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# Heaps of Health, Metaphysical Fitness

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## Ayurveda and the Ontology of Good Health in Medical Anthropology

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Because most scholars take it for granted that medicine is concerned with healing and problems of ill health, the way in which various medical systems define good health has not been adequately studied. Moreover, good health as such is usually regarded as a natural, normative state of being even by most medical anthropologists, who otherwise take a critical, relativist perspective on the subject of illness, pain, and disease. Using the case of Ayurvedic medicine, this article shows that there is a very different way of looking at the question of how health is embodied. This perspective is proactive and concerned with overall fitness rather than reactive and primarily concerned with either illness or disease. The argument presented here therefore seeks to go beyond the limiting—although extremely useful—orientation of remedial health care and suggests a radical challenge to some of the most basic ontological assumptions in the cross-cultural comparative study of medical systems.

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It almost goes without saying that all forms of medicine are, by definition, remedial. Healing presumes and requires the existence of disease, illness, and pain. Moreover, the goal of healing is to restore "good health," however that may be defined. To a degree this makes sense, but only to a degree. And the sense it makes belies an inherently applied, retroactive, problem-solving, and ultimately backward-looking approach to the question of health—backward-looking in the sense of finding defects, seeking causes, evaluating risks, and searching for genetic markers rather than in any pejorative sense. After all, the basic idea of all medicine is to fix what goes wrong so as to get back to a predetermined state of good health.

But what, after all, is good health? Is it just the absence of disease or the presence—statistically speaking—of a discernible pattern of low-risk behavior? If death and disease are taken to be natural facts of life, does it necessarily follow that good health is simply an unmarked, default category of everyday life—something one has when one is not old or sick? Or, alternatively, is it possible—and, more important, is it analytically useful—to make sense of clinical medicine outside the constraining limits of pathology? Is there a science of medicine that escapes an ontology of health defined in terms of disease—a clinical science that problematizes good health and seeks to promote a kind of fitness that takes issue with human nature, the nature of ecology, and ultimately the natural order of things?<sup>2</sup> Is there a realm of possibility beyond good health, a realm of optimal, maximally increasing, unlimited health promotion that provides a better point of reference for understanding a broad range of medical systems, biological theories, and physiological regimens?

In line with a tradition in which good health is idealized and reified but viewed as unproblematic, medical anthropologists have been primarily concerned with cross-cultural remedial therapies, critical interpretations of how medical knowledge is produced and how bodies are medicalized, and the culturally constructed ways in which various people experience ill health and find ways to "get back to where they were" before the onset of disease, illness, or pain (see, e.g., Csordas 1994a; Good 1994; Jordanova 1989; Kleinman 1986, 1988; Martin 1987, 1994; Scheper-Hughes and Lock 1987; Strathern 1996; Taussig 1980). Alternatively, some of the "canonical" anthropological literature on the meaning and symbolic structure of the body (Bettelheim 1962 [1954]; Douglas 1966, 1970; Lévi-Strauss 1966; Mauss 1973 [1935], 1979 [1950]; Turner 1968, 1969) has been followed by work that has focused atten-

2. I am using the term "ontology" here to mean the study of being as such as opposed to the study of logic as it relates to laws of becoming or epistemology as it relates to the origin of knowledge. However, my understanding of the problems inherent in a study of ontology stems from a reading of Nietzsche, where the critical issue is perfection and perfectibility in terms of ontological interests (Kaufmann 1968: 254–55) that can be derived through a genealogical method (see Krell 1996).

tion, either on trance, charismatic healing, and altered states of consciousness (Comaroff 1985, Csordas 1994b, Desjarlais 1992, Laderman 1991) or away from medical problems *per se* toward a consideration of many kinds of embodied experience (see, e.g., Blacking 1977, Boddy 1989, Gallagher and Laqueur 1987, Gottlieb 1988, Jacobus, Fox-Keller, and Shuttleworth 1990, Lutz 1988, Sault 1994, Turner 1984). Much of this literature is concerned primarily with the relationship between specific kinds of somatic experience and the broader social, cultural, and political context within which bodies are situated. When, from this vantage point, the body is viewed as symbolically, emotionally, or phenomenologically implicated in a broad spectrum of cultural constructs—and when sickness or distress is not explicitly an issue—then its health is not usually in question. In other words, when medical problems are not at issue, the question of health is not really a question at all. Therefore, a great deal of the literature on embodiment that is not also focused on medicine tends to veer sharply away from questions of physiology and anatomical health *per se* and into other domains such as aesthetics, religion, politics, philosophy, and economics broadly defined. In this article I would like to shift back somewhat in order to rethink the relationship between bodies and health and look critically at embodiment as a biocultural process, a process that encompasses remedial healing as a practical, necessary, and somewhat utilitarian endeavor but that relates proactively to the production of excellent health as an embodied ideal. This will lead, I hope, to a more comprehensive understanding of how fitness is implicated in medicine, on the one hand, and how concepts of hyperfitness and good health are implicated in what are usually thought of as religious, spiritual, and philosophical domains of experience, on the other.

The perspective I would like to take engages with a theme that has emerged out of the holistic health movement and the historical study of this movement's antecedents in 19th-century America (Edlin and Golanty 1985, Gevitz 1988, Goldstein 1992, Paul 1983; see also Berryman 1982, Betts 1972) but is oriented in a different direction. Historical studies of alternative medicine in relation to biomedicine in Europe and the United States have pointed out how physical fitness has, at various times, been more or less implicated in the theory and practice of health, healing, and health improvement (de France 1987, Fellman and Félman 1981, Hoberman 1992, Porter and Porter 1988, Whorton 1982). Moreover, there is a critical understanding in some of this literature that a concept of physical fitness has been integral to the development of so-called mainstream biomedical theories of disease, contamination, and pathology (Berryman 1982, 1992; Park 1992, 1994; Rippe 1992) even though, more recently, it has been moved out of the clinic and consigned to gymnasiums (Green 1986, Mangan and Walvin 1987, Smith 1972), out of science and into the domain of recreation and leisure self-improvement. Physical fitness is not a subject that has received very much attention from anthropologists, and there-

fore the concept is contaminated by an inherently biased Western perspective on how bodies work and how they can be made to work better. This perspective may be characterized, somewhat cryptically, as being concerned with either enhancement or prevention rather than with transformation—with the mechanical means by which the body can be pushed to its limit or brought into line with an ideal in order to achieve incremental benefits rather than with the organic, chemical, and mechanical means by which the limit of experience can itself be expanded. Working toward a more flexible concept of physical fitness that can be critically integrated into the analysis of alternative medical systems, my concern is with expansion and perpetual growth rather than incremental enhancement, with metamorphosis rather than morphology, with the metaphysics of physiological fitness rather than with exercise and exertion *per se*.

The problem, as I see it, is that health and physical fitness, even from the ecologically balanced and integrative perspective of holistic medicine, are regarded, fundamentally, as bounded, predetermined, natural states of balance that need to be maintained rather than as unbounded goals that might be actively pursued. In other words, quite apart from medicine as such—by which I mean any form of applied treatment that is designed to cure or prevent a condition of ill health—holistic medicine is only “alternative” in a very specific and narrow sense, since it too has been heavily influenced by the epistemological hegemony of the remedial bias that dominates institutionalized medical practice, including Ayurveda, cosmopolitan biomedicine, and traditional Chinese medicine, among others. While encompassing and extremely flexible, holistic health is necessarily structured by this bias and works—or is employed—as a defensive regimen against the possibility of getting sick. It is a defensive therapy against the dark side of a binary whole and therefore holistic only in a very narrow, oppositional sense. A more radical alternative would be to see “normal good health” as a condition of inherent limitation and compromise. From this perspective the concept of health becomes unbounded and uninhibited, making the goal of medicine something altogether different from finding and administering cures. Once this goal is engaged with, pursuit of it demands a redefinition of the nature of nature—the whole whole, as it were—and a reconceptualization of the way in which the body and the environment interface with one another.

My purpose here is simply to reexamine the meaning of embodied health by looking at Ayurvedic medicine not as means of curing disease and restoring balance through the application of humoral medications and ecologically holistic, organically synthetic, and ultimately “natural” therapies but as a mode of radical self-improvement.<sup>3</sup> It is possible to make this argument

3. In two essays in particular, Zimmermann (1992, 1995) deplores the recent tendency in both India and other countries to conflate Ayurveda with any notion of natural healing and mystical holism. There is an enormous popular literature that reflects this trend

only because in the past 15 years or so many excellent studies have been published on the subject of medical theory and practice in South Asia (see, e.g., Daniel and Pugh 1984; Trawick 1983, 1987, 1991, 1992; Leslie 1983, 1992; Obeyesekere 1982, 1992; Zimmermann 1987, 1992; Zysk 1985, 1986, 1991; White 1996). Zimmermann's work on the structural logic of Ayurvedic theory in particular is regarded by many as seminal. Although focused on the science of Siddha medicine in medieval South Asia, White's recent work clearly illustrates how the interface between alchemy, yoga, and Ayurveda produced a complex theory of physiology that is closely linked, on an empirical plane, with the metaphysics of asceticism and world renunciation (see also Hausman 1996).

From the vantage point of medical anthropology and the social science of medicine in general, Zimmermann's and White's analyses are particularly important in that they point toward an alternative perspective on the ontology of medicine and provide the basis for a critique of deeply held epistemological assumptions about the relationship between medicine as an applied science and health as an embodied ideal. Nevertheless, both Zimmermann and White, as well as virtually all others who have written on the subject, are heavily influenced by the epistemological hegemony of a remedial bias in the academic study of medicine, a bias that has a very long history and that is probably global in scale and transcultural in scope.<sup>4</sup> Therefore, without fully questioning this bias, most scholars have tended to view Ayurveda from the vantage point of either one who is sick, one who is trying to cure sickness, or, more significant for my purposes here, one who is theorizing medical knowledge from within a "natural" paradigm defined by the dialectic of disease and treatment.

As I see it, the ontology of Ayurvedic science—as opposed to its inherently variable but invariably practical, institutionalized, and explicitly modern, epistemic manifestation as clinical medicine—is not really holistic, not really based on an ideal of body-mind synthesis, and not primarily concerned with restoring homeostatic balance to diseased bodies. It should be clear but needs to be emphasized that I am making a sharp distinction between Ayurvedic theory as represented in the canonical literature and in contemporary technical, popular, and academic interpretations of that literature, on the one hand, and applied Ayurveda as it is practiced in hospitals, clinics, and research institutes in South

Asia and elsewhere, on the other.<sup>5</sup> Although I am explicitly not taking into consideration what modern practitioners of Ayurveda might have to say, at least ethnographically speaking, I am taking very seriously the scholarship that has been produced in India by modern "partisan" theorists who have provided commentaries on, synopses of, and compendiums of the primary texts.<sup>6</sup> There is absolutely no question but that Ayurveda is now used to cure disease and has been used for centuries if not millennia to treat the symptoms of disease. However, my concern is not with applied Ayurvedic medicine in either its ancient, medieval, or modern form but with an ontology of health that makes Ayurveda's application as "health care" extremely problematic on many fronts<sup>7</sup>—and by problematic I mean something on a par with but very different from the way in which Cartesian dualism has made the biomedical treatment of psychosomatic illnesses very difficult because of the sharp ontological distinction it makes between mental and physical domains. As I will show, Ayurveda, seen as an applied philosophy of physiology—what might be called metaphysical fitness—is a radical, often forceful, always struggling mode of metabolic, humoral body-building and cosmic self-improvement—a quest for equiposed perfection in an inherently and naturally imperfect world. In this regard Zimmermann sets the right tone when he writes: "Whereas what we today call physiology is the science of organic functions, we find in Ayurveda the opposite,

5. The primary sources I am using are translations of and commentaries on the three primary medical treatises, those of Caraka, Suśruta, and Vagbhata. Invariably these texts contain their own internal contradictions and inconsistencies. Moreover, they can be read and interpreted from any number of perspectives. Hence, any summary analysis of Ayurvedic theory based on these texts necessarily entails a degree of distortion and imposed synthesis. To provide an intellectual check on my own "distorted" reading of the primary texts, I have consulted a broad spectrum of the secondary literature with attention to contemporary theoretical formulations as these appear in encyclopedias, surveys, synopses, and other such works.

6. Some Sanskritists may take issue with my quoting freely from contemporary sources wherein the translations are poor and interpretations are either cryptically condensed, imaginatively elaborated, or simply wrong. I use these texts rather than relying only on the unadulterated "authority of the scriptures" to make the point that an Ayurvedic theory of metaphysical fitness is as "modern" as, for example, the prescription for shingles written out by a physician working in an Ayurvedic clinic in contemporary New Delhi, Bombay, or Madras.

7. Modern Ayurvedic medicine has been transformed systematically by the influence of colonial policy and Western science and less systematically by the priorities of a capitalist economy, post-colonial modernization, and various nationalist ideologies (Arnold 1993; Bala 1991; Cohen 1995; Leslie 1992; Obeyesekere 1992; Trawick 1987, 1991). Nevertheless the classical treatises of Caraka, Suśruta, and Vagbhata remain the primary textual pillars upon which the whole science rests. This is not to say, as Trawick (1987, 1991), Obeyesekere (1992), Leslie (1980, 1992), Nandy (1995a, b), and Nichter (1981), in particular, have pointed out, that modern practitioners do not give innovative and radical interpretations to these textual sources. Ayurveda is not in the least dogmatic and encourages a high degree of critical debate, experimentation, and self-criticism (Nandy 1995b: 186–95). The classical texts are authoritative on an ontological or meta-epistemic level, however, and it is to this level that my comments are directed.

[see, e.g., Chopra, Rothenberg, and Averbach 1990, Frawley 1997, Hope-Murray 1997, Lad 1990, Sachs 1996, Svoboda 1982, 1996, Tiwari 1995, VanHowten 1997, and Verma 1995]. Counteracting the holistically natural, somewhat eco-mystical self-help orientation of much of this literature, Zimmermann shows that Ayurveda is a rational science based on logical principles that entail the transformation of a natural ecology into the cultural practice of clinical medicine.

4. The history of this remedial bias is clearly outside the range of this article, but it predates the era of British colonialism. Although heavily influenced by the structure of "modern" biomedical institutions, Ayurveda's remedial bias is ancient.

namely a medicine of properties or virtues, a medicine of metamorphoses" (1987: 167).

### Heaps of Health: The Physiology of Self-Improvement

Understanding the physiology of self-improvement entails a two-step process of seeing the natural body as naturally imperfect and therefore—ironic as it may seem—naturally perfectible rather than as inherently healthy and therefore—ironic as it may seem—inherently prone to disease and irrevocably mortal.

