



**University of Calgary**

**PRISM: University of Calgary's Digital Repository**

---

University of Calgary Press

University of Calgary Press Open Access Books

---

2011

# After appropriation: explorations in intercultural philosophy and religion

University of Calgary Press

---

"After appropriation: explorations in intercultural philosophy and religion". Morny Joy, Ed.  
University of Calgary Press, Calgary, Alberta, 2011.

<http://hdl.handle.net/1880/48845>

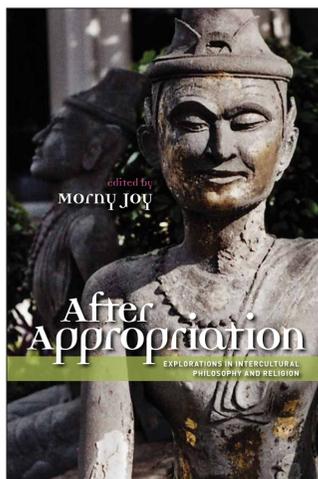
book

---

<http://creativecommons.org/licenses/by-nc-nd/3.0/>

Attribution Non-Commercial No Derivatives 3.0 Unported

Downloaded from PRISM: <https://prism.ucalgary.ca>



## AFTER APPROPRIATION: EXPLORATIONS IN INTERCULTURAL PHILOSOPHY AND RELIGION

edited by Morny Joy

ISBN 978-1-55238-584-5

**THIS BOOK IS AN OPEN ACCESS E-BOOK.** It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at [ucpress@ucalgary.ca](mailto:ucpress@ucalgary.ca)

**Cover Art:** The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

**COPYRIGHT NOTICE:** This open-access work is published under a Creative Commons licence.

This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

### UNDER THE CREATIVE COMMONS LICENCE YOU **MAY**:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

### UNDER THE CREATIVE COMMONS LICENCE YOU **MAY NOT**:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.

# philosophy, medicine, science, and boundaries

DAN LUSTHAUS

Harvard University

The *Caraka-saṃhitā* is widely accepted as the earliest extant Indian medical text. Its founding ideas are attributed to an ancient preceptor named Ātreya and his disciple Agniveśa, about whom we know very little that is not deeply drenched in conflicting hagiographia. The core redaction of this text is attributed to someone named Caraka, whose historical identity is equally soaked in conflicting hagiographical details.<sup>1</sup> In this text, however, we find, along with a plethora of medical information about sundry physical and mental illnesses, symptoms, drugs, herbs, diagnostic theory, and principles, methods of prognosis, treatments, anatomical theory, and so on, what is usually considered to be the first appearance of the theory of *pramāṇa*, the instruments or means by which knowledge is acquired. Medieval Indian philosophy – after the *Nyāya-sūtra* (which appears to have been influenced by the *Caraka-saṃhitā* [hereafter *CS*] in its own treatment of the *pramāṇas*), and especially after the innovations in epistemology and logic developed by the Buddhist philosophers Dignāga and

Dharmakīrti – devoted much of its energy and attention to arguments and refinements of *pramāṇa* theory.

For centuries, *pramāṇa* theory was the grounding discipline for all Indian philosophy, no matter which school or tradition one belonged to. Why did it first appear in India in a medical text? Does that make the *CS* a philosophical text or a medical text with some philosophical sections? Is this a question for comparative philosophy or for comparative “history” of science? I will try in this paper to both complicate and clarify those questions.

## COMPARED TO WHAT?

This essay will be a departure from my usual approach, which would be to focus on a careful reading of a text or limited range of texts. Instead, here, I will raise more general issues gathered from some of the thoughts I have had over the years as a practitioner of what could be called comparative philosophy, ideas raised by working on a variety of materials in a variety of religious and philosophical traditions. For the most part, what will be offered are, not so much conclusions, but possible research directions or considerations for myself and other practitioners of this sort of philosophy, though, as I will suggest in a moment, in some very important sense, *all* philosophy is comparative.

All thinking is comparative:  $X$  and non- $X$ ,  $X$  and  $Y$ ,  $Q$  implicating  $R$ ; all thinking presupposes notions of identity and difference. In what ways are  $X$  and  $Y$  the same or different? All relations presuppose at least two things must be different from each other, and at the same time united in a common relation. When we wish to test whether our students can think rather than regurgitate, we ask them to write essays that “compare and contrast” one idea, or system, or theory, etc., with another. Rubbing things together creates mental friction, which can, under the right conditions, ignite insightful and even innovative thinking – a type of creative *tapas* in the R̥g Vedic sense.<sup>2</sup> A contemporary philosopher tackling Plato, or Aquinas, or Descartes, or Hegel, or Frege, or Whitehead, or Derrida is, in effect, doing comparative philosophy, comparing the thought of another time and/or place, often in another language, with one’s own. Even when philosophizing strictly within one’s own contemporaneous idiom with one’s contemporaries, one is thinking comparatively of one idea with

another, or one theory with another, though obviously within a much more restricted horizon of comparative possibilities. Hence, there is a risk of ideational sterility unless new ideas, imported from elsewhere, can re-vivify the ideational pool. That “other” source can be a foreign philosophy, a system from another time, or simply the appearance of someone with new ideas that stem from bringing some new factor or permutation into the current discourse.<sup>3</sup>

Someone wrestling with Plato or Aristotle is engaged in something very much like what someone wrestling with medieval Indian or ancient Chinese philosophy encounters, i.e., an encounter with a foreign language that ‘thinks’ and expresses itself differently than we do today. This involves systems of thought embedded in alien cultural and conceptual horizons whose meanings and orientations must be recovered through whatever means available or devisable. At the same time, translating the ideas in these alien texts into our thinking patterns often requires negotiation with a complicated set of texts, commentaries, divergent interpretations, and hermeneutic challenges. These in turn may be riddled with painful lacunae in terms of missing pieces, unknown opponents, and multiple contexts, often indistinct (or less distinct than we might imagine them). These texts and their contexts all remain moving targets that are re-imagined and re-configured by every generation that attempts to think through these text-sets afresh. All of this is wrapped in an ever-increasingly dense accrual of baggage and assumptions requiring discriminative weeding. The encounter can engender a massive oedipal confrontation, or a minor re-arrangement of trivial details, or a refashioning to suit current tastes and needs. Of these last three alternatives, the first is likely to produce philosophy; the second, some form of scholasticism or doxography; and the last, revisionism or fundamentalism.<sup>4</sup>

Yet we tend to think of Greek, or Christian, or German philosophy, and so on, as part of *our* “tradition,” *our* history, while *Caraka-saṃhitā*, Dignāga’s *Pramāṇa-samuccaya*,<sup>5</sup> *Cheng weishilun* 成唯識論 (Treatise Establishing *Vijñapti-mātra*),<sup>6</sup> and Zhu Xi’s 朱熹 *Jinsi lu* 近思錄 (Reflections on Things at Hand)<sup>7</sup> are not. Some Western philosophers still insist that non-Western philosophy is not philosophy at all, but even if generously granted the label of “philosophy,” they don’t practice *our* philosophy, i.e., what we consider to be philosophy proper. In a more ambiguous status are works by Islamic and Jewish philosophers such as Ibn

Sīnā, Ibn Rushd, Maimonides, Gersonides<sup>8</sup> and Crescas.<sup>9</sup> Their ambiguity is due to the fact that, while they are rarely part of the curriculum of Western philosophy, it is recognized that important figures in Western philosophy, such as Aquinas and Spinoza, were aware of and were influenced by them. Buber and Levinas have impacted the academy, but Rosenzweig and Hermann Cohen still remain primarily “tribal” reading. One obvious goal of comparative philosophy would be to expand the horizons of our sense of “our” tradition. Laozi and Zhuangzi now *are* part of *our* tradition. One could even argue, without too much inaccuracy or perversity, that making the *Upaniṣads* a metonymy for Indian thought was an invention of *our* tradition more than a fair appraisal of the actual history of Indian philosophy, one with which certain factions in India became complicit. Nonetheless, the status of such divisions between “our” and “their” tradition has become increasingly ambiguous over the last century, as texts such as the *Bhagavad Gītā*, the *Daodejing*, and the *Zhuangzi* have become staples of humanities programs (and even popular reading), while, in Asia, Western fare has taken firm root in standard curriculums. The East-West divide is more imaginary than real these days – more a question of identity politics than a characterization of styles of thinking.

We are situated in a very privileged place. Rarely has such a large segment of the world had such access to so much of the world’s philosophical literature.

It is an historical truism that philosophies are at their innovative best when located at the intersection of competing systems. Philosophical xenophobia leads to stagnation, as the results of the largely successful efforts by Anglo-American philosophers to expel even the philosophy of their European contemporaries from the curriculum of philosophy departments sadly illustrates. Rorty sneaking Heidegger in through the backdoor has proven insufficient to revitalize the analytic project. He failed partly because so much of what made the German and French philosophies of the twentieth century vital was lost or distorted in reductionistic translation.<sup>10</sup>

Philosophy is not just any thought on something novel but a disciplined form of thought, at once tradition- and rule-bound, and yet seeking new discoveries or insights. Different philosophical traditions assume different rules and rhetorical styles. Some prize exhaustively detailed prose exposition in formalized univocal syntax – e.g., a syllogism – while others prefer evocative, poetic multivocality designed to say more with fewer

words. Some seek to express their syllogisms and rigorous method in the pithiest of verses. Whatever its style, philosophy seeks to reason, i.e., to apply reason methodically to a topic or agenda.

