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THE HINDU SYLLOGISM: NINETEENTH-CENTURY PERCEPTIONS OF INDIAN LOGICAL THOUGHT

Jonardon Ganeri

The great ages of renaissance in history were those when men suddenly discovered the seeds of thought in the granary of the past.

—Rabindranath Tagore

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I

In 1955, H. H. Price, who was then the Wykeham Professor of Logic in Oxford, wrote an article titled "The Present Relations between Eastern and Western Philosophy." He reports here his belief in the existence of a "vast chasm" separating the two philosophical traditions, one of which "looks outward and is concerned with Logic and with the presuppositions of scientific knowledge; the other inward, into the 'deep yet dazzling darkness' of the mystical consciousness" (1955, p. 222). While the job of the Western philosopher is the analysis and clarification of the concepts that ground scientific inquiry, the Eastern, more particularly Indian, philosopher is said to explore a "mysterious and fundamental sort of self-knowledge," which, though it cannot be literally described, can be "spoken of in paradoxes and parables" (p. 227). For Price, there is a sharp division of cultural labor: Western and Eastern philosophers are not to be thought of simply as giving different *answers* to the same perennial philosophical puzzles: they can hardly be regarded even as asking the same *questions*.

Price, indeed, gives expression to a dogma that, although by his time having acquired the status of an orthodoxy, has its roots in an earlier period. Most likely, it was transmitted to Price, directly or indirectly, by Radhakrishnan, who lived and taught in Oxford in the late 1930s, and whose representations of India's intellectual past were almost universally and uncritically accepted by his English philosophical audience. According to Radhakrishnan, Indian philosophy is "essentially spiritual," dominated by the spiritual motive, stimulated by the problems of religion, subjective, speculative, and synthetic (1923, pp. 24–30). "The whole course of Hindu philosophy," he says, "is a continuous affirmation of the truth that insight into reality does not come through analytical intellect" ([1937] 1977, p. 65). His own antipathy toward logic is grounded in his belief that logic has nothing to do with the real purpose of philosophy, namely the attainment of spiritual insight:

With its profound sense of spiritual reality brooding over the world of our ordinary experience, Indian thought may perhaps wean us moderns from a too exclusive preoccupation with secular life or the temporary formulations in which logical thought has too often sought to imprison spiritual aspirations. ("Fragments of a Confession," p. 7)

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Logical knowledge is comparable to a finger which points to the object and disappears when the object is seen. True knowledge is awareness, a perception of the identity with the supreme, a clear-sighted intuition. (1939, p. 24)

It is both remarkable and significant that someone as well acquainted with the original sources as Radhakrishnan should propound such a view of Indian thought. For, as I will show, the existence of strong rational, logical, and empiricist trends in Indian thought was well known both to nineteenth-century European logicians (as well as to orientalists) and historians of logic. The position of those who, like Radhakrishnan and Price, see in Indian philosophy a radically non-European mode of thought depends therefore on a deliberate choice: one involves the exclusion of texts dealing with the canons of sound argument, or with the criteria governing rational assent, or with grammar and the philosophy of language; and the other involves the promotion of quasi-religious, soteriological texts whose theme is the introspective methodology underlying what was called 'the science of the soul' (*ātmavidyā*). As Inden, in his recent book *Imagining India*, wryly observes, "To get us to this point (the point at which the Upaniṣads and Vedāntic texts are seen as containing the essentials of Indian philosophy) our guides have already had to make some careful selections" (1990, p. 101).

I believe that these selections were, to a great extent, a product of the colonized Indian intellectual struggle for an indigenous, non-European, identity. The devaluation of rationalist elements in Indian philosophical thought arose because of 'nativist' trends in the Indian nationalist movement, attempts to find in India's past something radically non-European with which to confront the colonial intrusion. What they found was a Vedāntic system grounded in certain 'fundamental' Upaniṣadic texts. T. Raychaudhuri, in his study of nineteenth-century Bengali attitudes, makes the following observation:

The emerging nationalist consciousness adopted the heritage of the Hindu culture as the focus of its identity and glorified in the Hindu past. . . . Even the secular-agnostic trend in Bengali middle class culture, traceable back to the early days of the Hindu College—if not to the even older tradition of Navyānyāya—was subsumed by the ill-defined sense of national identity built around the Hindu heritage and its social body. *A selective veneration for elements of the Hindu culture was thus the cultural bed-rock of the nationalist awareness.* (1988, p. 3, my italics)