Within the context of South Asia, the healthy body is often seen as problematic from what is best understood as a medical or physiological point of view. As a number of scholars have pointed out, in various South Asian medical systems the body is regarded as composed of fluids, saps, essences, humors, and elements that ebb and flow in a constant process of dynamic interaction (Daniel 1984, Daniel and Pugh 1984, Trawick 1983, Marriott 1990, Zimmermann 1979). Referring to the classical works of Panchasikha, an important early philosopher-psychologist, and Caraka, the editor/compiler of one of the most important Ayurvedic treatises, Rao (1987: 8) puts it like this:

For [them] human constitution is of great interest and pragmatic value, for emancipation [*apavarga*] as well as health [*ārogya*]. They recognize in man's constitution several elements, organized meaningfully and purposefully. The elements entering into this organization are technically known as "categories" [*tattvas*]. And they are counted as twenty-four; in two groups, *prakṛti* (nature, in the sense of causative factors) and *vikāras* (modifications thereof, in the sense of effects). Included in the former group are eight categories: five subtle elements, "consciousness stuff" [*buddhi*], "egoity" [*ahamkāra*], and the "unmanifest" primordial principle [*avyakta*]. The latter group consists of sixteen factors: five gross elements with specific characteristics, five organs of knowledge, five organs of action, and mind.

What we call man is only a conglomeration (a heap, *rāśi*), a gestalt, a configuration, a pattern composed of discrete but interrelated items. It is a body-mind complex. . . . The expression "heap person" [*rāśi-puruṣa*] is an interesting one. It is psychologically very suggestive and significant, as it emphasizes the organizational aspect.

Much more will be said about the nature and composition of this "heap person," but the concept is of particular significance not only in terms of psychology but in terms of the structure of physiology as well.<sup>8</sup> Config-

8. There are numerous descriptions of what constitutes this heap person. Clearly the best excavation of the component elements is McKim Marriott's wide-ranging work on Hindu categories and systems of classification (1990). Here, however, I am concerned more with the logic of constitution and transformation than with the

ured as heaps, bodies can easily slip out of health in any number of ways and for any number of reasons. More significant, however, individual bodies are inherently variable one from another—which is to say that one person's "natural constitution" is not necessarily the same as any other person's. Health, in this context, is highly relativistic and linked to specifically local if not idiosyncratically unique ecologies.<sup>9</sup>

In almost all of the literature, scholars and practitioners alike point out that Ayurveda is a holistic medical system that is closely linked to the natural order of things. Although a great deal of the *Caraka-Saṁhitā*, the *Suśruta-Saṁhitā*, and the *Ashtāṅga Saṁgraha*<sup>10</sup> is concerned with physiology, the classification of diseases, modes of treatment, pharmacology, surgery, and so forth, there is an equal concern with building good health. Moreover—and this is the important point—the concern for good health in Ayurveda is impacted in discussions of disease and treatment. Arguably, Ayurvedic treatment works effectively only if one abides by a daily regimen that promotes balanced fitness. In some sense, contingently good health is a prerequisite for being cured.<sup>11</sup> But, ironically, being cured of a specific ailment does not automatically restore health.

What I mean by this may best be explained in terms of the basic *sāṁkhya* doctrine regarding the constituent properties of the universe and the key concept of *dōsa* that derives from it.<sup>12</sup> In *sāṁkhya* the universe has two

structure of component elements per se. For good discussions of the biochemical, metabolic, and humoral composition of the heap person, see Majumdar 1971:235–38; Dasgupta 1987:51–91; Seal 1985:56–85, 202–43].

9. Referring specifically to the variable, contingent factors that contribute to conception and the reproduction of human life at an embryonic level, Dasgupta draws the following conclusion: "So it is that with the collocation of so many things that a foetus is generated. Thus we see that according to the variation of *sāttva*, a man may vary to a very great extent. Some twenty different types of men have been spoken of and exemplified by Caraka" (1987:79).  
10. See Basham (1976), Jolly (1977:1–25), Majumdar (1971), Meulenbeld (1996), Mitra (1974), and Rao (1985) for concise overviews of the textual sources for Ayurveda and for short histories and synopses of the primary texts. As Basham points out with reference to a commentary by Zimmer (1948), when analyzing this literature it is important to keep in mind that the texts are compilations "in which much disconnected material has been brought together with little alteration" (1976:21).

11. Unlike biomedicine, which holds to an absolute hope that all disease can be cured, Ayurveda clearly and clinically defines the "hopeless case" that cannot be cured and should not be treated (Jolly 1977:28–30; *Caraka-Saṁhitā*, *Indriyasthānam*, 6, 7). For example, Caraka states that "the patient having severe pain in the upper part of the chest while speaking, vomiting just after meal, indigestion, galloping debility, excessive thirst and cardiac pain should be discarded by the physician" (6.3–6) and that "the patient who expectorates profuse sputum having blue or yellow colour or with blood should be discarded from a distance" (6.15).

12. Although clearly dominant, *sāṁkhya* is by no means the only philosophy that has influenced Ayurvedic medicine. As Seal (1985), Subbarayappa (1971), Meulenbeld and Wujastyk (1987) Obeyesekere (1976b), Rāina (1990), Kutumbiah (1962), Zysk (1992), Jaggi (1973, 1977), and many others have noted, *vaiśeṣika* is also very important. It is also possible to discern the influence of *vedānta*, *nyāya*, and *yoga* schools of thought as well as other traditions (Larson 1993). According to Obeyesekere (1992), the influence of *sāṁ-*

primary constituents, the universal soul, *puruṣa*, and cosmic substance, *prakṛti*. *Prakṛti* is composed of three *guṇas*, perfectly balanced constituent qualities or strands: *sattva* (lightness, brightness, truth, and beauty), *rajas* (force, action, vitality), and *tamas* (dullness, lethargy, inaction).<sup>13</sup> Significantly, as manifest in *prakṛtic* form, these strands are inanimate. They have no volition. When the animating principle of *puruṣa* is combined with *prakṛti*, the *guṇas* come to life, as it were, but, I would argue, to a kind of life that is, in some sense, inherently imperfect precisely because the three *guṇas* begin to interact with one another in such a way that their cosmic balance is always compromised. As Rao (1987: 10) points out,

[*Guṇas*] cooperate, interact, and act together, they also strive for differential survival and specific dominance. The *Sāṃkhya* theory regards the phenomenal world as a tangled scene of the primal constituents, each one of them struggling for expression and ascendancy, and the other two struggling for the suppression of such expression and ascendancy. . . .

It is interesting that the *Sāṃkhya* thinkers strike a modern note when they postulate that all evolution starts from the disturbance of an original state of equilibrium (*sāmyāvasthā*), wherein the primal constituents (*guṇas*) are all perfectly balanced. But then somehow there is a disturbance, and consequently the struggle for ascendancy is instituted among the primal constituents.

There is a degree of competitive violence built into this manifest body, a kind of *sāṃkhyic* survival of the fittest *guṇa*. In his analysis of meat and meat eating as a structural crux in Hindu medical classification, Zimmermann makes a similar point about the inherently violent presupposition in Ayurvedic physiology (1987: 1). In this sense, agency and volition—with all of their intrinsically positive, life-giving connotations—are congruent with a notion of inherent devolution or involution back or down from a plane of unmanifest perfection into the realm of human experience—pure experience that is in and of itself devoid of any prior value judgment, an intrinsically volatile, bipolar domain of experience that involves pleasure and pain as well as sensuality and suffering, grief and disease along with health, wealth, and happiness. To a degree, then, the creation of the universe is not so much an act of perfection or the initiation of a process that would lead to

progress and refinement as the initiation of a series of infinite combinations and compromised recombinations that strive toward perfection but exist in perpetual imbalance and lead to inevitable death (Babb 1983: 298–99; White 1984:43). Consider White's (1996:21) recent interpretation:

The Ayurvedic *doṣas* are of the same order as the *guṇas* in the sense that, for so long as a human being is not exposed to the outside world (when in the womb, for example), it enjoys a perfect balance of *doṣas*. When, however, it becomes exposed to the outside world, the *doṣas* fall out of balance and the individual becomes subject to health disorders.

Here, then, Ayurveda goes beyond the conceit of biomedicine. It is not so much that pregnancy is classified—or misclassified—as a medical problem and the mother “treated” for her “condition” as that birth itself is somewhat pathogenic insofar as it triggers imbalance. On a theoretical level at least, babies are born unhealthy.<sup>14</sup>

Pejorative images of devolution notwithstanding, there is no need at all to interpret “natural imbalance” in a pessimistic light. However, it is important to understand that the realm of human experience that derives from the union of *puruṣa* and *prakṛti*—first the principles of intellect, individuation, and mind and subsequently sensory experience, emotions, and instincts, among all other things that make up the whole heap—is inherently *klišṭa*, that is, painful, full of suffering, and illusory to the extent that it is bounded by a *samsāric* cycle of life and death rather than by the unbounded nature of the incombiant, primordial, immutable universe.<sup>15</sup> Fusing the domains of sickness and spiritual darkness, healing and renunciation, Caraka says that “the supreme treatment is that which is devoid of allurements. Allurement is the greatest cause of misery and the abode of [embodied] miseries and renunciation of all allurements eliminates all miseries. As the silkworm brings forth threads leading to its death, the ignorant and ever-ill person creates allurements from the sense objects” (*Sāṅgasthānam* 1.94–97).

Interpretations of this classical theory have often led to the conclusion that *sāṃkhya* philosophy is both fatalistic and pessimistic as regards the experience of life

*khyā* on Ayurvedic practice in Sri Lanka has diminished under the influence of Buddhism.

13. Chapter 25 of the *Sūtrasthāna* in the *Caraka-Saṃhitā* opens with a debate between physicians regarding the relationship between the origin of the person and the origin of disease. Although different and contradictory theories are put forward, the physicians are advised not to take a dogmatic stand one way or the other. However, the authority of Punarvasu is invoked in verses 26–29 to point out that “the conclusion of the real position is that the entities, which in suitable state generate person, cause the various disorders in unsuitable state.” Thus “disease” and “person” are understood to be made up of one and the same thing.

14. Although constructed in terms of the various ways in which a woman can ensure the birth of a particular type of child—mentally strong, big and fair with reddish brown eyes, or sky-complexioned with red eyes and a broad chest—Caraka clearly suggests that a man and woman must take a proactive approach to the ways and means of coitus and prenatal care in order to control the configuration of constituent properties that develop in the foetus and manifest themselves in the physiology of the infant.

15. In a contextualized discussion of this idea in terms of theology and the practice of worship among the Radhasoami cult, Babb asserts that “the world of our normal experience is simply the residue of the entire process [of alimation in which subtle material is discriminated from coarse], that which is left when the maximum value has been extracted and retained. Therefore, our world, having its analogue in the matter expelled from the rectum in the human body, is truly a world worthy of hate” (Babb 1983:302; see also 297).

as well as oriented away from the world of sensory experience and toward otherworldly realization and the transcendence of limited consciousness. As Staal has recently shown through an analysis of yoga, sacrificial rituals, and other forms of body practice in Hinduism, this is clearly not the case (1993; see also Zarrilli 1989). Refinement is the goal, but this entails less a rejection of the material world than its contingent perfection.<sup>16</sup> Thus, perfectibility rather than imperfection is the logical key to self-realization.

Quite apart from whatever its ultimate metaphysical goal may be, however, *sāṃkhya* philosophy profoundly affected the basic ontology of science in the classical period of South Asian civilization (Filliozat 1964:26; 1970-71:416; Larson 1993; White 1996:20). Medicine, among other sciences, emerged out of a context in which important metaphysical questions were being posed in terms of physical science and questions about natural science were framed in terms of metaphysics.<sup>17</sup> However, as Rao points out, "it was theory that determined the practice in Indian medicine; and not the other way around. . . . Drugs were administered with a resulting cure on the basis of philosophy" (1987:2). Therefore, metaphysical questions and the evidence brought forward to answer them emerged from and referred back to direct observation and the analysis of empirical evidence in the natural world. Thus, as a number of scholars have pointed out, Ayurveda is a rigorously rational, empirical science (Rao 1987:174-76; Zimmermann 1987; Zysk 1991:21-37; see also Dasgupta 1987, Seal 1985) that is based on or seeks systematically to integrate the tenets of a fairly abstract, macrocosmic philosophy.<sup>18</sup> Bearing in mind the underlying tension suggested by a situation such as this—in which the natural world is seen as the microcosmic, physical fallout of a macrocosmic union that must be metaphysically undone—one is better able to understand Ayurvedic epistemology.

16. In a number of articles that deal with this theme, Parry has analyzed the relationship between death, sacrifice, ritual, and rebirth (1980, 1982, 1985). See also Trawick (1983), Knipe (1977). Parry's (1989) "The End of the Body" is most explicitly concerned with the physiological effect of what might be called a theology of spiritual refinement, showing that death rituals revolve around a medical conception of the body, particularly as regards the problem of elimination and balance (pp. 503-11).

17. For an argument that directly takes issue with this idea of syncretism between physics and metaphysics, science and religion, myth and medicine, see Chattopadhyaya's stridently positivistic reading of the classical medical texts, which edits out everything that does not conform to a Western notion of rational empiricism (1978: esp. book 2, chapter 3). For a more sympathetic reading of Chattopadhyaya's larger project, see Cohen (1995:339).

18. It is interesting that, although Chattopadhyaya tries to make a distinction between science and the counterideology of religion, his argument shows exactly how rigorous Caraka in particular was regarding the way in which medicine was defined as an empirical science. Employing very clear criteria regarding the kind of logic and the branches of knowledge that were pertinent to medical discourse in the 2d century A.D., one must conclude exactly the opposite: that because physicians spoke about and debated the nature of salvation and liberation, these topics had scientific, medical salience and were not simply the purview of so-called less conscientious or "un-real" physicians (1978:371, 375, 389).

## Morbific Humors and the Perfectible Body

In Ayurveda, *tridoṣa* is a theory of pervasive humoral balance and basic human constitution comprised of *vāta* (wind), *pitta* (bile), and *kapha* (phlegm). In turn, these humors are derived from the five elemental forms of matter known as *pañcabhūta*: *prthvī* (earth), *ap* (water), *agni* (fire), *vāyu* (air), and *ākāśa* (ether). These elements are universal, interdependent, and inherently interactive. They exist not in isolation but only in different combinations, thus constituting the infinite variability and diversity of the material world. The term *doṣa* is interesting, for although it is usually translated as "humor" it literally signifies a morbid domain and means "corrupting agent" or "cause of disease." Ironically, however, the *tridoṣa* are also regarded as the "three pillars of positive health" (Filliozat 1964:28; Rao 1987:65).<sup>19</sup> In the light of *sāṃkhya*, what this suggests is that the body is regarded as naturally morbid—and, I would say, predisposed toward corruption and disease—but *potentially* perfectible.<sup>20</sup> The notion of potential perfection is something analogous to but very different from a notion of natural good health.

Although they are not visible or measurable, the *doṣas* are substances that pervade the body and give it both structure and function. As Zimmermann (1987: 169) writes,

The humors—and especially wind—have an ambiguous reality. As images, they are fluid; as concepts, they are pathogenic factors. Finally, in the analysis of the human body, two points of view are superimposed, one on another. From the point of view of materials in movement, the humors are fluids irritating the tissues. From the point of view of health and disease, they represent various facets in the combinative system of humors, savors and qualities.