My interest at the moment, however, is not to argue for some sense of the universality of comparison. (As soon as universals become sufficiently restricted to allow comparison with other universals or particulars, they lose some of their presumed universality.) Neither is it to essentialize some notion of philosophy, but rather to think about what ‘reasoning’ means in different philosophies, and what sorts of typical gestures and characteristics reasoning exhibits in various philosophies. I am not proposing a definition of “reason” beforehand in order to remain open to possible suggestions offered by the different traditions.

## QUESTIONING PARAMETERS

To advance more quickly, let me throw out some questions.

Is there something that makes Chinese philosophy – if there is any such unitive discipline as opposed to multiple, divergent philosophical and religious traditions that we lump together on the basis of a common historical and geographical proximity – distinctively a Chinese philosophy? And so on for Indian, Islamic, Jewish, etc., philosophies. Deciding this is important if we wish to know what is being compared to what when we propose to do comparative philosophy. As we will see, this also entails the question of where our centre of gravity lies: *From where* do we begin to compare? What sets the agenda? Is comparative philosophy done from a home base looking out at the “others”? Or do we try to locate ourselves in some privileged neutral or lofty position from which we look down at the objects being compared, as if implicated by or committed to none of them? Is there any viable standpoint upon which a comparative philosopher can take his or her stand?

Might it be the case that so-called Western philosophy is also distinctively “Christian” philosophy, even when practised by non-Christians (such as Spinoza, Aristotle, Nietzsche, modern secularists, etc.), such that Hegel – despite coining the phrase “death of God” – is after all at bottom a Christian thinker? Does his *Encyclopedia* – consisting of the tripartite *Logic, Nature, Spirit* – bear only a superficial structural and conceptual parallel with the Trinity, or is there something more fundamental at play?

Has Spinoza become a Buddhist when he identifies the three primary affects – the affects from which all other affects are derived by permutational combinations – as pleasure, pain, and desire? In Buddhist jargon pleasure-pain is called *vedanā* while desire in a primary sense is called *trṣṇā*. *Vedanā* and *trṣṇā* are two of the most important *nidānas* in the twelve-fold chain of *pratītya-samutpāda* (conditioned co-arising), often considered Buddhism’s premier doctrine. Pleasure, pain, and desire in Spinoza’s system of affects play a similar primary role as do *vedanā* and *trṣṇā* in Buddhist discourse. Or is this model Jewish, since Spinoza partly draws on Crescas’ ethical philosophy for these and other components of his own?<sup>11</sup> What else would Spinoza have to include or exclude before we see his philosophy as Buddhistic, in the same way that Pure Land, Huayan, or Tantra are seen as, at one and the same time, deeply similar yet profoundly dissimilar to the Buddhist teachings of the early Pali canon? Might Spinoza be closer to, for instance, Pali Buddhism or Huayan Buddhism, than either is to Pure Land or Tantra?

What makes these distinctive types of philosophy distinctive? What, aside from their different narrative histories and accidental differences (language, socio-political factors, institutional support or suppression, changing fashions in styles and rhetoric, etc.), makes them distinctive from each other *as philosophies*? Are there characteristic factors that can be enumerated? How do we bracket our expectations of what is properly “philosophy” in order to inquire fairly into such a question? Even more problematically, how do we circumscribe what counts as “religion”?

It is axiomatic in Indian philosophy that a definition must be sufficiently restricted so as to exclude anything that is not the case, and broad enough to include everything that is the case. Western scholars will quickly recognize that this is rarely as simple as it seems, especially when trying to find a stable referent for a term as famously difficult to define adequately as “religion.” Christian or so-called Western presuppositions concerning what counts as a “religion” quickly exclude many of the world’s leading religions, such as Buddhism, Confucianism, Mīmāṃsā, Sāṃkhya, Jainism, etc. This is because these either reject or give short shrift to deities and especially deny a central role to a Divinity with a capital “D.” These are major religions explicitly devoid of “God.” Responding to that by enlarging the definition of religion into something as inclusive as Tillich’s “man’s ultimate concern” fails to exclude Marxism, health

care, sports, romance, ego-gratification, and a host of other -isms and human pursuits. Similarly, the Western notion that religion is grounded in faith and belief rather than reason and logic would be anathema to many Indian traditions (and even some pre-Renaissance Western religions). If the essence of religion requires neither God nor belief, such that these are contingent properties appropriate only for describing *some* religions, then what essentially marks a religion as a religion? We partially run into such problems because we start within the assumptions and “evidence” of our Western traditions and then try to explain the “other” traditions in terms of how well or adequately they mirror our own. In this way, we set the agenda and prioritize the importance of issues based on what our religions claim is important. Since other religions revolve around different centres of gravity, inconvenient anomalies invariably emerge. If we believe that “our” religion is paradigmatic for all religions, then its concerns must also constitute the paradigmatic underpinnings of *any* proper religion. Consequently, when faced with the aforementioned anomalies, if “our” concerns and definitions render other traditions marginal or insufficient relative to what we deem the “ultimate” and most essential concerns, the fault lies with them, not us.

What would this look like if, instead of taking Christian assumptions as the baseline, we let other traditions formulate their own consensus among themselves as to what counts as central concerns? What if Christianity was deemed marginal or insufficient by that exercise? What if, for example, one places ethical canons (*halakhah*, *shāri‘a*, *dharma-sāstra*, *vinaya*, Confucian codes, even Daoist ethical treatises) at the core of what would constitute a religion? Then Christianity becomes the odd religion out. Christianity emits a great deal of moralism (much of it centred on “bedroom ethics”), but it lacks a foundational ethical canon that plays a comparable role to *shāri‘a* in Islam, or *halakhah* in Judaism, or *dharma-sāstra* in Hinduism, *vinaya* in Buddhism. These ethical canons are typically more important than “belief” in determining the degree of one’s participation in these religions. This is not merely an ethnographic question but has immediate philosophical import. For instance, is it, as some have conjectured, due to the strong emphasis on the ethical in Judaism that Jewish philosophers predominantly embraced Aristotle – rather than Plato or explicit forms of Neo-Platonism – during medieval times, and Kant in modern times? What is lacking, in the Western study of religion

or in Western philosophical method, is a well-formed discipline that deals with the canons and reasoning styles of religious jurisprudence. (This is in contradistinction to such well-worn and traditionally Christian disciplines as ontology, myth, epistemology, and exegesis.) As such, this lack is a symptom of an evident myopia, and thus a potentially fatal challenge that is presently threatening to render Western scholars irrelevant to the growing religious confrontations. Such confrontations are occurring not only abroad but within our own shores (despite however relevant we may feel ourselves to be from within our own frameworks). For instance, we become reduced to mouthing questionable ideological, ahistorical claims when we insist that Islamists in Somalia are misusing the term *jihad* as they declare Holy War on their government and suspected Ethiopian (which, in their eyes, means Christian) interference. As a result, we fail to explain adequately to our students how jurisprudential reasoning works. At the same time, while searching for alternatives to military confrontation, we lack a commonly respected language and the recognized disciplined reasoning skills to address the holders of such worldviews on their own terms. This is very obvious in discussions of the role of women in Islam, caste inequities with Hindus, or abortion rights with evangelical and fundamentalist Christians. (In contrast, e.g., Palestinians and Iranians have demonstrated deft command of *our* rhetorical polemics of rights, self-determination, post-colonial *ressentiment*, etc.) One might ask therefore whether Kant's Practical Reason (and its spawn) include or occlude jurisprudential thinking? Is his ethical thinking the same or different as ethical thinking within religious traditions?

In a lighter but equally serious vein, as one surveys the religions of the world one finds in every religion – except Christianity – a sacred humour tradition. Midrashic and Hasidic tales in Judaism, Zen anecdotes and *kōan* collections in Buddhism, the ironic parodies in *Zhuangzi*, the tales of Mullah Nasruddin in Islam, Śiva's *līlā* (play), and so on, are best known, but only the tip of a largely unexplored iceberg. For most religions, sacred humour is an important component of the spiritual path, an attunement to the Cosmic Giggle, as some have called it. In contrast, Christians, as Umberto Eco's *Name of the Rose* highlighted, have often condemned comedy, laughter, humour, and even smiling as sacrilegious.<sup>12</sup> This was not merely a medieval predilection but still influences contemporary Christianity. When, in the 1950s, inspired by Aldous Huxley's

*Doors of Perception*,<sup>13</sup> the British scholar of Indian and Iranian religion, Richard Zaehner, decided to experiment with mescaline under clinical supervision, he subsequently declared the experience “profane” rather than “sacred.” This was largely because all of his attempts to have a “sacred” experience while under the influence of mescaline (visiting his favourite cathedral, looking at pictures of the Virgin Mary, etc.) resulted in laughter, either an urge within himself, or “hallucinations” of the figures in the stained glass windows laughing at him, etc. The book he wrote on this is in two parts.<sup>14</sup> The second part is an abridged but still lengthy transcript of his “trip,” in which one needn’t be a clinical psychologist to discern that his experiences were concertedly advising him to lighten up and enjoy the humour – a message he not only resisted but found shocking and disturbing. The result was the book’s first part in which, clothed in the guise of objective scholarly discourse, he laid out a hierarchic typology of religious mysticisms, with such labels as “pantheism” and “panentheism.”<sup>15</sup> The obvious purpose was to reaffirm the superiority of the Roman Catholic variety to which he had converted, deeming the mysticisms of other religions less sacred and even profane. His typology was influential in the field for some time, but, as an example of bald apologetics, should stand as a cautionary tale for all comparativists.