It is important to stress that this process involved an act of deliberate choice. The spiritual, Vedāntic, past was not there for the taking, but had to be constructed and imposed through a selective promulgation of key texts. Two remarkable passages from the Bengali social reformer Vivekananda throw much light on the mechanisms through which this took place. In the first, he is addressing a Bengali disciple:

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Why do you not set about propagating Vedānta in your part of the country? There Tāntrikism prevails to a fearful extent. Rouse and agitate the country with the lion-roar of *Avaitavāda*. Then I shall know you to be a Vedāntist. First open a Sanskrit school there and teach the *Upanishads* and the *Brahma-Sūtras*. Teach the boys the system of Brahmacharya. I have heard that in your country there is much logic-chopping of the Nyāya school. What is there in it? Only *Vyāpti* (pervasion) and *Anumāna* (inference)—on these subjects the Pandits of the Nyāya school discuss for months! What does it help towards the Knowledge of the *Ātman*? ([1902] 1972, vol. 7 : 256–257)

The second passage is from a speech in Madras:

Transported from the soil of Mithilā to Navadvīpa, nurtured and developed by the fostering genius of Shiromani, Gadādhara and Jadadisha, and a host of other great names, an analysis of the laws of reasoning in some points superior to every other system in the whole world, expressed in a wonderful and precise mosaic of language, stands the Nyāya of Bengal, respected and studied throughout the length and breadth of Hindusthān. But, alas, the Vedic study was sadly neglected, and until within the last few years, scarcely anyone could be found in Bengal to teach the *Mahābhāshya* of Patanjali. Once only a mighty genius rose above the never ending *Avacchinnas* and *Avacchedakas*—Bhagavān Shri Krishna Chaitanya. For once the religious lethargy of Bengal was shaken, and for a time it entered into a communion with the religious life of other parts of India. ([ca. 1895] 1972, vol. 4 : 336–337)

Vivekananda here gives us a glimpse, albeit idiosyncratic, into the academic life of nineteenth-century Bengal. It was a place where logic, grammar, and also Tantrism were the principal intellectual activities. But for Vivekananda, as later for Radhakrishnan, the study of logic was of no help in the spiritual renaissance that would rejuvenate India. It was necessary, rather, to establish institutions in which the key texts of Vedānta—the *Upaniṣads* and *Brahma-sūtras*—could be taught. The neo-Hindu movement did not, therefore, involve a “return to the source,” as some have argued,¹ if by this is meant the rediscovery of a ‘native’ culture. It needed, rather, to replace one set of sources with another, and to create a new, Vedāntic, culture, which would usurp an already existing intellectual culture grounded in India’s logical and grammatical traditions. If, long before the time of H. H. Price, any awareness of these traditions had disappeared, apart from within specialist academic circles, it reflects the effectiveness with which ‘neo-Hindu’ thinkers like Vivekananda, Radhakrishnan, and many others, had managed to impose their own vision of India’s philosophical past.

II

Since its origins were largely in the Indian nationalist struggle, the myth that there exists a ‘huge chasm’ between Eastern and Western phi-

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osophy could not have had a serious influence in Europe until the end of the nineteenth century. Prior to this, indeed, interest in Indian logical thought in the West was surprisingly widespread. I would like now to reconstruct nineteenth-century perceptions of the logical and 'rationalist' trends in Indian thought among European logicians and historians of philosophy. As we shall see, the period from 1825 to about 1860 witnessed a degree of awareness of Indian logic among European philosophers not seen before or since.

European interest in Indian rationalist² thought centered on the 'discovery' of what they called the Indian or Hindu syllogism, first noticed in 1824 by the pioneer orientalist and mathematician, H. T. Colebrooke. Colebrooke bases his account only on a single, very early text, Gautama's *Nyāya-sūtra*,³ to which he gives the somewhat paradoxical label 'a metaphysics of logic' ([1824] 1873, p. 92). Colebrooke's essay became the standard reference for the next fifty years, and Colebrooke, through his influence in the Royal Society and the Royal Asiatic Society, and his contacts with such logicians as Boole, Hamilton, and De Morgan, was able to generate a great deal of interest in his discovery of the Indian syllogism, not only among orientalists, but also within the English philosophical community. As Blakey revealingly states in the chapter on "Eastern and Indian Logic," in his 1851 *Historical Sketch of Logic*: "I confess it is chiefly from a compliance with recent custom, that I here offer these few remarks on the systems of logic known in the Eastern nations and in India. I have no doubt of the existence of such logical forms as have of late years been brought prominently forward among European *literati*" (1851, p. 380).