As fluid irrigants, the different *doṣas* are associated with different parts of the body and different body processes. Each has five subtypes. For example, *pacaka*

19. Kutumbiah provides one of the more comprehensive but concise analyses of the *tridoṣa* doctrine (1962:57-75) and points out that there is disagreement and probably some inconsistency in and among the classical texts regarding whether *doṣa* are the same as *dhātū* under all or only some circumstances and whether *malla*, *doṣa*, and *dhātū* have the same or different functions.

20. The philosophical basis for a notion of perfectibility is, of course, the idea of salvation or transcendence. However, as Majumdar points out, even the most metaphysical notion of transcendence and perfect self-realization is dependent on a kind of innate materialist phenomenology. As he puts it, "Ayurveda accepts that the highest aim of life is the quest for ultimate truth and realization; that the perception of our senses is not valid in the absence of spiritual insight; that suffering is due to the human error of discrimination between the body and mind which suffer and the spirit which is immune; that the final wisdom is to shed passions and illusions; that the supreme essence of power and awareness is present in man *making him potentially omniscient and omnipotent* when he achieves self-realization; and that it is possible for the trained mind to achieve this self-realization and salvation, a *healthy body, long life and a keen mind being desirable aids to this end*" (1971:238, emphasis added).

*pitta* is located in the stomach and is associated with digestion. *Ālocaka pitta* regulates vision. *Bhrājaka pitta* "maintains body temperature and gives luster to the skin" (*Suśruta-Saṁhitā* 1.15.4 and 1.21.10, 11 [Singhal and Patterson 1993:27]). *Apāna vāyu* is located mainly in the lower gut and pelvis and, as with all manifestations of *vāyu*, is associated with movement and, in this case, excretion (*Suśruta-Saṁhitā* 2.1.11–21/1 [Singhal and Patterson 1993:26]). Significantly, the relative balance of the three *doṣas* is responsible for "the constitutional peculiarities of individuals, including the susceptibility to particular ailments" (Rao 1987:67). In their synoptic paraphrase of Suśruta's treatise, Singhal and Patterson (1993:26, emphasis added) explain: "Although there are only fifteen main combinations (1.21.28), the humors can be combined in sixty-two ways, with 'health' considered as the sixty-third. When they are mixed with the tissues [*dhātū*] and excreta [*malla*] the possible combinations are innumerable; each of these may become aggravated or diminished (VI.66)." In turn, each of the three *doṣas* is affected by an almost infinite number of exogenous factors and combinations of factors that make up human ecology—diet, rate, time, and context of food consumption and digestion, time of day, climate, direction of wind, age, behavioral patterns, rest, accidents, exercise, state of mind, and so forth. In other words, a person is in perpetual flux as his or her humors ebb and flow, increase and diminish. It would be virtually impossible to establish a universal standard of natural good health without stipulating a whole series of qualifying factors and ancillary conditions. Hence, and very significantly, Suśruta seems to define health as a theoretical point of recombinant balance that is off the scale, so to speak. Majumdar (1971:237) makes this clear when he says that "all of these components and attributes remain in a state of equilibrium and balanced existence, complementing the functions of each other. But the infinite number of possible combinations makes a 'perfect' organism a near impossibility. Hence, health is only a state of optimum balance. The greater the approximation to the ideal state, the better the health." This is because health is not so much a state as a process—the erosion, rebuilding, fortifying, draining, rechanneling, and somato-seismic uplift of the heap person—that is endemic to life and death. It is, moreover, a process that moves from a condition of managed morbidity—the 62 possible combinations—toward an ideal of perfect health and long life—the 63d configuration of *doṣas*—rather than away from a state of risk toward a static ideal of progressive isolation, insulation, and immunity.

Since it is virtually impossible to define a standard of universal health within the framework of Ayurvedic practice (as opposed to theory), it follows that every person is unique (Majumdar 1971:237) not just in a biographical sense but on a biological level, allowing for a spectrum of finely tuned differences that enable any number of people to pursue health and be contingently healthy in any number of ways. Thus, there are more or

less "windy" people, "bilious" people, and "phlegmy" people who are variably affected by different occupations, diets, climates, and routines. With reference to the eight types of *sāra* (constitutional essence) that characterize different kinds of people, for example, Caraka makes a number of important distinctions regarding "degrees of strength":

In persons who are *twaksāra* [having the constitutional essence of skin], the skin is unctuous, smooth, soft, clear with fine, sparse, deep rooted and delicate hairs and is lustrous. This essence indicates happiness, good fortune, power, enjoyment, intelligence, learning, health, cheerfulness and longevity. (*Caraka-Saṁhitā, Vimānasthānam*, 8.103)

The persons with essence of *māṁsa* [fat] have their temples, forehead, nape, eyes, cheek, jaws, neck, shoulders, abdomen, axillae, chest, hands, feet, and joints equipped with firm, heavy, and good-looking muscles. This essence indicates forbearance, restraint, lack of greed, wealth, learning, happiness, simplicity, health, strength and longevity. [8.105]

Those with *asthisāra* [essence of bone] have prominent heels, ankles, knees, elbows, collar bones, chin, head, joints and also bones, nails and teeth. Such persons are enthusiastic, active, enduring, having strong and firm body as well as longevity. [8.107]

Charming . . . having eyes as if filled with milk, immensely exhilarated, with teeth that are unctuous, rounded, firm, even and compact; having pleasant and unctuous complexion and voice, brilliant, having prominent buttocks should be known as *sukra-sāra* [having semen as essence]. They are liked by women for enjoyment, are strong and endowed with happiness, supremacy, health, wealth, honour and progeny. [8.109]

Insofar as these distinctive *sāras* indicate conditions of contingent fitness they are particularly germane to the larger argument being advanced here. It should be noted, however, that regardless of the superlatives used by Caraka to describe semen, bony, fatty, and skinny people, they are, in a very real sense, people who are only one-eighth fit. Hence an embodied, universal standard of health is hard to find, even though a theoretical ideal of perfect health is clearly articulated as the sum of all eight *sāra* types:

The persons having all the essences are very strong and happy, enduring, confident in all actions, inclined to benevolent acts, having firm and balanced body with balanced movements; resonant, melodious, deep and high voice, endowed with happiness, supremacy, wealth, enjoyment and honour; with slow ageing and pathogenic process, mostly having similar or numerous offsprings and long lived. [8.111]

What all of this suggests is not only that people are unhealthy in a range of variable and problematically comparable ways but that all people can refine themselves and work toward an ideal of hyperfitness by influencing the ebb and flow of the various constituents that affect their unique manifestation of contingent health. Thus people are, depending on one's perspective—and, more significant, depending on their degree of commitment to accommodating and counteracting their natural *doṣic* or *sāric* tendencies—either all sick and getting sicker or all getting healthier.<sup>21</sup> In any case, an Ayurvedic physician must first understand a person's bioecology before being able to determine why that person is sicker than he or she should be under the circumstances appropriate to the biosocial configuration of his or her specific heap (cf. Zimmermann 1980 [1975]:101; Majumdar 1971:243).

This ambiguous ambivalence about what might be called the variable trajectory of health is, I think, clearly manifest in the way in which Ayurvedic texts talk about medicine in general and physiology in particular. Obviously medicine is meant to cure disease and alleviate symptoms, but there seems to be an underlying dissatisfaction in the tone of many texts with the purely remedial, restorative effect of drugs and therapies. As Majumdar points out, referring to the corpus as a whole, "Ayurveda is concerned mainly with prolongation of healthy life and prevention of disease and senility, and only secondarily with curing disease" (1971:213, 225).<sup>22</sup> A popular account reads as follows: "Ayurveda is not just a system of medicine but a science of health promotion designed to increase our well-being and happiness in all aspects. It shows us not only how to treat disease but how to live in such a way as to arrive at optimum health and the maximum utilization of our faculties, which according to Yoga and Ayurveda are almost unlimited" (Ranade 1996: 57). This ambivalence is reflected, I think, in the way in which, at various points in the canonical texts, phenomenal curative agency is ascribed to various specific therapies. For example, enemas concocted from various oils, broths, and other liquids are prescribed for the treatment of fevers, diarrhea, glaucoma, cataracts, headaches, ophthalmia, and a range of other symptoms and diseases but are then said to "make an impotent man potent, a thin man fat, a fat man thin, [and] remove wrinkles and grey hair" (Jolly 1977:33). In a parallel way, it is interesting to note that,

21. Majumdar (1971:241) makes this point well: "Apart from a few exceptions, all individuals have a predominance of one of the three humors and, therefore, an inherent imbalance. The few exceptions and near exceptions enjoy perfect or near perfect health and are immune to disease. The others are always susceptible to disease due to the ever-present possibility of aggravating the inherent imbalances, but normally stay tolerably healthy as long as the humors are not provoked by injudicious diet, wrong conduct or environmental conditions which are at variance with their individual humoral state."

22. I will return to the interesting and important conflation of disease and senility and to the epistemological problem of using the term "preventive medicine" in making sense of Ayurveda's concern with health promotion and fitness.

although various material substances are prescribed for specific ailments, there is a tendency in the classics to state categorically that one substance in a class of substances is inherently better than all others. For example, of the animal fats, ghi is said to be the best, and of the vegetable fats the best is sesame oil (Jolly 1977:33). Here a hierarchy of inherent, categorical value seems to be somewhat at odds with attributions of specific, discriminate medicinal value. Finally, the lengthy passages in the classical texts that enumerate what one should and should not do in order to avoid falling ill are so minutely specific that diseases pertaining to the "derangement of sense organs" can be attributed, cumulatively, to such seemingly mundane and banal things as riding in a defective vehicle, sitting on a hard seat that is knee-high, sleeping without a pillow, going outside without first touching gems, or laughing too loudly (Caraka-Saṁhitā, Sūtrasthāna 8.17–28).

In all of this it is as though a humoral theory of metamorphic transmutation had become inhibited by the practice of Ayurveda as "emergency" medicine for the treatment of disease and by the seemingly pedantic, utilitarian enumeration of recipes in the various treatises—recipes whose classificatory function as schemas of organic pathogenesis and practical function as stock cures lead to an understanding of disease as both a perpetual problem of taxonomic categorization and a condition of chronic crisis—what might be called a utilitarian semiotic of suffering. If one strips away the gross accretions of this preoccupation with enumerated pathologies and reciprocal cures, what remains is a dynamic structure of embodiment wherein being born unhealthy makes it possible to conceive of immortality and freedom in medical terms.<sup>23</sup> As Zimmermann notes, "whereas physiology comes into being as a science at the point where it becomes distinguishable from the study of pathogenesis, [in Ayurveda] the contrary is true" (1987:167)—which means, if I follow the logic correctly, that Ayurveda is concerned primarily with physiology and only somewhat ambivalently with pathogenesis as a discrete science. This is what Zimmermann must mean when he says that "medicine, in the sense of science as we understand it today, is not really relevant to Hindu medicine" (1987:177).<sup>24</sup>

With this in mind I would like to reconsider the di-

23. Referring to the dynamics of time and different chronologies in Ayurvedic logic as they affect the way in which physicians approach the problem of treatment, Zimmermann makes the following distinction: "The distinction between the two aspects of time is, for the doctor, a methodological one. On the one hand, the seasonal cycle gives him a framework for prognosis and hygiene; on the other hand, each phase of a sickness is a critical moment. Thus we have on one side the time of prevention, on the other the time of emergencies" (1980[1975]:104).

24. Majumdar (1971:219) provides some perspective on this critical issue when he points to a clear distinction in the *Rgveda* and *Athrvaveda* between two kinds of health care: *āyusyañi*, which is concerned with the promotion of perfect health through rejuvenation and with longevity in general, and *bhaisajyañi*, which is focused exclusively on curative treatments and medication. It seems as though classical Ayurveda blurs this distinction in an important way.



mension of Ayurveda which is termed *svasthavṛtta* (personal hygiene) and *dinacharyā* (daily routine). Ayurvedic texts are full of prescriptions for such everyday activities as sleep, evacuation of the bowels, taking care of oral, ocular, and aural hygiene, hair care, sartoriality, and, above all, diet (Kutumbiah 1962:130–43; Majumdar 1971:243). The regulated management of almost everything is carefully delineated: when, where, why, and how often to smoke different substances in order to “increase the strength of hairs, skull, sense organs and voice”; the kind of ointment to use daily in order to make eyesight keen and “colour-vision perfect”; the kind of oil to use in one’s ears in order to “improve audition”; the kind of twig to use for brushing one’s teeth in order to make them strong and bright; the right kind of metal tongue scraper to use and how to use it; the ideal temperature for bath water and the appropriate temperatures for different parts of the body; and the efficacious use of mirrors, umbrellas, and walking-sticks (*Caraka-Saṁhitā, Sūtrasthāna*, 5). The prescriptions regarding what kind of wood to use in building a bed, what kind of cloth to use for making a shirt, and what sort of flowers to use in decorating a room are amazingly comprehensive and worthy of careful attention given their location in texts which, as Gerald Larson notes, are otherwise perfectly comparable to and compatible with Western-style medical manuals (1993).

It is useful, I think, to start by considering the alternative to a well-regulated daily routine before looking carefully at the kind of person who emerges from the rigorous exercise—for I think that is what it is—of *svasthavṛtta* and *dinacharyā*. If, in order to maintain good health, one must, for example, wake up daily at 3:30 or 4:00 A.M. and think carefully about whether the food eaten last evening has been well enough digested to enable one to defecate without “forcing the bowels,” what does this suggest about a person who simply wakes up when the spirit moves or when necessity dictates? And what does it suggest about a person who does not think carefully about his or her digestion? If cutting one’s hair, trimming one’s beard, and having a manicure is “nutritive, aphrodisiac, and life-promoting,” and if footwear “benefits eye-sight, promotes strength, and inhibits the libido” (*Caraka-Saṁhitā, Sūtrasthāna* 5. 99, 100), then what of the person who does not cut his hair or trim his nails? What of the person who not only goes about barefoot but also goes out for a walk without an umbrella, a stick, and a turban and without keeping his eyes fixed on a stipulated point 6 ft. ahead of him on the ground (8.18)? The implication is perfectly clear: If one lives life without consciously working at being healthy one is almost by definition chronically ill—which takes us back, I think, to the reason the humors are insidiously morbidic and maintaining their balance is not something that can be taken for granted.

Following from this, common sense and practical experience would indicate that very few people subscribe rigorously to the regimen prescribed. At the very least it suggests a hierarchy of class-based consumption and a lifestyle of elite leisure. Who, after all, can afford a gold

tongue scraper? To follow the letter of the law was more than likely the prerogative of kings if not the perquisite of kingship (Zimmermann 1980 [1975]:104).<sup>25</sup> Moreover, it is unlikely that Caraka and Suśruta, among others, ever expected people in general to live up to the stipulated ideals of *svasthavṛtta* any more than they probably expected (as Zimmermann points out) anyone other than an impotent, heirless king to collect and use crocodile semen. There is, however, a tacit assumption which underlies the obsessive concern with hygiene and regimentation in Ayurveda, namely, an assumption that people are inherently unhealthy.