Such assumptions concerning what counts as a religion or as legitimate philosophy lead us to become selective about which literature we pay attention to, and even what parts to focus on in the literature we do select. What is Buddhist or Hindu ontology? Is there a Daoist theory of language? What are Neo-Confucian metaphysics? Such are our typical questions, but are they typical, much less prominent features of these traditions, as our sustained and narrow attention to them would seem to imply?

If a Hindu and an observant Jew begin to converse, they would quickly discover that *dharmasāstra* and *halakhah* – which are more constitutive of each’s sense of identity and practice within their own traditions – speak the same language. They share similar concerns about proper and improper foods, business affairs, daily behaviour, hygiene, familial and social obligations, ways to celebrate, etc. However, a Christian observer of that discussion might wonder what the bulk of their discussion had to do with “religion.” He may be envious of the poignant traditional humour tales they trade. And the Christian would likely overlook or resist that for the

Jew and the Hindu, what you *do* is infinitely more important religiously than what you personally *believe*. A Hindu can believe in one, many, or no gods, and still be a good Hindu; what he or she cannot do is violate the specific dictates and mores of his or her caste and still be deemed a “good” Hindu. At the level of *dharmasāstra* and *halakhah*, such matters are no longer ad hoc or sociological (or even ethnographic). They are instead philosophical, to be attended to with all the rigour of a system of detailed, rational jurisprudence, one which has for millennia pervaded every facet of social, personal, and spiritual life.

## BOUNDARIES

The boundaries between “philosophy” and “religion” (and science, medicine, physics, grammar, linguistics, astronomy, rhetoric, hermeneutics, etc.) are unclear, and the separations between such disciplines that we take for granted today were less clear even in the West a century or so ago. Philosophers and scientists, for instance, were often the same people during the Middle Ages in Islamic and Jewish circles. Ibn Sīnā (Avicenna), Ibn Rushd (Averroës), Maimonides (Rambam),<sup>16</sup> Gersonides (Ralbag), etc., all made major scientific contributions,<sup>17</sup> and, with the exception of Gersonides,<sup>18</sup> all were practising physicians esteemed for their medical skills during their day.<sup>19</sup> Kant may have been the last of this breed of scientist-philosophers, at least in the Western tradition, since he is credited with discovering the existence of galaxies. (Similarly, all except Ibn Sīnā and Kant were prominent jurists of their day. Maimonides, for example, in his *Mishneh Torah*, was the first to organize the full gamut of Jewish law into a systematic code. This, along with his Responsa and other halakhic works, continues to be influential and studied today.)

Nor were such scientific endeavours done in isolation. While certain Islamic and Jewish religious matters may have been primarily in-group matters, scientific knowledge was shared and common. Maimonides (1135–1204) and Ibn Rushd (1126–1198) – contemporaries born in Cordoba, Spain – drew from the same medical well-springs. (This occurred even though Maimonides’ family had to flee Spain due to the persecution of Jews by the Almohades; he completed his secular education at the famous University of Al-Karaouine in Fez, Morocco.) And such knowledge was far more globally disseminated than is usually recognized.

“The greatest tribute paid to the Indian [medical] system came from Avicenna [Ibn Sinā], who categorically acknowledged in *Al Qanun (The Canon)* that he had benefited tremendously from the Indian *jogis* he used as one of his sources.”<sup>20</sup>

The convergence of philosophy and medicine was not a creation of the Middle Ages. In the West, philosophy and medicine have been intimately related at least since Diocles of Carystus (fourth century BCE) and Aristotle. As van der Eijk states: “the relationship between Aristotelianism and medicine has long been a neglected area in scholarship on ancient medicine.”<sup>21</sup> One might add that the same neglect is evident in scholarship on ancient philosophy. While the present essay cannot substantially remedy that neglect, a few of van der Eijk’s observations about Greek medicine and philosophy – which have striking parallels in the case of India – may help bring some attention to what it is we have been neglecting.

... more recently there has been a greater appreciation of the fact that Greek medical writers did not just reflect a derivative awareness of developments in philosophy – something which led to the long-standing qualification of medicine as a ‘sister’ or ‘daughter’ of philosophy – but also actively contributed to the developing concepts and methodologies for the acquisition of knowledge and understanding of the natural world. (Philip J. van der Eijk, *Medicine and Philosophy in Classical Antiquity*, p. 8)

Moreover, it would be quite misleading to present the relationship between “doctors” and “philosophers” in terms of interaction between “science” and “philosophy,” the “empirical” and the “theoretical,” the “practical” and the “systematical,” the “particular” and the “general,” or “observation” and “speculation.” To do this would be to ignore the “philosophical,” “speculative,” “theoretical,” and “systematic” aspects of Greek science as well as the extent to which empirical research and observation were part of the activities of people who have gone down in the textbooks as “philosophers.” Thus Empedocles, Democritus, Parmenides, Pythagorus, Philolaus, Plato, Aristotle, Theophrastus, Strato, but also later thinkers such as Sextus Empiricus, Alexander of Aphrodisias, Nemesius of

Emesa, and John Philoponus took an active interest in subjects we commonly associate with medicine, such as anatomy and physiology of the human body, mental illness, embryology and reproduction, youth and old age, respiration, pulses, fevers, the causes of disease and of the effects of food, drink and drugs on the body. (p. 10)

... Galen ... wrote a treatise advocating the view that the best doctor is, or should be, at the same time a philosopher... It is no coincidence that Aristotle's comments on the overlap between "students of nature" and "doctors" are made in his own *Parva naturalia*, a series of works on a range of psycho-physiological topics – sense-perception, memory, sleep, dreams, longevity, youth and old age, respiration, life and death, health and disease – that became the common ground of medical writers and philosophers alike. (p. 11)

... interaction... also took place in the field of methodology and epistemology. As early as the Hippocratic medical writers, one finds conceptualizations and terminological distinctions relating to such notions as a "nature" (*phusis*), "cause" (*aitia*, *prophasis*), "sign" (*sēmeion*), "indication" (*tekmērion*), "proof" (*pistis*), "faculty" (*dunamis*), or theoretical reflection on epistemological issues such as causal explanation, observation, analogy, and experimentation. This is continued in fourth-century [BCE] medicine, with writers such as Diocles of Carystus and Mnesitheus of Athens, in whose works we find striking examples of the use of definition, explanation, division and classification according to genus and species relations, and theoretical reflection on the modalities and the appropriateness of these epistemological procedures, on the requirements that have to be fulfilled in order to make them work. (p. 12)

Some [philosophers] are known to have put their ideas into practice, such as Empedocles, who seems to have been engaged in considerable therapeutic activity, or Democritus, who is reported to have carried out anatomical research on a significant

scale, or, to take a later example, Sextus Empiricus, who combined his authorship of philosophical writings on Scepticism with medical practice. (p. 13)

It is interesting in this connection that one of the first attestations of the word *philosophia* in Greek literature occurs in a medical context – the Hippocratic work *On Ancient Medicine*. (p. 19)

Comparable observations could be made concerning the early Indian medical literature, such as *Caraka-saṃhitā* and the slightly later *Suśruta-saṃhitā*, as a survey of those texts, or even their tables of contents, would quickly show. Space limitations preclude documenting that here in detail, but one example should suffice. The core of chapter 8 of part 3 (*Vimāna-sthāna*) of the *CS* consists of a rigorous, detailed description of the components of “debate” (*vāda*). This includes a full discussion of the parts of a formal inference, the *pramāṇas*, distinguishing sound from unsound arguments, and the value and protocols of argument.<sup>22</sup> Passage 68 lists ten topics a physician should explore by the three *pramāṇas* of authoritative tradition, perception, and inference. (Here, unlike in part 1, chap. 11, where *āpta-pramāṇa*, ‘authoritative tradition,’ is given great weight, several indications place *āpta-pramāṇa* in a subservient, even expendable position in relation to perception and inference.<sup>23</sup>) The ten topics are: *kāraṇa* (the cause or agent initiating action, i.e., the physician), *kaṛaṇa* (instrument assisting the agent’s action, e.g., pharmaceuticals), *kāryayoni* (the matrix from which the action emerges), *kārya* (what is being done), *kāryaphala* (the result or purpose of the action), *anubandha* (what the action is bound to entail), *deśa* (the locus of the action, viz. the place and the patient), *kāla* (time, viz. seasonal factors and the state of progress of the disease), *pravṛtti* (the process), and *upāya* (procedure or device, i.e., proper preparations and initiation of proper actions). All students of Indian philosophy will instantly recognize these ten terms are central, pervasive categories of Indian philosophy. Here, where a patient’s life or death (not to mention the reputation of the physician, an issue the *CS* also takes very seriously) hang in the balance, these terms acquire not only concreteness but a sense of urgency. This list could serve as the program for virtually

any Indian religion or philosophy. That the first five items are conceptually and etymologically<sup>24</sup> linked to the term *karma* underlines this.

Are we failing to produce philosophers of the stature and acuity of Ibn Sīnā and Maimonides because philosophy departments do not require their majors or graduate students to attend medical school, much less seriously practice the hard sciences?