The extent to which Colebrooke's 'discovery' of the Hindu syllogism penetrated the consciousness of these "European literati" can be gauged by such facts as the following. One of the most widely used logic textbooks of the nineteenth century, Thomson's *Laws of Thought*, carried, from its third edition in 1853 until the final reprint of its fifth edition in 1882, an appendix by Max Müller titled "Indian Logic." Apart from an admirably clear discussion of the Hindu syllogism, to which I shall return, Müller here considers what was certainly an important question at the time, namely whether India or Greece had obtained its logical theory from the other. He quotes Niebuhr as saying that "if we look at Indian Philosophy, we discern traces of a great similarity with that of the Greeks [which] we cannot explain . . . except by the intercourse which the Indians had with the Graeco-macedonic kings of Bactra." To the Sanskritist Görres, he attributes the view that "Alexander, who had been himself in conversation with the Logicians of India, might have sent some of their treatises to his tutor at home, and Aristotle would have worked them up into a system of his own"! Müller, however, noted that such views were based on questionable assumptions about the antiquity of the Indian texts.

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He preferred to consider Greek and Indian philosophy to be autochthonic, and concluded that “in philosophy also there is a certain amount of truth which forms the common heirloom of all mankind.”

References to Indian logic appear in the works from this period by a number of European philosophers. De Morgan reflects awareness of the subject when he remarks that “the two races which have founded the mathematics, those of the Sanscrit and Greek languages, have been the two which have independently formed systems of logic” ([1860] 1966, p. 184 n. 1). That De Morgan should draw this parallel indicates that he was familiar with Colebrooke’s work on classical Indian mathematics, especially his book on Bhāskara’s algebra. Indeed, De Morgan went so far as to arrange for the English publication of a work on algebra by a nineteenth-century Indian mathematician, Ram Chundra, and, in a lengthy preface, to praise the mathematical sophistication of native Indian thought: “They [the English] forget that at this moment there still exists [in India] a body of literature and science which might well be the nucleus of a new civilisation, though every trace of Christian and Mohammedan civilisation were blotted out of existence” (De Morgan, 1859).

There is evidence, too, that the logician George Boole was acquainted with elements of Indian thought. His wife, Mary Everest Boole, wrote a fascinating article titled “Indian Thought and Western Science in the Nineteenth Century” (M. Boole [1901] 1931), in which she argued for the thesis that nineteenth-century European science “could never have reached its present height had it not been fertilised by successive wafts from the . . . knowledge stored up in the East” (p. 947). She claimed, in particular, that George Boole, and the circles in which he moved, were aware of and influenced by Indian philosophical, mathematical, and astronomical ideas, and she invites the reader to “Think what must have been the effect of the intense Hinduizing of three such men as Babbage, De Morgan and George Boole on the mathematical atmosphere of 1830–1865” (p. 958). Babbage, we may note, was a friend of Colebrooke, and it is more than likely that Colebrooke’s ‘discoveries’ were well known to the logicians whom Mary Everest Boole cites.

I will mention one other eminent logician, Sir William Hamilton, who refers, albeit unsympathetically, to the “Hindu syllogism” in the appendix to his *Discussions on Philosophy* (1852) titled “Of Syllogism”: “The Hindu syllogism is merely a clumsy agglutination of . . . counterforms, being enounced, 1st, analytically, 2nd, synthetically.”

The most influential histories of philosophy from this period, including Ritter’s widely read *The History of Ancient Philosophy* ([1838] 1846), Windischmann’s *Philosophie im Fortgang der Weltgeschichte* (1827–1834), and Ueberweg’s *A History of Philosophy from Thales to the Present Time* ([1863] 1872), all have chapters on ‘Eastern’ philosophy, in

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which they discuss the Hindu syllogism. Indeed, if Blakey's remark is anything to go on, it had become virtually *de rigueur* to discuss the Hindu syllogism in any account of the history of logic. As already noted, behind this lay a fascination with the question of Greek-Indian influence and, in particular, whether the basic idea of syllogistic argument schemas had been transmitted either from Greece to India or from India to Greece.

The general impression is that a certain knowledge of Indian logical theory was 'in the air' in the mid-nineteenth century, and that it was considered to be a topic worthy of serious, even if critical, discussion.