What this suggests is that personal hygiene and the daily routine are not forms of preventive medicine—there is nothing prophylactic about them—but rather forms of vigorous self-development. Consider what a contemporary encyclopedia of Indian medicine has to say about the virtues of a daily bath (*Sabda-kalpadruma*, quoted in Rao 1987:34):

It gives strength, increases appetite, invigorates the digestive process, nourishes the body, gives a long life, increases the vitality (*ojas*), improves the semen and cheers the mind. It also cleans the body, clears the skin of dirt and itches, reduces morbid heat in the body, removes drowsiness and fatigue, eliminates thirst and inflammation, diminishes the effect of toxins (*visha*), helps reduce fat, and improves eyesight.

And about the benefits of proper sleep (p. 191): “It causes happiness, nourishment, strength, virility and longevity. . . . Sleep at the right time makes for the balance of body constituents (*dhātū-sāmya*), alertness, good vision, good complexion, and fine digestive powers.” In other words, a good bath and good sleep do not keep one healthy but make one healthier on an inherently compromised scale. Consider the nature of the verbs in the two translated passages: *gives, increases, nourishes, improves, cheers*. Eyesight is not just maintained but improved; thirst is not just quenched but eliminated; drowsiness and fatigue are not just ameliorated but removed; and sleep does not just give the body rest but imparts happiness, nourishment, virility, and longevity.

Although a good bath and a good sleep may be regarded as having intrinsically positive effects on the body, Ayurveda stipulates that a person should regularly smoke and take snuff with careful regard to his or her unique disposition, contingent state of health, and climatic environment. Specific guidelines aside, it is clear that the right kind of snuff, taken properly on a regular basis as part of the larger *svasthavṛtta* regimen, is not just good for one in that it cures facial paralysis, lock jaw, chronic rhinitis, and head tremors but also develops metabolic strength and physiological fitness (*Caraka-Saṁhitā, Sūtrasthāna* 5.56–62):

25. See Basham (1976:31–34) for a discussion of the relationship between *vaidyas* and kings in relation to the role of physician and patient and to the question of patronage.

One who practices the snuffing as prescribed and in time, his vision, smell and hearing are not affected [by age], his hairs or beard and mustache do not become white or grey, hairs do not fall rather they grow abundantly. . . . Veins, joints, ligaments and tendons of skull attain greater strength on saturation through snuffing. Face becomes cheerful and well-developed, voice melodious, stable and grave. Freedom from defects and increased strength are bestowed upon all sense organs.

Whereas a good bath, good sleep, and careful snuffing result in fitness, haphazard bathing, sleeping, and snuffing are very clearly pathogenic. According to Vagbhata, "lack of sleep or improper sleep causes misery, emaciation, weakness, sterility and early death" (*Ash-tanga-hṛdaya, sūtra*, 7 [Rao 1987:191]). In this system one either gets better or gets worse; one cannot and should not stay the same.

Nor are the prescriptions particularly "holistic," at least in the fashionable sense of "in tune with nature." A common *dinacharyā* prescription whereby water is to be cooled overnight in a copper vessel and drunk at dawn (*ushah-pana*) does not mean that the water so cooled is pure and fresh by nature. It has been purified and freshened by the material of culture, inorganic chemistry, and the agency of human intervention and thus becomes a tonic only once it has been extracted from nature. Even well water, which is regarded as inherently better than copper-cooled water because it is "warm in the cold season [,] cold in the hot season [and] therefore natural" (Rao 1987:210), is really only "natural" to the extent that wells are somehow regarded as more "natural" than pipes, pumps, and faucets even though they are dug in particular places, constructed with the material of culture, and often require cleaning.

Again, although a cold water bath promotes fitness, very hot water is "positively harmful," and various different temperatures of water are appropriate under various circumstances: hot water if one has returned from a long journey or engaged in hard manual labor, tepid water in the winter and spring (Rao 1987:34). It is interesting, in this light, that although cold water and cool baths are regarded as ideal, as with well water or the drinking water in the copper vessel, the best kind of bath—in the sense of taking the body beyond its natural limits—requires human intervention and the disaggregation, transformation, and recombination of elements. This prescription in the *svasthavṛtta* routine is a two-stage process that requires a sesame-oil body massage and hot water. This bath-as-body-building is referred to as *abhyāṅga* and is said to have the following effect (*Madana-pala-nighantu* [Rao 1987:35]):

It prevents ageing, equalizes the body constituents (*dhātū*), pacifies *vāta*, cures intractable headaches, invigorates the sense organs, improves eye-sight, physical strength and mental cheer, makes the skin bright, soft and free from dirt, removes fatigue, facil-

itates sleep, acts like a hair-tonic (preventing hair from falling or greying, and making the hair roots firm) and refreshes the individual.

Clearly a person who "takes an *abhyāṅga*" emerges not just clean, relaxed, and refreshed but, humorally speaking, a real heap.

Because health is intrinsically compromised by the natural order of things, physical fitness is the only logical alternative. Put another way: if one's digestion, eyesight, skin tone, and hair texture, density, and color are going to be "bad" under putatively normal circumstances—when one wakes up and doesn't stop to think about digestion, sleeps in a bed made out of ordinary wood, arises after dawn and drinks tap water—then why not redefine the domain of normal everyday life to approximate perfection, translate the logic of natural devolution and pervasive morbidity into systematic evolution? In other words, the intense regimen of *svasthavṛtta* and *dinacharyā* must, I think, be seen not from the perspective of one who is trying to stay healthy but from the perspective of one who can feel in the morbidity of his or her physique the possibility of hyperhealth and metaphysical fitness. This, I think, is what Ayurveda as a science of life is really all about even while it must, somewhat pedantically and ambivalently, function as system of healing that deals with the numerous medical emergencies of everyday life. This logic may be taken one step further by considering Ayurvedic prescriptions regarding diet, food, and the regimen of eating.

Food is integral to the *materia medica* of Ayurvedic medicine (Khare 1976a, b, 1992a; Khare and Rao 1986; Nichter 1986; Seneviratne 1992; see also *Caraka-Saṁhitā, Sūtrasthāna*, 27). In fact, all food is medicine to the extent that it can cure and/or cause disease in specific, predictable manifestations. As Zimmermann (1987: 203) points out, "Food and the rules of conduct are associated together as *āhārācārau*, a compound in the dual, to define the conditions of a healthy system of life. The idea of remedy and that of nourishment are thus both parallel and complementary; pharmacy and cuisine are two aspects of medical activities regarded as a single set." Moreover, a consideration of dietetics in Ayurveda takes one back directly to the central problematic of physiology, wherein nutrition promotes not just the homeostasis of the body's organic functions but a structural metamorphosis of the body's constituent properties. Thus, food is assimilated into the body in terms of broad ecological congruence, wherein like nourishes like on a whole series of different levels—sattvic food promotes a sattvic personality; phlegmy food causes phlegm to predominate in the configuration of humors, and, on a more explicit level, the consumption of fat promotes the development of fat, the consumption of blood promotes blood, and so forth (*Caraka-Saṁhitā, Sūtrasthānam*, 6.10). When food is prepared for consumption its constituent properties are brought into play; the act of eating then sets in motion a series

of "cooking" or "digestion" whereby the "nutritive juices of foods" (*annarasa*) are transformed, first into chyle (*rasadhātū*) and then, sequentially, into blood (*rakta*), flesh (*māmsa*), fat (*medas*), bone (*asthi*), marrow (*majjā*), and semen (*śukra*). It takes 28 days for *annarasa* to become semen, and since only a fraction of each of the seven *dhātūs* is transformed into the next in sequence a small volume of "cooked" semen is understood to be the distilled, condensed essence of a fairly large volume of "raw" food. The body is thus structured on the basis of a metabolic hierarchy of tissue transformation wherein that which is most condensed is that which is most subtle and "thus closest to the universal essence and the power which obtains to it" (White 1984:50). At the pinnacle of this hierarchy is the essence of all essences known as *ojas*, which may be understood as the physiological analogue of divine *shakti* and the manifestation of power, vigor, fitness, and ultimate vitality.

Significantly, as Zimmermann has shown in detail, the world of food which nourishes this sequence of transmutation is also structured in terms of a precise hierarchy of transformation. A food chain with carnivores at the top, herbivores in the middle, and plants and roots at the bottom establishes a pyramid of increasingly condensed, nutritious food. "Nourishing" are the meats!—The meat of eaters of meat is doubly so! The virtues of the meats that they have eaten are added to those of their own flesh, producing a superconcentrate: . . . the concentration of the materials superactivates the essences that they contain" (Zimmermann 1987:160). Theoretically at least, meat is the best kind of food to produce plumpness<sup>26</sup> (Vagbhata, *sūtra* 14.35 [Zimmermann 1987:172]). "The meat of the eaters of meat" is the best of all (Caraka, *cikitsa* 15.209–11 [Zimmermann 1987:172]). And the best cut of meat is the liver of a freshly killed, healthy young female animal (*Suśruta-Saṁhitā* 146.53–138, 333 [Singhal and Patterson 1993:7]). Although the meat and blood of lions and leopards are classified exclusively as pharmaceuticals for the treatment of serious illness, meat is clearly an important part of the ideal diet. In the logic of like nourishing like, flesh is "precondensed" and enters the sequence of human digestion at a point closer to semen.

26. As Zimmermann (1987:160) points out, this notion of plumpness (*pushṭi*) conjures up images of obesity (*sthaulya*)—at least from the vantage point of a culture that is preoccupied with slenderness—even though it denotes something else entirely in the somatology of Ayurvedic fitness, aesthetics, and health. Plumpness is good, however, only when it is manifest as firmness rather than as flabbiness, a distinction that has very little to do with exercise but everything to do with the balance or imbalance of phlegm. Situating this point at the crux of a structural argument concerning meat eating and violence, Zimmermann says that "this alliance between contraries is absolutely fundamental: consumption of the most disgusting of meats and purity, conceived as serenity, an absence of distress and anger. Louis Dumont has noted the association between rain and order; similarly, this association between the purity of the mind and the plumpness of the body cannot be emphasized too strongly" (p. 178).

However, insofar as the flesh of animals contains the already distilled, assimilated, and partially transformed essence of a wide variety of raw foods, a high degree of specific calibration and rigid classification is required to establish the precise relationship of cause and effect in terms of the assimilation of one physiology by that of another. Although numerous kinds of food—wheat, garlic, mangoes, and lotus roots, for example—are said to increase semen, flesh as a broad food group seems to be transformed into semen most readily and most efficiently. In the *Suśruta-Saṁhitā*, for example, partridge meat "increases semen and memory, improves the complexion and is constipating," sparrow meat "cures bleeding, and greatly increases semen," pork "increases semen and urine," and duck "cures bleeding, increases semen, and expels urine and feces" (146.53–138, 33 [Singhal and Patterson 1993]). Clearly meat does many other things in the physiology of digestive metamorphosis, but its association with the production of condensed semen clearly indicates a preference on the part of Caraka, Suśruta, and Vagbhata for a diet that was not just healthy but strategically manipulated raw material so as to extract maximum utility. Positioned at the apex of the food chain you are not simply what you eat—in a holistically economical and ecologically balanced sense—but greater and more refined than what you eat.

Even though meat has exceptional properties, food of all kinds is the cornerstone of health. It is the basis of all action, including the four goals of life: desire, prosperity, right action, and release. Significantly, the digestion of food at all levels of metabolic transmutation entails the agency of fire (*dhātuvagnis*), and eating and digestion—the internal process of sequential cooking—are understood as a kind of metabolic sacrifice.<sup>27</sup> "The identification of the three *doṣas* with the three components of sacrifice is . . . explicit in Ayurveda. The body's inner fire (*antarāgni*) is represented by the fiery liquid that is bile; phlegm is 'lunar' (*saumya*) fluid, and the microcosmic wind bears the same name as it does in the macrocosm: *vayu* (or *vāta*)" (White 1996:22). As Zimmermann (1987:205) points out, "Making use of an analogy between the sacred fire and *antarāgni*, 'the internal fire, the digestive fire,' Caraka [27.346] compares the meal to a sacrifice: He will escape all disease, he who, maintainer of the fire (*āhitāgni*), provides as offerings to his internal fire (*antarāgnau juhōti*) foods that are always wholesome." What is significant about this analogy is the way in which an abstract concept of ritual sacrifice that relates specifically to a theme of "cooking to perfect the world" is brought down to earth in order to make food consumers engage in a regimen whereby they make every effort to perfect themselves.<sup>28</sup>

27. As White (1984:52) notes, the analogy also works the other way around in the sense that sacrifice serves as a point of logical reference for the alchemical work of clinically "killing" mercury whereby it is chemically perfected.

28. Although sacrifice is the most explicit analogue for metabolic digestion, Babb (1983: 305) and others (Khare 1992a: 215; Moreno 1992:148) have pointed out that the devotional ingestion of food

It is not, as Zimmermann, citing Malmoud (1975), has pointed out, that Brahmins slipped in status from being world perfecters to being merely cooks in the ritualized scheme of things (1987:207). Rather, as White's work on the contiguity of Ayurveda, Siddha medicine, and yoga would seem to indicate, the *āhitāgni* sacrifice is turned inward without simply being reduced to a metaphor and without any "degradation" (1996: 21–32). Thus the Brahmin tries to perfect himself on a deeply metabolic, biological level.<sup>29</sup> In this sense, cooking and right eating are the penultimate form of self-sacrifice, if this term may be used to convey a sense of Ayurveda's purely cosmic rather than altruistic ethics. Consider what Suśruta has to say about the regimen of consumption:

The best diet is one-year-old cereals, flesh of young animals, freshly cooked with the appropriate seasoning, ripe fruit and vegetables that are fresh, tender and moist [1.46.331–39]

The kitchen should be large and clean, with trustworthy attendants, supervised by the physician. The meal should be taken in a clean, quiet place, sitting on a high comfortable seat, with the food fresh and not too hot, eaten at the right time, without hurrying. Fruit should be taken first, followed by liquids and then solids; of the tastes, sweet should be first, then sour and salt, with the other tastes at the end. The mouth should be frequently washed out with water; water is drunk after the meal and a toothpick used. Aromatics, such as betel, should be taken to clean the mouth and prevent increase in *kapha*. One should then sit comfortably for awhile, before taking a short walk and lying down on the left side. [1.46.446–97 (Singhal and Patterson 1993: 9)]

The process of digestion, which must be understood as being much more comprehensive than what goes on in the stomach and intestines alone and is specifically coded to the body's humoral metabolism as a whole, is, in essence, a process of perfection wherein waste products (*malla*) are serially eliminated and, as White puts it, "the body is cooked to a turn (*paripakvā*)" (1996:20). Thus it is both appropriate and important to point out that in Ayurvedic terms eating and digestion are under-

stood as a kind of exercise, the metabolic, humoral equivalent of a gymnastic workout. This is a form of physical fitness that is directly comparable, on a number of levels, to the kind of Western-style exercises that build up the structural components of a very different kind of body—a body that is made up of interdependent parts rather than transmutable substances, that can be toned and tuned up but not well-cooked and condensed.