What then are the limits or horizons of philosophy proper? Some styles of philosophy strive for univocality. Thinking can only be clear, goes the claim, when words are drained of all ambiguity or multivocality. Today the implications of the desire to reduce all voices to one, to eliminate alternatives, or to reduce a word to a single meaning, strike many of us as disconcerting. We learn more from exploring different styles of philosophy, different ways of accounting for the human condition, than we benefit from silencing alternatives.

Are there meaningful lines to be drawn between philosophy and religion? Let me suggest two:

- (1) Borrowing Nietzschean vocabulary, we might say that religion is a will to meaning, while philosophy is a will to knowledge. These two types of wills may converge, when either meaning is understood as equivalent to knowledge or vice versa. Yet there are conceivably meaningful endeavours that do not rest on knowledge per se, e.g., romance.<sup>25</sup>

Religion thus seeks to make life meaningful, to provide purpose and meaning to one's existence and one's life experiences. Philosophy, in contrast, seeks to know, to understand, and to make life comprehensible through evidence and reason. When meaning and knowledge converge, the line between religion and philosophy blurs.

- (2) Religious thinking is ultimately tautological (e.g., "I am that I am"; Being is; scripture is true because it is scripture). Tautology can be a handmaiden to authoritarianism ("It's so because I say so!"). Philosophy, however, considers tautology a logical error, and thus it prefers (i) reasoning from premises to conclusions. This is Aristotle's preferred method (derived from the third

segment of Plato's divided line) and is a cornerstone of scientific method. Even more importantly and radically, however, philosophy prefers (ii) reasoning from premises to their presuppositions (as in recovering the *archē*; the fourth segment of Plato's divided line). Such a procedure can be found in Nāgārjuna's quieting of all presuppositions (*prapañcopaśama*) and perspectival attachments (*dṛṣṭi*). He undertakes this in order to expose the absurdities masquerading as reasoned positions to which we attach and with which we construct our identities (*ātma-dṛṣṭi*). It is also found in Husserl's search for a presuppositionless philosophy in order to ground the sciences, *Wissenschaften*.

With such considerations in mind, we might ask the following questions:

- (1) Does Hegel's teleological view of history, as a rediscovery of the self by itself through the other, finally only reaffirm a Christian tautological *telos*? (The result here is that history's destiny is already decided before it has begun, the alpha in the omega, so that the eschaton is prefigured in the creation. One moves all the way from one end of history to the other only to rediscover what was already there at the beginning:  $A = A$ . History and time become nothing more than the working out of the = that declares tautological self-coincidence as a discovery upon which all history awaits.)
- (2) What significance or insight lurks in the tension between his Being vs. Nonbeing sublating into Becoming, i.e., his famous *Aufhebung* offered in the *Logic*? On the one hand, Hegel seems to suggest that a dynamic process necessarily arises from, and then supersedes static contraries. On the other, he posits Becoming, seen as *Geist's* search for itself, as ultimately terminating in a static *telos* of authentic self-realization at the end of

history. Does this result in a terminus in which the movement of mind, spirit, and history itself comes to a stop once reaching its actualized self-recognition? Does Becoming emerge from the tension of two static contraries only to culminate eventually, with historical and ultimate finality, in a new stasis where the contraries have been replaced by a tautological self-coincidence? (This self-identity will have *aufheben*-ed all contrastive tensions.)

Becoming stops becoming. In what way, then, might this terminal historicism of Hegel be compared with the Kashmiri Shaivite idea of *līlā*, as a game Śiva plays with himself? In this game, Śiva repeatedly, even eternally, alienates himself from himself, multiplying himself into “others” into which he forgets himself in order to find himself again. He thus continually engenders and wanders through various realms of existence that are the forgotten aspects of himself. Eventually, he rediscovers himself as the source of the game of forgetfulness, only to forget himself again once he is found, in order to keep the game in play. Each of us is nothing more than moves in this game of hide-and-seek, mere facets of Śiva’s forgetfulness. For Hegel, History becomes a finite search by Spirit for itself consisting of a series of logical predictable moves with a guaranteed climax. The notion of Becoming with which Hegel reintroduced Western thought to time and historicity finally leads to its own static culmination. No such finite limits restrict Śiva’s *līlā*. The divine’s game of hide and seek with himself not only plays out perpetually, restarting once completed, but time and temporality are byproducts of the game. The game is not only a temporal narrative conceived chronologically, but synchronically *all* levels of the game are at play simultaneously, so that remembering and forgetting happen simultaneously as well as sequentially. History plays out, but full realization is always available and instantaneous. It is a *telos* that is forever culminating because it never really culminates. The joy of realization is only one more joyous moment in a joyous game. The game and the joy continue nonetheless. The cosmic cards are reshuffled. Śiva forgets once again, and the game continues.

## LOGICAL STYLES: ROOT METAPHORS

Let me suggest a quick rubric for differentiating Western philosophy from Indian philosophy, and each from Chinese philosophy, though I will not expand this here into a full analysis. Each is grounded in certain root metaphors, basic models or disciplines which become, from the beginning, fundamental and constitutive of what follows and thereby counts as philosophy in each of these traditions.

For the Greeks (and still in the West), the foundational disciplines were physics and mathematics. For India, the root models were grammar and medicine. For China, it was the family viewed, on the one hand, as hierarchical relations (parents over children, elder sibling over younger sibling, etc.), and, on the other hand, as dialectical relations between family members (the give and take between a couple, parents and children, etc.). Family relations, combined hierarchically and dialectically, yield a pattern in which individuals both change and keep roles through a stable system: The youngest daughter, starting out life at the bottom of the family hierarchy, can gradually raise her status until she is matriarch of the family, overlording her sons and their wives. Social order, the web of correlative thinking into which all natural and artificial entities and forces – including medical theories – were plotted, and ascension through the stages of the spiritual path followed that model.

For the West, then, we think we are at our most profound when engaged in questions of infinity, ontology, and the translation of time and space into mathematical equations. This fosters the illusion that soft sciences become hard once they adopt a mathematical method, etc. The sense of profundity that wells up in us when such topics are broached is our inheritance from the Greek presuppositional foundation of mathematics and physics. The word *meta-physics* resonates. “Infinity,” for instance, has had neither the prominence nor the emotional affect in other cultures that it has held in ours. Kant, having completed the three critiques, still thought his philosophy unfinished, “or else a gap will remain in the critical philosophy.”<sup>26</sup> In a letter to Kiesewetter, Kant explains what remains to be done: “The transition from the metaphysical foundations of natural science to physics must not be left out of the system.... [W]ith that work the task of the critical philosophy will be completed and a gap that now stands open will be filled.”<sup>27</sup> He died before completing this task that the

Western tradition tacitly insisted he address. It is like a voice of conscience or internalized imperative that had become categorical, unavoidable, an urgent need that now defined him and his system. Conversely, Nathan Sivin has to argue, in his treatment of Chinese science,<sup>28</sup> that Chinese scientists did not deal with “Nature” in the sense of *phusis*. Understanding what they have been concerned with thus becomes a conceptual stretch for the “Western” mindset.

For Indians, grammar disclosed the structure of reality. Just as words are means to apprehend referents (*artha*), so does perception apprehend objects (*artha*). The detailed relations and variations denoted by Sanskrit grammatical inflections mirror and reveal the relational realities, variations, and even the eternal verities of the operations of the cosmos. Medicine is about saving beings from sickness, illness, and suffering, restoring them to health. Buddha’s famous four Noble Truths<sup>29</sup> is taught these days, in an expanded form, in medical schools throughout the West under the label “Pathological Model,” i.e., symptom, diagnosis, prognosis, and treatment. When early Buddhist texts spoke of the Buddha as the “Great Physician,” one who turns poison into medicine, etc., they were not speaking metaphorically. Buddhism itself, these texts explain, is “medicine,” consisting of specific therapeutic devices designed to cure disease (*duḥkha*). Like all-powerful medicines, it is forged from toxic materials specifically designed to treat specific illnesses; when the medicine has done its task one should stop taking it, or else it also can make one sick.

Hence, that we should find *pramāṇas* (means of knowledge) being introduced in the medical text, the *CS*, should not surprise us.

## THE *CARAKA-SAMHITĀ*, INSANITY, AND THE *PRAMĀṆAS*

I came to the *CS* as a result of work on the *Mano-bhūmika* section of Asaṅga’s encyclopedic *Yogācārabhūmi*. Asaṅga is the nominal founder of the Yogācāra school of Buddhism, one of the two Mahāyāna systems in India. The *Yogācārabhūmi*’s first chapter, on the five bodily consciousnesses (*pañca-vijñāna-kāya-bhūmi*), discusses the sense organs, perception, karma, and related topics. For the second chapter, the “mental stage” (*mano-bhūmi*), Asaṅga makes the transition from physical, bodily processes to more exclusively mental conditions through a medical survey of

psycho-somatic topics, specifically physical conditions that affect mental states, such as intoxication (*mādhyaṭi*) and insanity (*unmādyati*). Insanity or mental disorders is a topic to which the *CS* and Indian medicine generally devote great attention.<sup>30</sup> Asaṅga gives us a list of possible causes, which includes such things as physical and mental trauma (*uttrāsa-bhayata*), strikes to vital spots (*marmābhigāta*), and other external factors such as attacks from ghosts (*bhūta-samāveśatayā*). He explains the causes of sleep and the causes for awakening from sleep (e.g., a loud noise, bodily discomfort, etc.). He takes this into a somewhat detailed discussion of medical conditions, employing the three *doṣa* model and various other clearly medical concerns.<sup>31</sup> This leads to a discussion of the causes of health and longevity, and the causes of the shortening of life span and death (food, digestive processes, and moral habits are cited as critical factors). Asaṅga even provides a description of how death occurs, how consciousness leaves the body.