But what about that short walk recommended by Suśruta? Is it not the "real" exercise that helps to digest the food that has been eaten? References in the Ayurvedic literature to exercise—in the structural sense of running, swimming, and lifting weights—are difficult to interpret. Clearly exercise is regarded as beneficial, "essential for good health and the only way to reduce fat" (*Suśruta-Saṁhitā* 4.24.38; *Caraka-Saṁhitā, Sūtrasthāna*, 7.31–32). However, from the standpoint of anyone who is interested in developing muscular strength and respiratory and cardiovascular stamina, to say nothing of specific gymnastic skills or proficiency in martial arts, athletics, and sports, the prescriptions seem woefully inadequate. It is noteworthy, for example, that when Caraka catalogues the factors which "lead to the increase of strength," exercise is regarded as no more or less important than, among other things, being born in a place where people are strong and where "seed and soil" are of excellent quality, being born at a time that is conducive to strength, and being cheerful (*Caraka-Saṁhitā, Sūtrasthānam*, 6.13). Moreover, according to Caraka one should exercise only up to "half of one's ability" (*ardha-śakti*), until one's heart begins palpitating or until one starts to sweat (*Caraka-Saṁhitā, sūtra*, 7.31 [Rao 1987:87]). "Excessive physical exercise gives rise to fatigue, exhaustion, emaciation, thirst, internal hemorrhage, darkness before the eyes, cough fever and vomiting (*Caraka Saṁhitā, Sūtrasthāna*, 7.33). In other words, Ayurvedic exercise stops at the point at which exercise in the Western aerobic, gymnastic sense starts. As Rao points out in his review of the place of exercise in the Ayurvedic literature, the "Suśruta Saṁhitā recommends walking (*chaṅkramana*) as the best exercise, as it does not excessively tax the body (*chikitsa*, 24). Running as a form of exercise is to be avoided, for 'death runs after one who runs.' . . . Excessive exercise is harmful even for healthy people" (1987:87).

It would be wrong to conclude that this perspective on exercise is toned down because it is put forth by sedentary Brahmins or reclusive, otherworldly ascetics. For one thing, it is not toned down. Moreover, as Deshpande (1992) has pointed out, there is no dearth of evidence that running, swimming, weight-lifting, wrestling, boxing, and all manner of strenuous physical fitness regimens played an important role in the life of various people in the Vedic, epic, and medieval periods of Indian history. There are many examples of training regimens that require one to exert far more than half of one's strength, and the case of contemporary wrestlers in Vrindaban (Lynch 1990) and Banaras (Alter 1992) as well as the example of the Jayesthimalla wrestlers of

may also be understood as a process of physiocosmological transmutation (to use Babb's terminology). As Moreno says of the consumption of *pañcāmṛtam*, a powerful elixir food offering that is used to wash the god and is thereby "enriched" with a subtle residue from his body, "these washings are supposed to be very tasty food, with extraordinary power to restore health and the normal functions of the body . . . by consuming [the god] Murukan's excess of cold, [Cettiyars] can restore in their natures the greatness and goodness (*sāttvika perumai*) qualities they lost in the past" (1992: 166, 167; see also Babb 1983:307).

29. In his study of food symbolism in relation to *Annabrahman*, the essence of the Absolute, Khare points out that the relationship between a guru and his disciple may be thought of in terms of a relationship between a skilled cook and the cooked: "[a] disciple is like an unripe fruit, and one's guru is a great cook who knows how long to cook each fruit to get the maximum flavor out of it" (1992a: 215).

medieval Gujarat (Das 1968) would indicate that this was true for so-called Brahmins as well as for so-called Kshatriyas. Even with his focus on standard physical fitness, however, Deshpande does make passing reference to the Ayurvedic literature as regards personal hygiene and the daily regimen (1992:110). He points out that these regimens, along with the practice of yoga, were particularly relevant to middle-aged Brahmin householders—the classical performers of sacrifice—and older Vanaprastha renunciants. By implication, younger Kshatriya nobles engaged in more vigorous, martial routines that involved archery, wrestling, and competitive sports. But in the Ayurvedic literature it is clear that to push the body beyond the limit of its ability in order to increase the strength of muscles and the efficiency of the heart and lungs is not only not the point but unhealthy. Therefore, the exercise prescribed by Caraka and Suśruta is significantly different from, if not contradictory to, that which was prescribed, for example, by the Brahmin Dronacharya for the martial training of the five Kshatriya Pandava brothers.

What, then, is Ayurvedic exercise, and what is it good for? It is good for many things—the luster of one's skin, concentration, the correct proportion of one's limbs, vigor, and as a prophylactic against annoyances—but it functions primarily as an important support regimen to the more integral process of metabolic transformation. In other words, exercise is to diet in the Ayurvedic scheme of things much as diet is to exercise in Deshpande's model of the martial Kshatriya regimen and in the biomedical/nutritional/fitness configuration of things. In this regard, Rao (1987:87) summarizes the Ayurvedic literature as follows: "The main purposes of exercise are to facilitate proper elimination of waste products from the body (*malanihsāraṇā*), to increase the digestive power (*agni-dīpana*), and reduction of fat (*medo-nāśa*)." Food does not fuel physical activity and build or strengthen muscles; physical activity promotes the transmutation of food into semen. These two perspectives on the relationship between exercise, physiology, and health are completely different. Nevertheless, it seems as though the Ayurvedic literature does seek to accommodate the vigorous kinetic routine of the Kshatriya nobles to its more metabolic model of humoral transmutation by pointing out that the power of digestion and physical strength increase proportionally. However, the direction of cause and effect is largely one-way: digestion produces semen which enhances physical strength which promotes digestion. Fitness is simply a manifestation of virility, and strength is measured, by those who seek a transformation of metabolism into muscle, not only in terms of how much one can lift, how far and fast one can run, or how high one can jump but in terms of how much of a particular kind of food one is able to eat and efficiently digest without getting sick. To an extent, therefore, vigorous exercise can, under some circumstances, promote exceptional digestion—as in the case of wrestlers (Alter 1992)—but from a strict Ayurvedic perspective superior physical

strength is simply a gross by-product of this more elemental process.

### Metamorphic Heaps: *Rasāyana* and Somatic Perfection

A consideration of personal hygiene and the daily regimen as forms of physiological fitness and an analysis of eating and digestion as forms of metabolic exercise anticipates the seventh branch of Ayurvedic medicine, *rasāyana* (rejuvenation therapy). *Rasāyana* is of particular interest because it forces the question of whether Ayurveda is primarily concerned with remedial healing or with a proactive formula for the embodiment of self-perfection. Certainly, the term "Ayurveda" may be translated not just as the science of life or the science of saving life or the knowledge of long life but also as knowledge for prolonging life (Zimmermann 1987:2). As a therapy which rejuvenates, *rasāyana* is explicitly designed to confront the ravages of time and bestow eternal youth and immortality. Quite apart from whether *rasāyana* therapy works, my concern is with the way in which it incarnates a unique conception of physical fitness that is implied in all of the other branches of the medical system and is integral to the applied physiology of humoral pathology as a whole.

To understand *rasāyana* as a form of hyperfitness, one must begin with mythology and structural cosmology—the sun, the moon, and the calendrical cycle, in which time is of the essence. As White puts it, the cycle of the seasons and the relationship between life and death are "reducible to a single dynamic . . . an ongoing tug-of-war between the sun and the moon, in which the prize [is] moisture, in the especial form of vital fluids" (1996:23). Whereas the fiery sun drains the life from everything and dries up essential fluids, the moon cools, replenishes, and moisturizes. The sun is most powerful and devastating at the peak of summer, just before the onset of the summer monsoon, and the moon most nourishing during the winter monsoon (Zimmermann 1980 [1975]:102; see *Caraka-Saṁhitā, Sūtrasthāna*, 6). When the sun is in the ascendancy, humans are said to be at high risk for contracting what White, following Zimmermann (1980 [1975]:102), calls Ayurveda's "ontological disease": *rājayakṣma* or royal consumption (1996:24). *Rājayakṣma* is a wasting disease in which the body's vital fluid is completely dried up. In mythology, King Moon is the first to suffer from royal consumption due to the astronomical confluence of fire and desire. King Moon is married to 27 stars, and he moves through their astrological mansions in the course of a lunar month. Every night he sleeps with one, spending his last and most rapturous night with Rohini, whose mansion is closest to the sun. As a result, his "rasa, his vigor, his semen [is] completely dried up, [and he] must perform a *soma* (which is both a name for and the stuff of the moon, the *rasa* par excellence) sacrifice in order

to recover his lost *rasa*, and so the cycle begins anew" (White 1996:24). Significantly, King Moon is revived by means of *rasāyana* therapy, and through the course of a 15-day waxing period he is completely rejuvenated.

White has clearly illustrated the connection between mythology and medicine in that *rasāyana* is designed to revive a waning moon and cure royal consumption because microcosmic semen and the macrocosmic soma elixir are identical. Moreover, he also points out that *rasāyana* therapy and *vajikarana* virility therapy are both integrally concerned with digestion.<sup>30</sup> "Both of these branches of Ayurveda assume that youthful vigor is primarily a matter of good digestion which, when overly troubled by 'excessive manifestations of time,' must be restored through more radical treatments than special dietary regimens or purification techniques" (White 1996:25). The "more radical treatment" of *rasāyana* is interesting for number of reasons, not the least of which is the fact that although it is designed as a remedy for royal consumption it is prescribed as a radical regimen of physical re-fitness—a cure for old age, the waxing of time. The Ayurvedic literature on the whole takes on the question of aging somewhat ambiguously and ambivalently, making no clear distinction between premature aging and senility, on the one hand, and normal aging as a natural fact of life, on the other. As Rao (1987:176, emphasis added) puts it,

Rejuvenation is essentially regeneration of vitality so that the individual, although old and worn out, would get a fresh lease of life, full of energy and stamina. . . .

The assumption is that senility is not an inescapable condition of old age, and that premature degeneration can be corrected. Conditions like degeneration of body tissues, loss of the efficient functioning of sense organs, diminution in mental vigour (intelligence, memory and so forth) can not only be prevented, but can also be reversed.

Qualifications aside, as the epistemological cure for the ontological disease, *rasāyana* bestows immortality. The more radical of the two forms of *rasāyana* therapy involves a complete cleansing of the body, inside and out, with particular attention given to the intestines, which are "purged of all fecal accumulations" (Rao 1987:177). The person is then sequestered within a series of three concentric huts built for the purpose of administering the therapy. While in the hut the person must follow an extremely strict regimen for a period of four months that stipulates exactly what to eat and what to do. Although complex and detailed, the regimen is not rigid; people with different constitutions and

different conditions must eat and do things somewhat differently. Nevertheless, taken as a whole, the therapy which prepares a person for the elixir ingestion may be interpreted as a "perfected" daily regimen and as "total" personal hygiene—as a regimen for rebirth through dissolution (see White 1984: 52).

As the key ingredient in *rasāyana*, *rasa* denotes a range of various substances, elements, and essences depending on the level of abstraction entailed and the context within which the treatment is being prescribed. Primarily, however, *rasa* refers both to the herb *soma*, the essence of all essences, and to mercury, the elemental distillate of all elements in the alchemical formulation of Siddha medicine. On a number of different levels, *soma*, mercury, and *rasa* are identical to semen in the physiology of *dhātū* metamorphosis.<sup>31</sup> Thus, *rasāyana* therapy is a means by which the body as a whole may be rejuvenated. It is important to note that *rasāyana* per se does not enhance virility. It restores youth, which is a precondition for virility, but in and of itself semen has very little if anything to do with sex or sexuality, even though, as White notes (1996:26), the term *rasāyana* has become synonymous with contemporary Ayurvedic treatments for a range of sexual disorders.

In terms of botany and herbal pharmacology, there are 24 varieties of the *soma* plant, all of which "have a bulb, look like a creeper, and secrete a milky juice" (*Suśruta-Saṁhitā* 4.29.4–9 [Singhal and Patterson 1993:42]). Although *soma* does not figure in Western botanical taxonomies, the *Suśruta-Saṁhitā* provides a long and fairly detailed list of "alternative herbs" that have the same effect (4.30 [Singhal and Patterson 1993:43]). Moreover, it is clear that *soma* is an herbal alternative to various permutations of mercury in the largely inorganic Siddha pharmacopeia—which is to say that we are not dealing with metaphors upon metaphors here. The *rasāyana* branch of Ayurveda is empirical, not esoteric, and every bit as rational in its ontological structure as the branch that deals with surgery. Consider how *Suśruta* describes the procedure and explains its benefits (4.29.10–19 [Singhal and Patterson 1993:42]):

A man who wishes to take *soma* should build a special house, with three chambers, one inside the other and take a careful diet. The plant is collected at the auspicious time with religious ceremonies. The man pricks the bulb with a golden needle, and drinks a cupped palm full in one gulp. He should stay in the innermost chamber of a special house without sleeping, or he may sleep on a bed of spe-

30. The connection between sexuality, food, and digestion also works the other way around, eating less of very specific kinds of food or large volumes of specific items like ghi can promote celibacy and controlled virility (Alter 1994, 1995, 1997). Although involving somewhat different historical and cultural dynamics, the case of Mahatma Gandhi is a striking example of the larger process (Alter 1996).

31. As White (1996:27) puts it, "It is here, at the level of the replenishment and maintenance of vital fluids, and most particularly the vital fluid that is semen, that the disciplines of Ayurveda and Hatha Yoga intersect: the same semen that the physician identifies with male virility and vitality is the sine qua non of yogic practice; semen is the raw material and fuel of every psychochemical transformation the yogin, alchemist or tantric practitioner undergoes, transformations through which a new, superhuman and immortal body is 'conceived' out of the husk of the mortal, conditioned, biological body."

cial grass and practice *yoga*. The *soma* cause vomiting of blood and worms; on the third day he will pass loose motions and worms. He should have a bath and drink milk. On the seventh day he becomes thin, and then his muscles start to strengthen, his skin flakes off, and his teeth, nails and hair fall out. After massage and a bath his skin will become firm. On the seventeenth day new teeth will appear. He should then increase his diet. New nails will grow and his hair will become luxuriant. After six weeks he may leave the innermost chamber of the house for a short time, and then, gradually, to acclimatize himself, spend longer periods in the middle one, and finally ten days in the outer chamber. After four months and religious rites he may go where he pleases.

A man who has taken *soma* will always stay young; he cannot be harmed by fire, water, poison, or weapon. He will be beautiful and learned and will never be exhausted.

As White has pointed out, the relationship between *rasāyana* therapy, *haṭha yoga*, and alchemy is important. In the *tāntric*, alchemical science of Siddha medicine, the ultimate goal is to effect an embodiment of the elemental process by which mercury is turned into gold, just as in *haṭha yoga* semen is channeled upward and transformed into *amṛta*, the nectar of immortality. The goal, therefore, is to perfect oneself by chemically influencing humoral metabolism in such a way as to effect a transmutation of substance (White 1984:57; see also Majumdar 1971:233):

The processes involved in the transmutation of the body are identical to those of metals. The body is "pierced" by the ingested perfected mercury, which causes it to rid itself—through sweat, urine, feces, etc.—of that which is *sthūla* [coarse] in it, such that only *sūkṣma* [subtle] remains. As *sthūla* "envelopes" are successively stripped away, the body, like the metallic stages, becomes denser, more powerful, shining and immortal. The body becomes perfected (*kāya siddha*), as hard as a diamond (*vajra*), impenetrable and all penetrating. It shines and smells like *hāṭaka* gold. The hair becomes as black antimony, and the face and form of the man become those of a beautiful adolescent just entering into maturity. He becomes eternally young and unsusceptible to disease or injury. . . .

I think it is very significant that Suśruta moves from this metabolic physiology of ideal re-fitness to an anatomical description of an ideal physique—but not a description that one would expect to find in a medical text: "Persons with certain anatomical features, like disproportionately short necks, wide shoulders, muscular chests, large faces and foreheads, deep voices and deep inspirations while breathing, are generally immune to disease" (*Suśruta-Saṁhitā*, *sūtra*, 35 [Ma-

jumdar 1971:243]; see also *Caraka-Saṁhitā*, *Sūtras-thāna*, 21. 18–19).

### Conclusion: Infant Immortality

Even among critical medical anthropologists whose research is not applied in orientation and does not focus on resolving problems such as endemic malnutrition and childhood diseases, there is a clear tendency to assume that good health is a natural, biological given with universal significance. This assumption creates serious problems for the cross-cultural study of health, since it does not allow for alternative perspectives on what the goal of medicine might be. To date a great deal of work has been done in cultural anthropology on the comparison of different medical traditions and different ways in which the body is culturally constructed, but very little has been said about cross-cultural differences in the underlying assumptions about good health upon which both medical systems and concepts of the body depend.

Responding to this gap in theorizing, I have attempted to suggest that Ayurveda is not just different from most other forms of medical knowledge on the level of theory regarding the nature of disease, organic function, and the structure of physiology. This point has been cogently argued by many others and has been clearly documented in recent research. As Leslie (1976, 1980, 1983, 1992), Brass (1972), Obeyesekere (1976a, b, 1982, 1992), Kakar (1982), Trawick (1983, 1991), Cohen (1995), Nandy (1995a, b), and others (Majumdar 1971: 266–68) have shown, debates concerning the structure, function, and modern institutionalization of Ayurveda have crossed the spectrum at various levels of theory and practice, with some pundits claiming that Ayurveda is and should remain a science unto itself whereas others have argued vigorously for a syncretic approach combining the best of Ayurveda with the best of biomedicine to the greater advantage of both. Sidestepping these issues, my contribution is to question fundamental assumptions regarding the nature of medical knowledge. Extending this argument into the domain of ontology, I suggest that Ayurveda operates on the basis of very different assumptions not just about the relationship between healing, medicine, and concepts of the body but about the nature of nature, the trajectory of human life, and the meaning, experience, and purpose of good health. As has modern medicine, Ayurveda has been heavily influenced by the global hegemony of a remedial bias in the epistemic logic of fighting disease, saving life, and finding cures—and I hardly need to point out the practical utility of this bias in either biomedicine, Ayurveda, or some combination of the two. But it is a critical bias nevertheless in that it superimposes a series of stabilizing, ambiguously instantiating epistemological assumptions about the nature of health onto a metamorphic ontology of physiological transformation—ontology that is conceived of

What all of this suggests is not only that people are unhealthy in a range of variable and problematically comparable ways but that all people can refine themselves and work toward an ideal of hyperfitness by influencing the ebb and flow of the various constituents that affect their unique manifestation of contingent health. Thus people are, depending on one's perspective—and, more significant, depending on their degree of commitment to accommodating and counteracting their natural *doṣic* or *sāric* tendencies—either all sick and getting sicker or all getting healthier.<sup>21</sup> In any case, an Ayurvedic physician must first understand a person's bioecology before being able to determine why that person is sicker than he or she should be under the circumstances appropriate to the biosocial configuration of his or her specific heap (cf. Zimmermann 1980 [1975]:101; Majumdar 1971:243).

This ambiguous ambivalence about what might be called the variable trajectory of health is, I think, clearly manifest in the way in which Ayurvedic texts talk about medicine in general and physiology in particular. Obviously medicine is meant to cure disease and alleviate symptoms, but there seems to be an underlying dissatisfaction in the tone of many texts with the purely remedial, restorative effect of drugs and therapies. As Majumdar points out, referring to the corpus as a whole, "Ayurveda is concerned mainly with prolongation of healthy life and prevention of disease and senility, and only secondarily with curing disease" (1971:213, 225).<sup>22</sup> A popular account reads as follows: "Ayurveda is not just a system of medicine but a science of health promotion designed to increase our well-being and happiness in all aspects. It shows us not only how to treat disease but how to live in such a way as to arrive at optimum health and the maximum utilization of our faculties, which according to Yoga and Ayurveda are almost unlimited" (Ranade 1996: 57). This ambivalence is reflected, I think, in the way in which, at various points in the canonical texts, phenomenal curative agency is ascribed to various specific therapies. For example, enemas concocted from various oils, broths, and other liquids are prescribed for the treatment of fevers, diarrhea, glaucoma, cataracts, headaches, ophthalmia, and a range of other symptoms and diseases but are then said to "make an impotent man potent, a thin man fat, a fat man thin, [and] remove wrinkles and grey hair" (Jolly 1977:33). In a parallel way, it is interesting to note that,

21. Majumdar (1971:241) makes this point well: "Apart from a few exceptions, all individuals have a predominance of one of the three humors and, therefore, an inherent imbalance. The few exceptions and near exceptions enjoy perfect or near perfect health and are immune to disease. The others are always susceptible to disease due to the ever-present possibility of aggravating the inherent imbalances, but normally stay tolerably healthy as long as the humors are not provoked by injudicious diet, wrong conduct or environmental conditions which are at variance with their individual humoral state."

22. I will return to the interesting and important conflation of disease and senility and to the epistemological problem of using the term "preventive medicine" in making sense of Ayurveda's concern with health promotion and fitness.

although various material substances are prescribed for specific ailments, there is a tendency in the classics to state categorically that one substance in a class of substances is inherently better than all others. For example, of the animal fats, ghi is said to be the best, and of the vegetable fats the best is sesame oil (Jolly 1977:33). Here a hierarchy of inherent, categorical value seems to be somewhat at odds with attributions of specific, discriminate medicinal value. Finally, the lengthy passages in the classical texts that enumerate what one should and should not do in order to avoid falling ill are so minutely specific that diseases pertaining to the "derangement of sense organs" can be attributed, cumulatively, to such seemingly mundane and banal things as riding in a defective vehicle, sitting on a hard seat that is knee-high, sleeping without a pillow, going outside without first touching gems, or laughing too loudly (Caraka-Saṁhitā, Sūtrasthāna 8.17–28).

In all of this it is as though a humoral theory of metamorphic transmutation had become inhibited by the practice of Ayurveda as "emergency" medicine for the treatment of disease and by the seemingly pedantic, utilitarian enumeration of recipes in the various treatises—recipes whose classificatory function as schemas of organic pathogenesis and practical function as stock cures lead to an understanding of disease as both a perpetual problem of taxonomic categorization and a condition of chronic crisis—what might be called a utilitarian semiotic of suffering. If one strips away the gross accretions of this preoccupation with enumerated pathologies and reciprocal cures, what remains is a dynamic structure of embodiment wherein being born unhealthy makes it possible to conceive of immortality and freedom in medical terms.<sup>23</sup> As Zimmermann notes, "whereas physiology comes into being as a science at the point where it becomes distinguishable from the study of pathogenesis, [in Ayurveda] the contrary is true" (1987:167)—which means, if I follow the logic correctly, that Ayurveda is concerned primarily with physiology and only somewhat ambivalently with pathogenesis as a discrete science. This is what Zimmermann must mean when he says that "medicine, in the sense of science as we understand it today, is not really relevant to Hindu medicine" (1987:177).<sup>24</sup>

With this in mind I would like to reconsider the di-

23. Referring to the dynamics of time and different chronologies in Ayurvedic logic as they affect the way in which physicians approach the problem of treatment, Zimmermann makes the following distinction: "The distinction between the two aspects of time is, for the doctor, a methodological one. On the one hand, the seasonal cycle gives him a framework for prognosis and hygiene; on the other hand, each phase of a sickness is a critical moment. Thus we have on one side the time of prevention, on the other the time of emergencies" (1980[1975]:104).

24. Majumdar (1971:219) provides some perspective on this critical issue when he points to a clear distinction in the *Rgveda* and *Athrvaveda* between two kinds of health care: *āyusyañi*, which is concerned with the promotion of perfect health through rejuvenation and with longevity in general, and *bhaisajyañi*, which is focused exclusively on curative treatments and medication. It seems as though classical Ayurveda blurs this distinction in an important way.



mension of Ayurveda which is termed *svasthavṛtta* (personal hygiene) and *dinacharyā* (daily routine). Ayurvedic texts are full of prescriptions for such everyday activities as sleep, evacuation of the bowels, taking care of oral, ocular, and aural hygiene, hair care, sartoriality, and, above all, diet (Kutumbiah 1962:130–43; Majumdar 1971:243). The regulated management of almost everything is carefully delineated: when, where, why, and how often to smoke different substances in order to “increase the strength of hairs, skull, sense organs and voice”; the kind of ointment to use daily in order to make eyesight keen and “colour-vision perfect”; the kind of oil to use in one’s ears in order to “improve audition”; the kind of twig to use for brushing one’s teeth in order to make them strong and bright; the right kind of metal tongue scraper to use and how to use it; the ideal temperature for bath water and the appropriate temperatures for different parts of the body; and the efficacious use of mirrors, umbrellas, and walking-sticks (*Caraka-Saṁhitā, Sūtrasthāna*, 5). The prescriptions regarding what kind of wood to use in building a bed, what kind of cloth to use for making a shirt, and what sort of flowers to use in decorating a room are amazingly comprehensive and worthy of careful attention given their location in texts which, as Gerald Larson notes, are otherwise perfectly comparable to and compatible with Western-style medical manuals (1993).

It is useful, I think, to start by considering the alternative to a well-regulated daily routine before looking carefully at the kind of person who emerges from the rigorous exercise—for I think that is what it is—of *svasthavṛtta* and *dinacharyā*. If, in order to maintain good health, one must, for example, wake up daily at 3:30 or 4:00 A.M. and think carefully about whether the food eaten last evening has been well enough digested to enable one to defecate without “forcing the bowels,” what does this suggest about a person who simply wakes up when the spirit moves or when necessity dictates? And what does it suggest about a person who does not think carefully about his or her digestion? If cutting one’s hair, trimming one’s beard, and having a manicure is “nutritive, aphrodisiac, and life-promoting,” and if footwear “benefits eye-sight, promotes strength, and inhibits the libido” (*Caraka-Saṁhitā, Sūtrasthāna* 5. 99, 100), then what of the person who does not cut his hair or trim his nails? What of the person who not only goes about barefoot but also goes out for a walk without an umbrella, a stick, and a turban and without keeping his eyes fixed on a stipulated point 6 ft. ahead of him on the ground (8.18)? The implication is perfectly clear: If one lives life without consciously working at being healthy one is almost by definition chronically ill—which takes us back, I think, to the reason the humors are insidiously morbidic and maintaining their balance is not something that can be taken for granted.

Following from this, common sense and practical experience would indicate that very few people subscribe rigorously to the regimen prescribed. At the very least it suggests a hierarchy of class-based consumption and a lifestyle of elite leisure. Who, after all, can afford a gold

tongue scraper? To follow the letter of the law was more than likely the prerogative of kings if not the perquisite of kingship (Zimmermann 1980 [1975]:104).<sup>25</sup> Moreover, it is unlikely that Caraka and Suśruta, among others, ever expected people in general to live up to the stipulated ideals of *svasthavṛtta* any more than they probably expected (as Zimmermann points out) anyone other than an impotent, heirless king to collect and use crocodile semen. There is, however, a tacit assumption which underlies the obsessive concern with hygiene and regimentation in Ayurveda, namely, an assumption that people are inherently unhealthy.

What this suggests is that personal hygiene and the daily routine are not forms of preventive medicine—there is nothing prophylactic about them—but rather forms of vigorous self-development. Consider what a contemporary encyclopedia of Indian medicine has to say about the virtues of a daily bath (*Sabda-kalpadruma*, quoted in Rao 1987:34):

It gives strength, increases appetite, invigorates the digestive process, nourishes the body, gives a long life, increases the vitality (*ojas*), improves the semen and cheers the mind. It also cleans the body, clears the skin of dirt and itches, reduces morbid heat in the body, removes drowsiness and fatigue, eliminates thirst and inflammation, diminishes the effect of toxins (*visha*), helps reduce fat, and improves eyesight.

And about the benefits of proper sleep (p. 191): “It causes happiness, nourishment, strength, virility and longevity. . . . Sleep at the right time makes for the balance of body constituents (*dhātū-sāmya*), alertness, good vision, good complexion, and fine digestive powers.” In other words, a good bath and good sleep do not keep one healthy but make one healthier on an inherently compromised scale. Consider the nature of the verbs in the two translated passages: *gives, increases, nourishes, improves, cheers*. Eyesight is not just maintained but improved; thirst is not just quenched but eliminated; drowsiness and fatigue are not just ameliorated but removed; and sleep does not just give the body rest but imparts happiness, nourishment, virility, and longevity.

Although a good bath and a good sleep may be regarded as having intrinsically positive effects on the body, Ayurveda stipulates that a person should regularly smoke and take snuff with careful regard to his or her unique disposition, contingent state of health, and climatic environment. Specific guidelines aside, it is clear that the right kind of snuff, taken properly on a regular basis as part of the larger *svasthavṛtta* regimen, is not just good for one in that it cures facial paralysis, lock jaw, chronic rhinitis, and head tremors but also develops metabolic strength and physiological fitness (*Caraka-Saṁhitā, Sūtrasthāna* 5.56–62):

25. See Basham (1976:31–34) for a discussion of the relationship between *vaidyas* and kings in relation to the role of physician and patient and to the question of patronage.

One who practices the snuffing as prescribed and in time, his vision, smell and hearing are not affected [by age], his hairs or beard and mustache do not become white or grey, hairs do not fall rather they grow abundantly. . . . Veins, joints, ligaments and tendons of skull attain greater strength on saturation through snuffing. Face becomes cheerful and well-developed, voice melodious, stable and grave. Freedom from defects and increased strength are bestowed upon all sense organs.

Whereas a good bath, good sleep, and careful snuffing result in fitness, haphazard bathing, sleeping, and snuffing are very clearly pathogenic. According to Vagbhata, "lack of sleep or improper sleep causes misery, emaciation, weakness, sterility and early death" (*Ash-tanga-hṛdaya, sūtra*, 7 [Rao 1987:191]). In this system one either gets better or gets worse; one cannot and should not stay the same.

Nor are the prescriptions particularly "holistic," at least in the fashionable sense of "in tune with nature." A common *dinacharyā* prescription whereby water is to be cooled overnight in a copper vessel and drunk at dawn (*ushah-pana*) does not mean that the water so cooled is pure and fresh by nature. It has been purified and freshened by the material of culture, inorganic chemistry, and the agency of human intervention and thus becomes a tonic only once it has been extracted from nature. Even well water, which is regarded as inherently better than copper-cooled water because it is "warm in the cold season [,] cold in the hot season [and] therefore natural" (Rao 1987:210), is really only "natural" to the extent that wells are somehow regarded as more "natural" than pipes, pumps, and faucets even though they are dug in particular places, constructed with the material of culture, and often require cleaning.