Interested to discover how typical Asaṅga's treatment was of Indian medical theory at that time, my search for Buddhist medical literature of that period revealed that there is precious little available today on the Buddhist medical theories and practices of his day. As a result, I turned to the next best thing, the text considered to be the oldest of the Hindu medical texts, the only extant medical treatise generally considered to predate Asaṅga.<sup>32</sup> While, unfortunately, it quickly became apparent that the Hindu medical theories were a closely related but different system (enumerations and models differed), the *CS* provided charms of its own.

As mentioned above, the *CS* is usually considered to be the first text to introduce the idea of *pramāṇa*, the means of acquiring knowledge. This should not come as a surprise, since medicine requires not only a disciplined method of observation to observe symptoms, to take account of treatments and experiments that work or do not work, etc., but it also requires a method by which what is unobserved and even potentially unobservable, namely the cause of a disease, can be inferred and known in order to be treated. The present symptoms displayed by an ill person may have an etiology that lies in the past, and diseases often progress through stages. Thus the physician must be able to infer from what presents at the moment to what likely has transpired in the past, just as one would infer a past fire from ashes and smoke. As the *CS* itself argues, one also has to be able to infer predictability, i.e., from the present to the future, in order to

make an accurate prognosis and to have some confidence in the effectiveness of specific treatments. The current popularity of forensic medicine on television shows such as the CSI-style programs illustrates the power still inherent in such approaches. To the chagrin of idealists and solipsists, physical remainders of past actions can provide definitive evidence of what happened – evidence sufficient to convict a perpetrator “beyond the shadow of a doubt.”

Various Indian schools proposed different *pramāṇas* as viable means of acquiring certain knowledge. Virtually all agreed that perception and logical inference were *pramāṇas*. For example, I know that the table is there because I can see it, feel it, etc. I know it can hold a certain weight, because when I place objects of a certain weight on it, it doesn’t collapse, and I have this knowledge even when nothing is presently on the table. As the *CS* states, the fact of pregnancy compels one to infer that sexual intercourse has occurred (unless one is a certain type of theologian).

To these two *pramāṇas*, some Indian schools wished to add reliable testimony, meaning testimony from a respectable witness, as in a court proceeding, or a respectable authority, i.e., an expert. In addition, and more importantly, this *pramāṇa* includes the testimony of scripture. Curiously, the first school to challenge *śabda-pramāṇa* (reliable testimony) as a viable source of knowledge was the Vaiśeṣika, a Hindu school that eventually merged with Nyāya. Buddhists, rejecting the validity of Hindu scriptures, also eventually dismissed the validity of *śabda-pramāṇa* as a *pramāṇa* (at least after Dignāga, although Asaṅga in his *Abhidharmasamuccaya* already makes it subsidiary to perception and inference). This was because they argued that claims made by testimony or scripture must themselves be subjected to test by inference and/or perception to be deemed valid. The reliability of a witness must be tested, as must the truth-value of claims made in scripture. Such tests would examine whether the claims conform to what is evident to the senses or to what is reasonable. Thus, Buddhists insisted, it is perception and inference that guarantees the validity of knowledge, not the testimony itself. Additional *pramāṇas* proposed by others included “comparison,” “analogy,” and even “absence,” but for Vaiśeṣikas and Buddhists these too are either fallacious or subordinate to perception and inference.

*Pramāṇa*-theory first appears in the eleventh chapter of the first part (*Sūtra-sthāna*) of the *CS*. Here the *CS* intriguingly proposes, along with

the three *pramāṇas* one would expect (perception, inference, and authoritative testimony), a fourth not found anywhere else: synthetic inductive reasoning (*yukta-pramāṇa*). Discussion of *pramāṇa* occurs in two other parts of the *CS*: part 3, *Vimāna-sthāna*, chap. 4 and chap. 8, but the unique *yukta-pramāṇa* is absent from those discussions, a sign of the stratified nature of the text.

The discussion in chap. 11 of the *Sūtra-sthāna* is interesting because it offers some explanation for why a discussion of *pramāṇas* should appear in a medical text. It begins by stating that for humans there are three basic desires or impulses (*eṣāṇa*): (1) desire for life itself (*prāṇaiṣāṇā*), (2) desire for material possessions (*dhanaṣāṇā*), and (3) desire for (happiness in) the next world (*paralokaiṣāṇā*) (11:3). Of these, the first, the impulse for longevity, is most basic since “when life departs, all departs” (11:4). Since life without adequate means is miserable, the second impulse comes next.

As to the third impulse, the desire for the next life, *CS* states that some have doubts whether such a thing is real. To disabuse its readers of such skepticism, *CS* launches into an attack on all sorts of skepticism (those who disbelieve in gods, sages, *siddhis*, efficient and material causes, the necessity for examination and investigation, etc.). He argues, for instance, that non-perception does not entail non-existence. There are numerous reasons why something real may be imperceptible. It may be too far way, too close, too small, obstructed by something else, a sense-organ defect, and so on. *CS* admits that the scriptures are also in conflict on the question of afterlife. Such conflicts, it recommends, should be resolved by reason (*yukti*).

After arguing for the existence of the self (*ātman*) despite its being perceptually unobservable, and for a world created by purposeful causes, and denouncing the nihilist (*nāstika*) as “the worst of the sinful,”<sup>33</sup> *CS* states that everything falls into one of two categories: *sattva* and *asattva*, i.e., real or unreal, or, perhaps, true and false (11:17). Then the four *pramāṇas* are introduced, starting with *āpta*, traditional authority. This, the *CS* informs us, is knowledge passed on by the experts (*śiṣṭa*). Instead of *śabda-pramāṇa*, *CS* calls this *āptopadeśa*, “teachings of the Respected ones,” and a list of the types of people this includes is given (passages 18–19). These people are indubitable because they lack *tamas* and *rajas*,<sup>34</sup> and thus are incapable of lying. Next comes perception (*pratyakṣa*), which is described as contact between the self and what is present. This is followed

by inference (*anumāna*), which *CS* says is based on having previously perceived or learned something. *CS* explains that there are three types of inference, corresponding to inferences about the past, present, and future. “Fire is inferred from smoke, and sexual intercourse from pregnancy” (present and past, respectively), and a future fruit can be inferred from a seed, based on having previously observed, i.e., perceived, that process (11:21–22).

The fourth *pramāṇa*, *yukta*, is explained with the following examples (11:23–24):<sup>35</sup>

Growth of crops from the combination of irrigation, ploughed land, seed and seasons; formation of embryo from the combination of six *dhātus* (five *mahābhūtas* and *Ātman*); Production of fire from the combination of the lower-fire-drill, upper-fire-drill and the act of drilling; cure of diseases by fourfold efficient therapeutic measures.

*Yukta* here means something like: the coordination of multiple factors converging into a trajectory in which something is changed or transformed. It is taking into account the coordination of multiple causes, a process with contributive factors that might affect the outcome, as in crops or medical treatments. To plant a crop requires attention to multiple factors, from the time of planting, the type of seed, properly working the land, fortuitous seasonal conditions, and so on. If all the factors work properly, the seed turns into a plant that produces the desired crop. Any of the contributing factors (e.g., amount of rainfall) can alter the outcome. There is no strict one-to-one cause-effect relation between the seed and the fruit. The additional factors mediate it. Similarly, an embryo becoming a human undergoes a process requiring multiple factors in addition to the sex act that initiated it. Any of these factors could terminate the pregnancy or inflict permanent damage on the embryo. Producing fire by coordinating fire sticks similarly illustrates the coordination of multiple factors. Treating illness, likewise, requires coordinating conditions across a trajectory in time in order for the person’s condition to change from sickness to health. The physician must recognize and coordinate those conditions: what to watch for in the disease’s progress; what types of treatments are

most effective, and when to administer them; what habits and regimens, such as diet and exercise, contribute to health or maladies; etc.

Inference (*anumāna*) was treated (vs. 21–22) as inferring from a specific condition or cause to a specific effect, i.e., a fruit from a seed. And *CS* also insists that inference requires previous perception (*pratyakṣa-pūrva*). One recognizes the relation between the fruit and seed on the basis of prior observations of this process, and so one can predict a future fruit is likely from a present planted seed. Although *CS*'s account is terse, the claim, I believe, is not simply that a seed will become a plant, but the fact that we recognize by looking at a certain type of seed what *type* of plant it will produce. One sees an acorn and knows that it will produce an oak tree, not a weeping willow. This type of knowledge would be important in medicine, since it is important to know that certain types of treatments, medicines, bodily conditions will become or change into something else. But this does not necessarily happen automatically. Additional contributory causal factors must play a role as well. An acorn sitting on a table does not become an oak; it must be planted, and it must receive nutrients from the soil, heat, water, etc. None of these factors is sufficient alone. Each must contribute for the seed to progress along a trajectory in which it changes into something else.

*Yukta* (= *yukti*), which literally implies to tie together, or connect, and later comes to be one of the numerous terms for “reasoning” or “logic,” is used in *CS* specifically to denote combining a group of factors that, together, produce a result. A doctor cannot diagnose a disease on the basis of a single symptom but must weigh multiple symptoms together, many (such as headaches, nausea, etc.) that could be shared by numerous diseases. This multitude of factors must be taken into account in order to determine correctly the specific disease affecting a particular patient. Diagnosis is inductive, not purely deductive, so, to the old debate about whether Indian logic is strictly deductive or includes induction, *CS* at least provides a case for inductive reasoning.

Unfortunately, *yukta-pramāṇa* never underwent further development in India, appearing nowhere else than in this text. It is rich in analytic possibilities, and one wonders what Indian philosophers, as deeply concerned as most were with causal analyses, might have created had they explored further possibilities of this inductive tool.

Since the *CS* arrived here by attempting to refute skepticism about after-lives, it is not surprising that, having now established a basis for knowledge, the *CS* next turns to arguing for the validity of rebirth, the issue that instigated this excursion into epistemology in the first place. To do this, it offers arguments from each of the *pramāṇas* in turn, i.e., arguments from authority, perception, inference, and *yukta*. A modern reader would not find the arguments very convincing, and apparently neither did the ancients, since we do not find them repeated, or improved upon, in subsequent literature. In fact, one of the striking things about the *CS*'s attempt to provide arguments supporting the idea of rebirth and reincarnation is the fact that it does so at all, since such arguments are surprisingly rare in Indian philosophical texts. Indian philosophers seem to have understood that it would be very difficult to mount a reasonable argument for the validity of the theory of reincarnation, and thus largely chose to avoid embarrassing themselves with such attempts. Thus the *CS*'s boldness in this regard is refreshing, even if the arguments themselves are far from compelling.

This *CS* chapter has explained that the *pramāṇas* can help resolve doubts about the objectives of one of our basic impulses, the desire for the next life. It also demonstrates that, in addition to the *pramāṇas* employed by some other Indian schools, the physician requires a *pramāṇa* suited to the needs of his profession. This is *yukta-pramāṇa* that deals inductively with synthetic judgments about changes and alterations (*pariṇāma*, etc.) affected, in temporal phases, by multiple contributory causes. Illness is a transformation of bodily factors from a healthy balance to imbalance; restoring health is a transformation back to proper functioning. Birth, life, health, sickness, old age, and death are transformations involving multiple factors that the physician must learn to recognize and manipulate. The physician is a philosopher who lacks the luxury of indulging in speculation. Either his knowledge is true, or the patient dies.

But this matter, along with such other fascinating topics in the *CS* as its use of the idea of "intellectual blasphemy" (*prajñā-parādha*<sup>36</sup>) as an explanation for some diseases, must await another occasion.

## CONCLUDING SUMMARY

So what does it mean to do comparative philosophy of religion? Since all thinking is comparative, comparative philosophy of religion draws its strength from expanding the range of philosophies and religions it “compares.” Expanding the horizon of our exploration provides more than additional data; it enriches the possibilities of thinking. For a Western philosopher to think about Indian or Chinese or Arabic or Jewish philosophies, etc., is basically no different from a North American philosopher thinking about Plato, Spinoza, Hegel, or Wittgenstein. Each task requires looking at the other through similarities and differences of language, culture, context, foundational categories, historical developments, and a host of other factors. For a Chinese, Indian, Jewish, etc., philosopher to think, philosophically, about Western philosophy is no different. Starting from a different standpoint, however, might entail that different priorities and categories set the agenda. The basic differences are not between East and West, as is often assumed, but between styles of philosophizing and the root metaphors from which different traditions take their orientation. Similarly, philosophy, religion, and medicine have always been intertwined, especially in ancient and medieval philosophy.

As Thomas H. Huxley, the biologist, noted:<sup>37</sup> “The only medicine for suffering, crime, and all the other woes of mankind, is wisdom.”

## Notes

- 1 Some attempt to date Caraka to as early as the sixth century BCE, though most date the bulk of the *Caraka-saṃhitā* to ca. the first century CE, with some obvious later interpolations and additions. Our received edition is based on an eleventh-century CE commentary and redaction by Cakrapāṇi.
- 2 *Tapas* eventually came to mean the heat of austerities that burn off bad karma, thus, like the fire of sacrifice, purifying the practitioner; but its earlier meaning in the *R̥g Veda* is the heat from friction produced in the sex act, which is creation *par excellence*. Cf. *RV* 10.129.3: “*tuchyenābhvapīhitam yadāsīt tapasastanmahinājāyataikam*” (“that One which had been covered by the void, through the heat of desire [*tapas*] was manifested,” trans. Antonio de Nicolas).
- 3 This is easier to assert once a dominant paradigm or theory has run its course, marked by the repetition, reiteration, and refinement of previous insights rather than the inspirational introduction of truly novel ones, as some view the situation today for both analytic and postmodern styles of philosophy. When caught in the throes of the creative possibilities that are being opened by a new paradigm, the mere implementation of its directives, or putting into motion permutations merely implied by the new paradigm – analogous to Frege’s indication that all of mathematics springs from  $1 +$  [i.e., a unit and a function] – may give the feeling of opening onto limitless horizons with boundless future potential. Hence the exuberance and heady feeling of having brought something new and momentous into the world that often accompanies “movements” in their early phases.
- 4 “Living adherents,” i.e., old traditions that have modern-day exponents, introduce other sorts of problems, since modern exponents typically are not transplants from another time, but instead embody all sorts of permutations and sensibilities derived from centuries of changing interpretations that become embedded in the transmission. And the modern exponent’s motivations are, consciously or unconsciously, geared toward accommodating modern issues and modes of expression that a careful researcher would have to take into account and isolate.
- 5 Interest has recently been rekindled in Dignāga’s foundational Buddhist work on *pramāṇa*-theory. Until a few years ago *Pramāṇasamuccaya* was only available in two poor Tibetan translations. Jinendrabuddhi’s Sanskrit commentary, found in Tibet, which contains much of Dignāga’s original text, is now coming out. The first volume has appeared – Ernst Steinkellner, Helmut Krasser, and Horst Lasic (eds.), Jinendrabuddhi’s *Pramāṇasamuccayaṭīka*, chap 1, part 1: *Critical Edition*; part 2: *Diplomatic Edition* (Beijing: Österreichischen Akademie der Wissenschaft, 2005) – with more to follow.
- 6 This is the only “translation” by Xuanzang (600–664) – the famous Chinese pilgrim who travelled to India and, on his return to China, became the most prolific translator

of Buddhist texts – that is *not* a strict translation of a single text but instead a redacted compendium based on a number of Sanskrit commentaries on Vasubandhu's *Triṃśikā* (Thirty Verses). This “translation” incorporates a host of other materials as well, resulting in an encyclopedic work on the Buddhist **Yogācāra** system as it was debated in India in the seventh century. Louis de la Vallée Poussin's French translation, *Vijñaptimātratāsiddhi: Le Siddhi de Hiuan-tsang* (Paris: Geuthner, 1928, 2 vols.), is overly interpretive, transforming the text into a tract on idealism, an interpretation that has largely stuck. Wei Tat published a bilingual edition, *Cheng Wei-shih lun: The Doctrine of Mere-Consciousness* (Hong Kong, 1973), that contains an English rendering of Vallée Poussin's French (minus Vallée Poussin's extensive annotations) on facing pages with the original Chinese. Swaty Ganguly, *Treatise In Thirty Verses on Mere-Consciousness* (Delhi: Motilal Banarsidass, 1992), offers an abridged translation. Francis Cook, *Three Texts on Consciousness Only* (Berkeley: Numata, 1999), is sometimes an improvement over Vallée Poussin but too frequently follows his misinterpretation. On the philosophy of Yogācāra as reflected in *Cheng weishi-lun*, see my *Buddhist Phenomenology: A Philosophical Investigation of Yogācāra Buddhism and the Ch'eng Wei-shih lun* (London: Routledge Curzon, 2002).

- 7 This has been translated by Wing Tsit-Chan, *Reflections on Things at Hand* (New York: Columbia University Press, 1967). Zhu Xi's name may be more familiar to some Western readers by its older

transcription: *Chu-hsi*. This is only one of the many works of Zhu Xi (1130–1200), the most prominent Neo-Confucian thinker.

- 8 A number of Gersonides' (i.e., Rabbi Levi ben Gershon, whose name in acrostic is Ralbag; 1288–1344) works have been translated. His major work, *The Wars of the Lord*, is available as: (1) Levi ben Gershom (Gersonides), *The Wars of the Lord: Book One: Immortality of the Soul*, trans. Seymour Feldman (Philadelphia: Jewish Publication Society, 1984); (2) Levi ben Gershom (Gersonides), *The Wars of the Lord: Book Two: Dreams, Divination, and Prophecy; Book Three: Divine Knowledge; Book Four: Divine Providence*, trans. Seymour Feldman (Philadelphia: Jewish Publication Society, 1987); a third promised volume to complete the work has not yet appeared. Book Five of the *Wars* includes treatises on trigonometry (which sparked the development of trigonometry in Europe); a description of the *meguleh 'amuqot* (“revealer of profundities”), a device Gersonides invented to measure the angular distances of heavenly bodies (this also circulated as an independent text); astronomical tables and critiques of astronomical theories. An alternate translation, with analysis, of Book Three of the *Wars* is Norbert Samuelson, *Gersonides on God's Knowledge* (Toronto: Pontifical Institute of Mediaeval Studies, 1977). His style as a Biblical commentator is displayed in Menachem Kellner (trans.), *Commentary on Song of Songs: Levi ben Gershom (Gersonides)* (New Haven, CT: Yale, 1998).
- 9 Harry Wolfson's translation of Book One of Crescas' *Or Adonai*

(Light of Our Lord) – Crescas' *Critique of Aristotle: Problems of Aristotle's Physics in Jewish and Arabic Philosophy* (Cambridge, MA: Harvard University Press, 1929) – is a classic treatment of a work that deeply influenced Spinoza and moved Western thought closer to the end of the Middle Ages. Crescas' critique is comparable to al-Ghazzali's *Tabafut al-falsifa* (The Incoherence of Philosophy) in that its motive is to purge Aristotelian contamination from religious thought, though it is very different in style and conclusion. Crescas (Hasdai ben Abraham Crescas, ca.1340–1410/11) delves deeply into Aristotle's arguments and principles and concludes they are *not scientific enough*, i.e., they are merely reified speculations that inadequately and incorrectly interpret the physical world.