Again, although a cold water bath promotes fitness, very hot water is "positively harmful," and various different temperatures of water are appropriate under various circumstances: hot water if one has returned from a long journey or engaged in hard manual labor, tepid water in the winter and spring (Rao 1987:34). It is interesting, in this light, that although cold water and cool baths are regarded as ideal, as with well water or the drinking water in the copper vessel, the best kind of bath—in the sense of taking the body beyond its natural limits—requires human intervention and the disaggregation, transformation, and recombination of elements. This prescription in the *svasthavṛtta* routine is a two-stage process that requires a sesame-oil body massage and hot water. This bath-as-body-building is referred to as *abhyāṅga* and is said to have the following effect (*Madana-pala-nighantu* [Rao 1987:35]):

It prevents ageing, equalizes the body constituents (*dhātū*), pacifies *vāta*, cures intractable headaches, invigorates the sense organs, improves eye-sight, physical strength and mental cheer, makes the skin bright, soft and free from dirt, removes fatigue, facil-

itates sleep, acts like a hair-tonic (preventing hair from falling or greying, and making the hair roots firm) and refreshes the individual.

Clearly a person who "takes an *abhyāṅga*" emerges not just clean, relaxed, and refreshed but, humorally speaking, a real heap.

Because health is intrinsically compromised by the natural order of things, physical fitness is the only logical alternative. Put another way: if one's digestion, eyesight, skin tone, and hair texture, density, and color are going to be "bad" under putatively normal circumstances—when one wakes up and doesn't stop to think about digestion, sleeps in a bed made out of ordinary wood, arises after dawn and drinks tap water—then why not redefine the domain of normal everyday life to approximate perfection, translate the logic of natural devolution and pervasive morbidity into systematic evolution? In other words, the intense regimen of *svasthavṛtta* and *dinacharyā* must, I think, be seen not from the perspective of one who is trying to stay healthy but from the perspective of one who can feel in the morbidity of his or her physique the possibility of hyperhealth and metaphysical fitness. This, I think, is what Ayurveda as a science of life is really all about even while it must, somewhat pedantically and ambivalently, function as system of healing that deals with the numerous medical emergencies of everyday life. This logic may be taken one step further by considering Ayurvedic prescriptions regarding diet, food, and the regimen of eating.

Food is integral to the *materia medica* of Ayurvedic medicine (Khare 1976a, b, 1992a; Khare and Rao 1986; Nichter 1986; Seneviratne 1992; see also *Caraka-Saṁhitā, Sūtrasthāna*, 27). In fact, all food is medicine to the extent that it can cure and/or cause disease in specific, predictable manifestations. As Zimmermann (1987: 203) points out, "Food and the rules of conduct are associated together as *āhārācārau*, a compound in the dual, to define the conditions of a healthy system of life. The idea of remedy and that of nourishment are thus both parallel and complementary; pharmacy and cuisine are two aspects of medical activities regarded as a single set." Moreover, a consideration of dietetics in Ayurveda takes one back directly to the central problematic of physiology, wherein nutrition promotes not just the homeostasis of the body's organic functions but a structural metamorphosis of the body's constituent properties. Thus, food is assimilated into the body in terms of broad ecological congruence, wherein like nourishes like on a whole series of different levels—sattvic food promotes a sattvic personality; phlegmy food causes phlegm to predominate in the configuration of humors, and, on a more explicit level, the consumption of fat promotes the development of fat, the consumption of blood promotes blood, and so forth (*Caraka-Saṁhitā, Sūtrasthānam*, 6.10). When food is prepared for consumption its constituent properties are brought into play; the act of eating then sets in motion a series

of "cooking" or "digestion" whereby the "nutritive juices of foods" (*annarasa*) are transformed, first into chyle (*rasadhātū*) and then, sequentially, into blood (*rakta*), flesh (*māmsa*), fat (*medas*), bone (*asthi*), marrow (*majjā*), and semen (*śukra*). It takes 28 days for *annarasa* to become semen, and since only a fraction of each of the seven *dhātūs* is transformed into the next in sequence a small volume of "cooked" semen is understood to be the distilled, condensed essence of a fairly large volume of "raw" food. The body is thus structured on the basis of a metabolic hierarchy of tissue transformation wherein that which is most condensed is that which is most subtle and "thus closest to the universal essence and the power which obtains to it" (White 1984:50). At the pinnacle of this hierarchy is the essence of all essences known as *ojas*, which may be understood as the physiological analogue of divine *shakti* and the manifestation of power, vigor, fitness, and ultimate vitality.

Significantly, as Zimmermann has shown in detail, the world of food which nourishes this sequence of transmutation is also structured in terms of a precise hierarchy of transformation. A food chain with carnivores at the top, herbivores in the middle, and plants and roots at the bottom establishes a pyramid of increasingly condensed, nutritious food. "Nourishing" are the meats!—The meat of eaters of meat is doubly so! The virtues of the meats that they have eaten are added to those of their own flesh, producing a superconcentrate: . . . the concentration of the materials superactivates the essences that they contain" (Zimmermann 1987:160). Theoretically at least, meat is the best kind of food to produce plumpness<sup>26</sup> (Vagbhata, *sūtra* 14.35 [Zimmermann 1987:172]). "The meat of the eaters of meat" is the best of all (Caraka, *cikitsa* 15.209–11 [Zimmermann 1987:172]). And the best cut of meat is the liver of a freshly killed, healthy young female animal (*Suśruta-Saṁhitā* 146.53–138, 333 [Singhal and Patterson 1993:7]). Although the meat and blood of lions and leopards are classified exclusively as pharmaceuticals for the treatment of serious illness, meat is clearly an important part of the ideal diet. In the logic of like nourishing like, flesh is "precondensed" and enters the sequence of human digestion at a point closer to semen.

26. As Zimmermann (1987:160) points out, this notion of plumpness (*pushṭi*) conjures up images of obesity (*sthaulya*)—at least from the vantage point of a culture that is preoccupied with slenderness—even though it denotes something else entirely in the somatology of Ayurvedic fitness, aesthetics, and health. Plumpness is good, however, only when it is manifest as firmness rather than as flabbiness, a distinction that has very little to do with exercise but everything to do with the balance or imbalance of phlegm. Situating this point at the crux of a structural argument concerning meat eating and violence, Zimmermann says that "this alliance between contraries is absolutely fundamental: consumption of the most disgusting of meats and purity, conceived as serenity, an absence of distress and anger. Louis Dumont has noted the association between rain and order; similarly, this association between the purity of the mind and the plumpness of the body cannot be emphasized too strongly" (p. 178).

However, insofar as the flesh of animals contains the already distilled, assimilated, and partially transformed essence of a wide variety of raw foods, a high degree of specific calibration and rigid classification is required to establish the precise relationship of cause and effect in terms of the assimilation of one physiology by that of another. Although numerous kinds of food—wheat, garlic, mangoes, and lotus roots, for example—are said to increase semen, flesh as a broad food group seems to be transformed into semen most readily and most efficiently. In the *Suśruta-Saṁhitā*, for example, partridge meat "increases semen and memory, improves the complexion and is constipating," sparrow meat "cures bleeding, and greatly increases semen," pork "increases semen and urine," and duck "cures bleeding, increases semen, and expels urine and feces" (146.53–138, 33 [Singhal and Patterson 1993]). Clearly meat does many other things in the physiology of digestive metamorphosis, but its association with the production of condensed semen clearly indicates a preference on the part of Caraka, Suśruta, and Vagbhata for a diet that was not just healthy but strategically manipulated raw material so as to extract maximum utility. Positioned at the apex of the food chain you are not simply what you eat—in a holistically economical and ecologically balanced sense—but greater and more refined than what you eat.

Even though meat has exceptional properties, food of all kinds is the cornerstone of health. It is the basis of all action, including the four goals of life: desire, prosperity, right action, and release. Significantly, the digestion of food at all levels of metabolic transmutation entails the agency of fire (*dhātuvagnis*), and eating and digestion—the internal process of sequential cooking—are understood as a kind of metabolic sacrifice.<sup>27</sup> "The identification of the three *doṣas* with the three components of sacrifice is . . . explicit in Ayurveda. The body's inner fire (*antarāgni*) is represented by the fiery liquid that is bile; phlegm is 'lunar' (*saumya*) fluid, and the microcosmic wind bears the same name as it does in the macrocosm: *vayu* (or *vāta*)" (White 1996:22). As Zimmermann (1987:205) points out, "Making use of an analogy between the sacred fire and *antarāgni*, 'the internal fire, the digestive fire,' Caraka [27.346] compares the meal to a sacrifice: He will escape all disease, he who, maintainer of the fire (*āhitāgni*), provides as offerings to his internal fire (*antarāgnau juhōti*) foods that are always wholesome." What is significant about this analogy is the way in which an abstract concept of ritual sacrifice that relates specifically to a theme of "cooking to perfect the world" is brought down to earth in order to make food consumers engage in a regimen whereby they make every effort to perfect themselves.<sup>28</sup>

27. As White (1984:52) notes, the analogy also works the other way around in the sense that sacrifice serves as a point of logical reference for the alchemical work of clinically "killing" mercury whereby it is chemically perfected.

28. Although sacrifice is the most explicit analogue for metabolic digestion, Babb (1983: 305) and others (Khare 1992a: 215; Moreno 1992:148) have pointed out that the devotional ingestion of food

It is not, as Zimmermann, citing Malmoud (1975), has pointed out, that Brahmins slipped in status from being world perfecters to being merely cooks in the ritualized scheme of things (1987:207). Rather, as White's work on the contiguity of Ayurveda, Siddha medicine, and yoga would seem to indicate, the *āhitāgni* sacrifice is turned inward without simply being reduced to a metaphor and without any "degradation" (1996: 21–32). Thus the Brahmin tries to perfect himself on a deeply metabolic, biological level.<sup>29</sup> In this sense, cooking and right eating are the penultimate form of self-sacrifice, if this term may be used to convey a sense of Ayurveda's purely cosmic rather than altruistic ethics. Consider what Suśruta has to say about the regimen of consumption:

The best diet is one-year-old cereals, flesh of young animals, freshly cooked with the appropriate seasoning, ripe fruit and vegetables that are fresh, tender and moist [1.46.331–39]

The kitchen should be large and clean, with trustworthy attendants, supervised by the physician. The meal should be taken in a clean, quiet place, sitting on a high comfortable seat, with the food fresh and not too hot, eaten at the right time, without hurrying. Fruit should be taken first, followed by liquids and then solids; of the tastes, sweet should be first, then sour and salt, with the other tastes at the end. The mouth should be frequently washed out with water; water is drunk after the meal and a toothpick used. Aromatics, such as betel, should be taken to clean the mouth and prevent increase in *kapha*. One should then sit comfortably for awhile, before taking a short walk and lying down on the left side. [1.46.446–97 (Singhal and Patterson 1993: 9)]

The process of digestion, which must be understood as being much more comprehensive than what goes on in the stomach and intestines alone and is specifically coded to the body's humoral metabolism as a whole, is, in essence, a process of perfection wherein waste products (*malla*) are serially eliminated and, as White puts it, "the body is cooked to a turn (*paripakvā*)" (1996:20). Thus it is both appropriate and important to point out that in Ayurvedic terms eating and digestion are under-

stood as a kind of exercise, the metabolic, humoral equivalent of a gymnastic workout. This is a form of physical fitness that is directly comparable, on a number of levels, to the kind of Western-style exercises that build up the structural components of a very different kind of body—a body that is made up of interdependent parts rather than transmutable substances, that can be toned and tuned up but not well-cooked and condensed.

But what about that short walk recommended by Suśruta? Is it not the "real" exercise that helps to digest the food that has been eaten? References in the Ayurvedic literature to exercise—in the structural sense of running, swimming, and lifting weights—are difficult to interpret. Clearly exercise is regarded as beneficial, "essential for good health and the only way to reduce fat" (*Suśruta-Saṁhitā* 4.24.38; *Caraka-Saṁhitā, Sūtrasthāna*, 7.31–32). However, from the standpoint of anyone who is interested in developing muscular strength and respiratory and cardiovascular stamina, to say nothing of specific gymnastic skills or proficiency in martial arts, athletics, and sports, the prescriptions seem woefully inadequate. It is noteworthy, for example, that when Caraka catalogues the factors which "lead to the increase of strength," exercise is regarded as no more or less important than, among other things, being born in a place where people are strong and where "seed and soil" are of excellent quality, being born at a time that is conducive to strength, and being cheerful (*Caraka-Saṁhitā, Sūtrasthānam*, 6.13). Moreover, according to Caraka one should exercise only up to "half of one's ability" (*ardha-śakti*), until one's heart begins palpitating or until one starts to sweat (*Caraka-Saṁhitā, sūtra*, 7.31 [Rao 1987:87]). "Excessive physical exercise gives rise to fatigue, exhaustion, emaciation, thirst, internal hemorrhage, darkness before the eyes, cough fever and vomiting (*Caraka Saṁhitā, Sūtrasthāna*, 7.33). In other words, Ayurvedic exercise stops at the point at which exercise in the Western aerobic, gymnastic sense starts. As Rao points out in his review of the place of exercise in the Ayurvedic literature, the "Suśruta Saṁhitā recommends walking (*chaṅkramana*) as the best exercise, as it does not excessively tax the body (*chikitsa*, 24). Running as a form of exercise is to be avoided, for 'death runs after one who runs.' . . . Excessive exercise is harmful even for healthy people" (1987:87).

It would be wrong to conclude that this perspective on exercise is toned down because it is put forth by sedentary Brahmins or reclusive, otherworldly ascetics. For one thing, it is not toned down. Moreover, as Deshpande (1992) has pointed out, there is no dearth of evidence that running, swimming, weight-lifting, wrestling, boxing, and all manner of strenuous physical fitness regimens played an important role in the life of various people in the Vedic, epic, and medieval periods of Indian history. There are many examples of training regimens that require one to exert far more than half of one's strength, and the case of contemporary wrestlers in Vrindaban (Lynch 1990) and Banaras (Alter 1992) as well as the example of the Jayesthimalla wrestlers of

may also be understood as a process of physiocosmological transmutation (to use Babb's terminology). As Moreno says of the consumption of *pañcāmṛtam*, a powerful elixir food offering that is used to wash the god and is thereby "enriched" with a subtle residue from his body, "these washings are supposed to be very tasty food, with extraordinary power to restore health and the normal functions of the body . . . by consuming [the god] Murukan's excess of cold, [Cettiyars] can restore in their natures the greatness and goodness (*sāttvika perumai*) qualities they lost in the past" (1992: 166, 167; see also Babb 1983:307).