- 10 Defenders of analytic philosophy may contend that it is still going strong, but what is practised under that name today would be unrecognizable to its practitioners of only a couple of decades ago. The label “analytic” philosophy was supposed to signal above all that only the quality of arguments (propositions sequentialized into logical entailments) counted, not personalities or the authors of the arguments. The cult of personality was considered a serious error committed by philosophies of the past. A proper essay, they believed, should begin with a rational exposition accessible to all that subsequently would be developed into more technical implications. The essay's merit rested in the cogency of the argument, not the weight of its author. Citing others was to be largely avoided, unless the

essay's purpose was an analysis of a particular philosopher, and reverence for a philosopher instead of appreciation for an argument was simply bad taste. Today not only must one recite and acknowledge a pantheon of analytic philosophers to make even the most trivial argument, but publishers are producing an endless stream of books with simple titles such as *Quine*, *Ayer*, *Strawson*, etc., typically with a photo or drawing of that person adorning the cover. The cult of personality is now embraced. While analytic philosophers of the past would find all that shocking, it is perhaps a belated recognition that philosophy without philosophers is a platonic fantasy, as well as a curious attempt to breathe new life and sustainability into the analytic project. Others would object that even with these changes, unlike philosophers of the past who wrestled with the “big issues” of perennial interest to all thinking individuals, the issues that analytic philosophy engages and the parameters within which it permits what it accepts as legitimate analysis have become so restricted and narrow that few outside the ranks of the analytic philosophers themselves find their discussions pertinent or even interesting.

- 11 “Spinoza's distinction between attributes and properties is identical with Crescas' distinction between attributes subjectively ascribed and their objective reality in God. The connection between Spinoza's views on creation and free will, on love of God and of others, and those of Crescas has been established by [Manuel] Joël in his [Spinoza's Theologisch-Politischer Tractat auf

- Seine Quellen Geprüft] Zur Genesis der Lehre Spinoza's' (Breslau, 1871)." From the article, "Crescas, Hasdai ben Abraham," by Kaufmann Kohler and Emil G. Hirsch, in *JewishEncyclopedia.com*, <http://www.jewishencyclopedia.com> [square brackets added]. See also Harry Wolfson, *Crescas on the Problem of Divine Attributes* (Philadelphia: Dropsie College, 1916); Warren Zev Harvey, *Physics and Metaphysics in Hasdai Crescas* (Amsterdam: J.C. Gieben, 1998).
- 12 Umberto Eco, *The Name of the Rose*, trans. William Weaver (Boston and New York: Harcourt, 1983). While Church complicity in suppressing Aristotle's lost work on comedy remains speculative, the medieval debates between Dominicans, etc., on whether laughter is permitted or sinful are grounded in history.
  - 13 Aldous Huxley, *The Doors of Perception and Heaven and Hell* (New York: Harper & Brothers, 1954, 1956).
  - 14 R.C. Zaehner, *Mysticism: Sacred and Profane* (Oxford: Clarendon Press, 1957. Reprint: London: Oxford University Press, 1961).
  - 15 The term "panentheism" was coined by the German philosopher, Karl Christian Friedrich Krause (1781–1832), a student of Fichte, Hegel, and Schelling, and one of Schopenhauer's teachers.
  - 16 Jewish tradition often uses acrostics of the names of prominent figures as their official nicknames. Hence Maimonides, e.g., Rabbi Moshe Ben Maimon, becomes RaMBaM; Gersonides, Rabbi Levi Ben Gershon, becomes RaLBaG, and so on. For an overview of Maimonides' works on medicine, including a translation of two of his treatises, see Ariel Bar-Sela, Hebbel E. Hoff, and Elias Faris, "Moses Maimonides' Two Treatises on the Regimen of Health: *Fi Tadbir al-Sibhab* and *Maqalah fi Bayan Ba'd al-A'rad wa-al-Jawad 'anha*" (Philadelphia: Transactions of the American Philosophical Society, New Series, v. 54, 4, 1964), 3–50. Also cf. Gerrit Bos (trans.), *Medical Aphorisms: Treatises 1–5* (Provo, UT: Brigham Young University, 2004) (the first of six volumes on Maimonides' summary of Galen); and Fred Rosner, *Medicine in the Mishneh Torah of Maimonides* (Northvale: NJ: Aronson Press, 1997).
  - 17 On Ibn Sīnā, see note 19. As Hamed Abdel-reheem Ead, Professor of Chemistry at the Faculty of Science, University of Cairo, Giza, Egypt, and director of the Science Heritage Center, states on a web page (<http://www.levity.com/alchemy/islam21.html>) devoted to Ibn Rushd's medical contributions (slightly modified):
    - Ibn Rushd ... spent a great part of his fruitful life as a judge and as a physician. Yet he was known in the West for being the grand commentator on the philosophy of Aristotle, whose influence penetrated the minds of even the most conservative of Christian Ecclesiastes in the Middle Ages, including men like St. Thomas Aquinas. People went to him for consultation in medicine just as they did for consultation in legal matters and jurisprudence.
    - Ibn Rushd's major work in medicine, *al-Kulliyat*

- (“Generalities”), was written between 1153 and 1169.
- Its subject matter leans heavily on Galen, and occasionally Hippocrates’ name is mentioned. It is subdivided into seven books: *Tasbrih al-a’lda’* (“Anatomy of Organs”), *al-Sibha* (“Health”), *al-Marad* (“Sickness”), *al-’Alamat* (“Symptoms”), *al-Adwiya wa ’l-aghdhiya* (“Drugs and Foods”), *Hifz al-sibha* (“Hygiene”), and *Shifa al-amrad* (“Therapy”).
  - Two Hebrew versions of *al-Kulliyat* are known, one by an unidentified translator, another by Solomon ben Abraham ben David.
  - The Latin translation, *Colliget*, was made in Padua in 1255 by a Jew, Bonacosa, and the first edition was printed in Venice in 1482, followed by many other editions.
  - Ibn Rushd wrote an (abstract) of Galen’s works, parts of which are preserved in Arabic manuscripts.
  - He showed interest in Ibn Sīnā’s *Urjūzah fi al-ṭibb* (“Poem on Medicine,” *Canticum de medicina*), on which he wrote a commentary, *Sharh Urjuzat Ibn Sina*.
  - It was translated into Hebrew prose by Moses ben Tibbon in 1260; a translation into Hebrew verse was completed at Beziers (France) in 1261 by Solomon ben Ayyub ben Joseph of Granada.
  - Further, a Latin translation of the same work was made by Armengaud, son of Blaise, in 1280 or 1284, and a printed edition was published at Venice in 1484.
  - Another revised Latin translation was made by Andrea Alpago, who translated Ibn Rushd’s *Maqala ’l-tiryāq* (“Treatise on Remedies,” *Tractatus de theiaca*).
  - Ibn Rushd’s unsuccessful attempts to defend philosophers against theologians paved the way for a decline in Arabic medicine.
  - The great image of the Hakim (physician-philosopher), which culminated in the persons of al-Razi and Ibn Sīnā, has been superseded by that of *faqih musharik fi ’l-ulum* (a jurist who participates in sciences), among whom were physician-jurists and theologian-physicians.
  - The German physician Max Meyerhof remarked that: “In Spain, the philosophical bias predominated among medical men. The prototypes of this combination are the two Muslims, Ibn Zuhr (Avenzoar) and Ibn Rushd (Averroës).”
  - According to Draper, Ibn Rushd is credited with the discovery of sunspots.
- 18 Gersonides’ main scientific contributions were in mathematics, astronomy, and logic. For a collection of essays detailing his scientific achievements, especially his innovative astronomy which influenced the astronomical revolution we usually associate with Galileo and Copernicus, see Gad Freudenthal, ed., *Studies on Gersonides: A Fourteenth-Century Jewish Philosopher-Scientist* (Leiden: E.J. Brill, 1993).
- 19 The Wikipedia entry on Avicenna (Ibn Sīnā) correctly summarizes his contributions thus <<http://en.wikipedia.org/wiki/Avicenna>>

Ibn Sīnā ... was a Persian polymath and the foremost physician and philosopher of his time. He was also an astronomer, chemist, geologist, logician, paleontologist, mathematician, physicist, poet, psychologist, scientist, soldier, statesman, and teacher.

Ibn Sīnā wrote almost 450 treatises on a wide range of subjects, of which around 240 have survived. In particular, 150 of his surviving treatises concentrate on philosophy and forty of them concentrate on medicine. His most famous works are *The Book of Healing*, a vast philosophical and scientific encyclopaedia, and *The Canon of Medicine* [in fourteen volumes], which was a standard medical text at many medieval universities. *The Canon of Medicine* was used as a text-book in the universities of Montpellier and Louvain as late as 1650. Ibn Sīnā developed a medical system that combined his own personal experience with that of Islamic medicine, the medical system of the Greek physician Galen, Aristotelian metaphysics (Avicenna was one of the main interpreters of Aristotle, and ancient Persian, Mesopotamian and Indian medicine. He was also the founder of Avicennian logic and the philosophical school of Avicennism, which were influential among both Muslim and Scholastic thinkers.)

Ibn Sīnā is regarded as a father of early modern medicine, and clinical pharmacology, particularly for his introduction of systematic experimentation and quantification into the study of physiology, his discovery of the contagious nature of infectious diseases, the introduction of quarantine to limit the spread of contagious diseases, the introduction

of experimental medicine, evidence-based medicine, clinical trials, randomized controlled trials, efficacy tests, clinical pharmacology, neuropsychiatry, risk factor analysis, and the idea of a syndrome, and the importance of dietetics and the influence of climate and environment on health. He is also considered the father of the fundamental concept of momentum in physics and is regarded as a pioneer of aromatherapy for his invention of steam distillation and extraction of essential oils. He also developed the concept of uniformitarianism and law of superposition in geology.

Also, from <http://www.isesco.org.ma/pub/Eng/Architects/P20.htm>:

Ibn Sīnā mastered medicine in particular. He made new discoveries in this field; he was the first to describe a worm that he called the “round worm,” currently known as “ankles-toma.” He also studied neurological dysfunctions and was able to reach certain pathologic and psychological facts through psychoanalysis. He believed in the existence of an interaction between psychology and physical health. He also described the brain’s apoplexy resulting from excess in the blood flow.

Ibn Sīnā made original contributions in medicine, based on his own observations. He founded his conclusions on experiments and was able to reach new observations, including the contagious nature of tuberculosis and the propagation of diseases through water and soil. He also described at length dermatological and sexually transmitted diseases. Moreover, he described the pharmaceutical preparation of some medicines.

Ibn Sinā was also the first to describe the irritation of the brain's envelope, distinguishing it from other chronic irritations. He elaborated the first clear diagnostic of neck's scleroses and of meningitis. He also described the facial paralysis and its causes. He made the distinction between the paralysis caused by a dysfunction in the brain and that resulting Scientific contributions in other fields.

Ibn Sinā made important contributions in physics, through the study of several natural phenomena such as motion, force, vacuum, infinity, light and heat. He made the observation that if the perception of light is due to the emission of some particles from a luminous source, the speed of light must be finite.

Ibn Sinā made contributions in geology with a treatise on the formation of mountains, precious stones and metals. In this treatise, he discussed the effect of earthquakes, water, the degree temperature, sediments, fossilisation and erosion.

Ibn Sinā was also an outstanding mathematician and astronomer. He studied infinite bodies from religious, physical, and mathematical perspectives. His findings helped Newton and Leibniz to develop infinite numerals in the seventeenth century.

- 20 Mansura Haidar, "Medical Works of the Medieval Period from India and Central Asia," *Diogenes* 55, no. 27 (2008): 28.
- 21 Philip J. van der Eijk, *Medicine and Philosophy in Classical Antiquity* (Cambridge: Cambridge University Press, 2005), 15.
- 22 This chapter is important, not only because of its description of debate and its epistemological elements, but because it also informs us that debate (between different physicians as well as between physicians and others) was a professional obligation of physicians. It was part of their pedagogy, how they learned, how they defended their theories and practice, and how they practiced medicine.
- 23 When we think of "authoritative tradition" in a medical context, rather than, as is more usual, in a religious or philosophical context, the value and indeed necessity of a respect for tradition becomes obvious, since, if every physician had to re-invent the full inventory of medical lore and acquired knowledge all over again, everyone's health would be at greater risk. Medicine learns from the trial and error of preceding generations; its accumulated knowledge can be supplemented and modified by fresh observations and discoveries, but accumulated traditional knowledge can only be ignored at the peril of the physician and his patients.
- 24 Deriving philosophical categories by inflecting a key verb, in this case the verbal root of "action," *karma* (from the root  $\sqrt{\text{kr}}$ ), is an inheritance from the other great influence on Indian philosophy, the grammatical tradition. See below under "Logical Styles." For an example in a decidedly philosophical context that draws on the same root, compare the following *kārikā* from Nāgārjuna's *Mūlamadhyamakakārikā* (8:4): "If a cause [for an action] does not actualize (*asaṭ*), the enacted (*kārya*) and activator (*kāraṇa*) are not found. | Those not having come

- to be (*abhāva*), activity (*kṛiya*), actor (*kartā*), and acting (*karaṇa*) are not found.” (*betāvasati kāryaṃ ca kāraṇaṃ ca na vidyate | tadabhāve kriyā kartā karaṇaṃ ca na vidyate*)
- 25 The *Tevijja sutta* of the Dīgha Nikāya of the Buddhist Tipiṭaka gives a humorous, satirical parody of religious devotionism, comparing it to someone who proclaims he is in love with the most beautiful woman in the world, but when asked what does she look like, what type of hair, eyes, and so on does she possess, what is her caste, etc., he replies: “I don’t know.” Devotionalism, Buddha concludes, is as ineffective as someone who, wishing to get to the other shore of a river, builds a fire and sits down, chanting to the other shore to “come here,” rather than building a raft and making his way across.
- 26 Kant, in a letter to Christian Garve. Quoted in Immanuel Kant, *Opus postumum*, ed. Eckart Förster; trans. Eckart Förster and Michael Rosen (Cambridge: Cambridge University Press, 1993), “Introduction,” p. xvi.
- 27 Ibid.
- 28 Geoffrey Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece* (New Haven, CT: Yale University Press, 2003).
- 29 (1) *Duḥkha* (dis-ease, a.k.a. “suffering”), (2) *samudaya* (identifying the causes of *duḥkha*), (3) *nirodha* (assurance that the causes can be eliminated), and (4) *mārga* (the way to eliminate the causes).
- 30 For instance, it is the topic of chap. 7 of part 2 (*Nidāna-sthāna*) of the *Caraka-saṃhitā*.
- 31 The three *doṣas* – *vāta*, *pitta*, and *śleṣman*, based respectively on the three elements wind, fire-heat, and water – are fundamental categories of Indian medicine into which diseases, symptoms, pharmaceuticals, foods, etc., are classified and analyzed. For a general discussion that includes Buddhist usages, see Hartmut Scharfe, “The Doctrine of the Three Humors in Traditional Indian Medicine and the Alleged Antiquity of Tamil Siddha Medicine,” *Journal of the American Oriental Society* 119, no. 4 (1999): 609–29.
- 32 The next oldest Indian medical text, *Suśruta-saṃhitā*, contains materials roughly contemporaneous with Asaṅga (4th century) but is recognized to also contain much later material in the redaction that has come down to us.
- 33 *Pātakebhyah paraṃ caitat pātakaṃ nāstikagrabaḥ*. I have consulted two editions of the *Caraka-saṃhitā*, both containing the original text in devanagari and an English translation: (1) *Caraka-saṃhitā: Agniveśa’s treatise refined and annotated by Caraka and redacted by Dṛḍhabala: text with English translation*, Priyavrat Sharma (editor-translator) (Varanasi: Chaukhambha Orientalia, 1981–83), 4 vols.; and (2) *Agniveśa’s Caraka saṃhitā: text with English translation & critical exposition based on Cakrapāṇi Datta’s Āyurveda dipikā*, Ram Karan Sharma and Bhagwan Dash (trans. and ed.) (Varanasi: Chowkhamba Sanskrit Series Office, 1976–2002), 7 vols. The translation above is from passages 14–15 of chap. 11, vol. 1, p. 209 of Sharma and Dash.

- 34 The *CS* in its available redaction is heavily steeped in Sāṃkhyan theory, which holds that the world consists of varying proportions of three constituent factors: *sattva* (light, pure, etc.), *rajas* (passionate, active), and *tamas* (dark, dull, inert). By implication, *CS* is claiming that someone devoid of *rajas* and *tamas* (skewering passions and stupidity) must be *sattvic* (pure, enlightened), and thus constitutionally incapable of lying.
- 35 Sharma and Dash, vol. 1, 213.
- 36 *Prajñā-parādha* is translated by Sharma and Dash as “intellectual blasphemy” and “intellectual error” by P.V. Sharma. It literally means “an offense to reason,” i.e., acting unreasonably. The *CS* uses the term in a number of ways, but what they seem to have in common is acting or having an attitude that is unreasonable, i.e., endangering one’s health in ways that one should know better than to engage in. E.g., *Sūtra-sthāna*, chap. 38: 39-40 states: “Due to *prajñāparādha*, he indulges in unwholesome sense objects, suppression of natural urges and taking up risky jobs. The ignorant one is attached to temporarily pleasing objects but the learned is not so because of his understanding having been clear” (P.V. Sharma, vol. 1, 231).
- 37 Reflection #90, *Aphorisms and Reflections*, selected by Henrietta A. Huxley (London: Macmillan, 1907).