29. In his study of food symbolism in relation to *Annabrahman*, the essence of the Absolute, Khare points out that the relationship between a guru and his disciple may be thought of in terms of a relationship between a skilled cook and the cooked: "[a] disciple is like an unripe fruit, and one's guru is a great cook who knows how long to cook each fruit to get the maximum flavor out of it" (1992a: 215).

medieval Gujarat (Das 1968) would indicate that this was true for so-called Brahmins as well as for so-called Kshatriyas. Even with his focus on standard physical fitness, however, Deshpande does make passing reference to the Ayurvedic literature as regards personal hygiene and the daily regimen (1992:110). He points out that these regimens, along with the practice of yoga, were particularly relevant to middle-aged Brahmin householders—the classical performers of sacrifice—and older Vanaprastha renunciants. By implication, younger Kshatriya nobles engaged in more vigorous, martial routines that involved archery, wrestling, and competitive sports. But in the Ayurvedic literature it is clear that to push the body beyond the limit of its ability in order to increase the strength of muscles and the efficiency of the heart and lungs is not only not the point but unhealthy. Therefore, the exercise prescribed by Caraka and Suśruta is significantly different from, if not contradictory to, that which was prescribed, for example, by the Brahmin Dronacharya for the martial training of the five Kshatriya Pandava brothers.

What, then, is Ayurvedic exercise, and what is it good for? It is good for many things—the luster of one's skin, concentration, the correct proportion of one's limbs, vigor, and as a prophylactic against annoyances—but it functions primarily as an important support regimen to the more integral process of metabolic transformation. In other words, exercise is to diet in the Ayurvedic scheme of things much as diet is to exercise in Deshpande's model of the martial Kshatriya regimen and in the biomedical/nutritional/fitness configuration of things. In this regard, Rao (1987:87) summarizes the Ayurvedic literature as follows: "The main purposes of exercise are to facilitate proper elimination of waste products from the body (*malanihsāraṇā*), to increase the digestive power (*agni-dīpana*), and reduction of fat (*medo-nāśa*)." Food does not fuel physical activity and build or strengthen muscles; physical activity promotes the transmutation of food into semen. These two perspectives on the relationship between exercise, physiology, and health are completely different. Nevertheless, it seems as though the Ayurvedic literature does seek to accommodate the vigorous kinetic routine of the Kshatriya nobles to its more metabolic model of humoral transmutation by pointing out that the power of digestion and physical strength increase proportionally. However, the direction of cause and effect is largely one-way: digestion produces semen which enhances physical strength which promotes digestion. Fitness is simply a manifestation of virility, and strength is measured, by those who seek a transformation of metabolism into muscle, not only in terms of how much one can lift, how far and fast one can run, or how high one can jump but in terms of how much of a particular kind of food one is able to eat and efficiently digest without getting sick. To an extent, therefore, vigorous exercise can, under some circumstances, promote exceptional digestion—as in the case of wrestlers (Alter 1992)—but from a strict Ayurvedic perspective superior physical

strength is simply a gross by-product of this more elemental process.

### Metamorphic Heaps: *Rasāyana* and Somatic Perfection

A consideration of personal hygiene and the daily regimen as forms of physiological fitness and an analysis of eating and digestion as forms of metabolic exercise anticipates the seventh branch of Ayurvedic medicine, *rasāyana* (rejuvenation therapy). *Rasāyana* is of particular interest because it forces the question of whether Ayurveda is primarily concerned with remedial healing or with a proactive formula for the embodiment of self-perfection. Certainly, the term "Ayurveda" may be translated not just as the science of life or the science of saving life or the knowledge of long life but also as knowledge for prolonging life (Zimmermann 1987:2). As a therapy which rejuvenates, *rasāyana* is explicitly designed to confront the ravages of time and bestow eternal youth and immortality. Quite apart from whether *rasāyana* therapy works, my concern is with the way in which it incarnates a unique conception of physical fitness that is implied in all of the other branches of the medical system and is integral to the applied physiology of humoral pathology as a whole.

To understand *rasāyana* as a form of hyperfitness, one must begin with mythology and structural cosmology—the sun, the moon, and the calendrical cycle, in which time is of the essence. As White puts it, the cycle of the seasons and the relationship between life and death are "reducible to a single dynamic . . . an ongoing tug-of-war between the sun and the moon, in which the prize [is] moisture, in the especial form of vital fluids" (1996:23). Whereas the fiery sun drains the life from everything and dries up essential fluids, the moon cools, replenishes, and moisturizes. The sun is most powerful and devastating at the peak of summer, just before the onset of the summer monsoon, and the moon most nourishing during the winter monsoon (Zimmermann 1980 [1975]:102; see *Caraka-Saṁhitā, Sūtrasthāna*, 6). When the sun is in the ascendancy, humans are said to be at high risk for contracting what White, following Zimmermann (1980 [1975]:102), calls Ayurveda's "ontological disease": *rājayakṣma* or royal consumption (1996:24). *Rājayakṣma* is a wasting disease in which the body's vital fluid is completely dried up. In mythology, King Moon is the first to suffer from royal consumption due to the astronomical confluence of fire and desire. King Moon is married to 27 stars, and he moves through their astrological mansions in the course of a lunar month. Every night he sleeps with one, spending his last and most rapturous night with Rohini, whose mansion is closest to the sun. As a result, his "rasa, his vigor, his semen [is] completely dried up, [and he] must perform a *soma* (which is both a name for and the stuff of the moon, the *rasa* par excellence) sacrifice in order

to recover his lost *rasa*, and so the cycle begins anew" (White 1996:24). Significantly, King Moon is revived by means of *rasāyana* therapy, and through the course of a 15-day waxing period he is completely rejuvenated.

White has clearly illustrated the connection between mythology and medicine in that *rasāyana* is designed to revive a waning moon and cure royal consumption because microcosmic semen and the macrocosmic soma elixir are identical. Moreover, he also points out that *rasāyana* therapy and *vajikarana* virility therapy are both integrally concerned with digestion.<sup>30</sup> "Both of these branches of Ayurveda assume that youthful vigor is primarily a matter of good digestion which, when overly troubled by 'excessive manifestations of time,' must be restored through more radical treatments than special dietary regimens or purification techniques" (White 1996:25). The "more radical treatment" of *rasāyana* is interesting for number of reasons, not the least of which is the fact that although it is designed as a remedy for royal consumption it is prescribed as a radical regimen of physical re-fitness—a cure for old age, the waxing of time. The Ayurvedic literature on the whole takes on the question of aging somewhat ambiguously and ambivalently, making no clear distinction between premature aging and senility, on the one hand, and normal aging as a natural fact of life, on the other. As Rao (1987:176, emphasis added) puts it,

Rejuvenation is essentially regeneration of vitality so that the individual, although old and worn out, would get a fresh lease of life, full of energy and stamina. . . .

The assumption is that senility is not an inescapable condition of old age, and that premature degeneration can be corrected. Conditions like degeneration of body tissues, loss of the efficient functioning of sense organs, diminution in mental vigour (intelligence, memory and so forth) can not only be prevented, but can also be reversed.

Qualifications aside, as the epistemological cure for the ontological disease, *rasāyana* bestows immortality. The more radical of the two forms of *rasāyana* therapy involves a complete cleansing of the body, inside and out, with particular attention given to the intestines, which are "purged of all fecal accumulations" (Rao 1987:177). The person is then sequestered within a series of three concentric huts built for the purpose of administering the therapy. While in the hut the person must follow an extremely strict regimen for a period of four months that stipulates exactly what to eat and what to do. Although complex and detailed, the regimen is not rigid; people with different constitutions and

different conditions must eat and do things somewhat differently. Nevertheless, taken as a whole, the therapy which prepares a person for the elixir ingestion may be interpreted as a "perfected" daily regimen and as "total" personal hygiene—as a regimen for rebirth through dissolution (see White 1984: 52).

As the key ingredient in *rasāyana*, *rasa* denotes a range of various substances, elements, and essences depending on the level of abstraction entailed and the context within which the treatment is being prescribed. Primarily, however, *rasa* refers both to the herb *soma*, the essence of all essences, and to mercury, the elemental distillate of all elements in the alchemical formulation of Siddha medicine. On a number of different levels, *soma*, mercury, and *rasa* are identical to semen in the physiology of *dhātū* metamorphosis.<sup>31</sup> Thus, *rasāyana* therapy is a means by which the body as a whole may be rejuvenated. It is important to note that *rasāyana* per se does not enhance virility. It restores youth, which is a precondition for virility, but in and of itself semen has very little if anything to do with sex or sexuality, even though, as White notes (1996:26), the term *rasāyana* has become synonymous with contemporary Ayurvedic treatments for a range of sexual disorders.

In terms of botany and herbal pharmacology, there are 24 varieties of the *soma* plant, all of which "have a bulb, look like a creeper, and secrete a milky juice" (*Suśruta-Saṁhitā* 4.29.4–9 [Singhal and Patterson 1993:42]). Although *soma* does not figure in Western botanical taxonomies, the *Suśruta-Saṁhitā* provides a long and fairly detailed list of "alternative herbs" that have the same effect (4.30 [Singhal and Patterson 1993:43]). Moreover, it is clear that *soma* is an herbal alternative to various permutations of mercury in the largely inorganic Siddha pharmacopeia—which is to say that we are not dealing with metaphors upon metaphors here. The *rasāyana* branch of Ayurveda is empirical, not esoteric, and every bit as rational in its ontological structure as the branch that deals with surgery. Consider how *Suśruta* describes the procedure and explains its benefits (4.29.10–19 [Singhal and Patterson 1993:42]):

A man who wishes to take *soma* should build a special house, with three chambers, one inside the other and take a careful diet. The plant is collected at the auspicious time with religious ceremonies. The man pricks the bulb with a golden needle, and drinks a cupped palm full in one gulp. He should stay in the innermost chamber of a special house without sleeping, or he may sleep on a bed of spe-

30. The connection between sexuality, food, and digestion also works the other way around, eating less of very specific kinds of food or large volumes of specific items like ghi can promote celibacy and controlled virility (Alter 1994, 1995, 1997). Although involving somewhat different historical and cultural dynamics, the case of Mahatma Gandhi is a striking example of the larger process (Alter 1996).

31. As White (1996:27) puts it, "It is here, at the level of the replenishment and maintenance of vital fluids, and most particularly the vital fluid that is semen, that the disciplines of Ayurveda and Hatha Yoga intersect: the same semen that the physician identifies with male virility and vitality is the sine qua non of yogic practice; semen is the raw material and fuel of every psychochemical transformation the yogin, alchemist or tantric practitioner undergoes, transformations through which a new, superhuman and immortal body is 'conceived' out of the husk of the mortal, conditioned, biological body."

cial grass and practice *yoga*. The *soma* cause vomiting of blood and worms; on the third day he will pass loose motions and worms. He should have a bath and drink milk. On the seventh day he becomes thin, and then his muscles start to strengthen, his skin flakes off, and his teeth, nails and hair fall out. After massage and a bath his skin will become firm. On the seventeenth day new teeth will appear. He should then increase his diet. New nails will grow and his hair will become luxuriant. After six weeks he may leave the innermost chamber of the house for a short time, and then, gradually, to acclimatize himself, spend longer periods in the middle one, and finally ten days in the outer chamber. After four months and religious rites he may go where he pleases.

A man who has taken *soma* will always stay young; he cannot be harmed by fire, water, poison, or weapon. He will be beautiful and learned and will never be exhausted.

As White has pointed out, the relationship between *rasāyana* therapy, *haṭha yoga*, and alchemy is important. In the *tāntric*, alchemical science of Siddha medicine, the ultimate goal is to effect an embodiment of the elemental process by which mercury is turned into gold, just as in *haṭha yoga* semen is channeled upward and transformed into *amṛta*, the nectar of immortality. The goal, therefore, is to perfect oneself by chemically influencing humoral metabolism in such a way as to effect a transmutation of substance (White 1984:57; see also Majumdar 1971:233):

The processes involved in the transmutation of the body are identical to those of metals. The body is "pierced" by the ingested perfected mercury, which causes it to rid itself—through sweat, urine, feces, etc.—of that which is *sthūla* [coarse] in it, such that only *sūkṣma* [subtle] remains. As *sthūla* "envelopes" are successively stripped away, the body, like the metallic stages, becomes denser, more powerful, shining and immortal. The body becomes perfected (*kāya siddha*), as hard as a diamond (*vajra*), impenetrable and all penetrating. It shines and smells like *hāṭaka* gold. The hair becomes as black antimony, and the face and form of the man become those of a beautiful adolescent just entering into maturity. He becomes eternally young and unsusceptible to disease or injury. . . .

I think it is very significant that Suśruta moves from this metabolic physiology of ideal re-fitness to an anatomical description of an ideal physique—but not a description that one would expect to find in a medical text: "Persons with certain anatomical features, like disproportionately short necks, wide shoulders, muscular chests, large faces and foreheads, deep voices and deep inspirations while breathing, are generally immune to disease" (*Suśruta-Saṁhitā*, *sūtra*, 35 [Ma-

jumdar 1971:243]; see also *Caraka-Saṁhitā*, *Sūtras-thāna*, 21. 18–19).

### Conclusion: Infant Immortality

Even among critical medical anthropologists whose research is not applied in orientation and does not focus on resolving problems such as endemic malnutrition and childhood diseases, there is a clear tendency to assume that good health is a natural, biological given with universal significance. This assumption creates serious problems for the cross-cultural study of health, since it does not allow for alternative perspectives on what the goal of medicine might be. To date a great deal of work has been done in cultural anthropology on the comparison of different medical traditions and different ways in which the body is culturally constructed, but very little has been said about cross-cultural differences in the underlying assumptions about good health upon which both medical systems and concepts of the body depend.

Responding to this gap in theorizing, I have attempted to suggest that Ayurveda is not just different from most other forms of medical knowledge on the level of theory regarding the nature of disease, organic function, and the structure of physiology. This point has been cogently argued by many others and has been clearly documented in recent research. As Leslie (1976, 1980, 1983, 1992), Brass (1972), Obeyesekere (1976a, b, 1982, 1992), Kakar (1982), Trawick (1983, 1991), Cohen (1995), Nandy (1995a, b), and others (Majumdar 1971: 266–68) have shown, debates concerning the structure, function, and modern institutionalization of Ayurveda have crossed the spectrum at various levels of theory and practice, with some pundits claiming that Ayurveda is and should remain a science unto itself whereas others have argued vigorously for a syncretic approach combining the best of Ayurveda with the best of biomedicine to the greater advantage of both. Sidestepping these issues, my contribution is to question fundamental assumptions regarding the nature of medical knowledge. Extending this argument into the domain of ontology, I suggest that Ayurveda operates on the basis of very different assumptions not just about the relationship between healing, medicine, and concepts of the body but about the nature of nature, the trajectory of human life, and the meaning, experience, and purpose of good health. As has modern medicine, Ayurveda has been heavily influenced by the global hegemony of a remedial bias in the epistemic logic of fighting disease, saving life, and finding cures—and I hardly need to point out the practical utility of this bias in either biomedicine, Ayurveda, or some combination of the two. But it is a critical bias nevertheless in that it superimposes a series of stabilizing, ambiguously instantiating epistemological assumptions about the nature of health onto a metamorphic ontology of physiological transformation—ontology that is conceived of