III

Note, however, that Blakey's grudging inclusion of such Eastern "systems of logic" into his history is dictated not by a willingness to admit that there is anything of value to be found in them, but rather out of deference to fashion. He continues:

I have a great doubt of such logical views becoming of any value whatever in the cause of general knowledge or science, or of ever having any fair claim to be admitted as an integral part of the Catholic philosophy of mankind. It is absurd to conceive that a logic can be of any value from a people who have not a single sound philosophical principle, nor any intellectual power whatever to work out a problem connected with human nature, in a manner that is at all rational or intelligent. Reasoning, at least in the higher forms of it among such semi-barbarous nations, must be at its lowest ebb; nor does there seem to be any intellectual stamina, in such races of men, to impart to it more vigour and rationality. (1850, p. 380)

If, by 1853, Max Müller went so far as to ask "the Brahmans themselves [to] take up the gauntlet and defend their Logic against the attacks of European critics" (1853, p. 300), this was a reflection as much of the failure of the philosophically untrained orientalist scholars plausibly to interpret the "Hindu syllogism" as it was of the negative reaction of many British and German logicians and historians of philosophy to the idea of an origin of logical inquiry other than Greek.

Indeed, as we shall see, most of the objections leveled by these critics follow immediately from Colebrooke's hasty reductive comparison of the Nyāya analysis of the structure of sound reasoning with syllogistic schemata, a comparison implicit in the very phrase "Hindu syllogism." Colebrooke describes the *Nyāya-sūtra* analysis of an argument schema as follows:

A regular argument or syllogism (*nyāya*) consists of five members (*avayava*) or component parts. 1st, the proposition (*pratijñā*); 2nd, the reason (*hetu* or *apadeśa*); 3rd, the instance (*udhāharaṇa* or *nidarśana*); 4th, the application (*upanaya*); 5th, the conclusion (*nigamana*). Ex.

1. This hill is fiery:
2. For it smokes.
3. What smokes is fiery: as a culinary hearth.
4. Accordingly, the hill is smoking:
5. Therefore it is fiery.

Some confine the syllogism (*nyāya*) to three members; either the three first, or the three last. In this latter form, it is quite regular. The recital joined with the instance is the major; the application is the minor; the conclusion follows. ([1824] 1873, p. 115)

The most influential of the "European critics" to whom Müller refers was without doubt H. Ritter. His 1846 *History of Ancient Philosophy* contained a chapter titled "Oriental Philosophy, and its Influence on the Grecian." Indian philosophy, according to Ritter, "has an irresistible claim on our attention," which it attracts to a lesser extent than Greek philosophy "only because its ideas have not entered in such extensive and therefore influential combinations into the present development of science" ([1838] 1846, p. 332). When it comes to the Nyāya, however, this generous assessment is qualified or withdrawn:

One point alone appears certain, and that is, that they [the Nyāya] can lay but slight claims to accuracy of exposition. This is proved clearly enough by the form of their syllogism, which is made to consist of five instead of three parts. Two of these are manifestly superfluous, while by the introduction of an example in the third the universality of the conclusion is vitiated. (p. 365)

Irritated probably by the haphazard ordering of the sections in such an ancient and diachronic text as the *Nyāya-sūtra*, he grumbles that "in its exposition the Nyāya is tedious, loose and unmethodical. Indeed the whole form of this philosophy is a proof of the incapacity of its expositors to enter into the intrinsic development of ideas, whatever knowledge they may have possessed of the external laws of composition" (p. 366). Ritter's sources, we may note, are Colebrooke (he cites the passage above in a footnote) and Windischmann, whose view he reports thus: "Windischmann concludes that the Hindoos possessed only the fundamental principles of the logic which the Greeks cultivated" (p. 366).

Ritter's comments are representative of European reactions to the Hindu syllogism in the nineteenth century. The Indian version of the syllogism is found wanting in two respects. First, of the five steps, two are "manifestly superfluous." For in a properly formulated syllogism, the conclusion, that the hill is fiery, follows from two premises: a *minor* premise, that the hill is smoky, and a *major* premise, that whatever has smoke also has fire. When they are construed as setting out the premises and conclusion of a deductive argument, the Indian schema indeed looks as if it is "nothing but an operose repetition of the same reasoning"

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(Hamilton 1852), in which the conclusion is first stated followed by the premises, and again the premises stated followed by the conclusion.

Apologists for the Nyāya were quick to point out that this criticism depends on a radical misconstrual of the point of the five-step format, whose function, they said, is not to present the premises and conclusion of a formal deduction, but to describe the correct form for conducting a debate. It is to be thought of as a sort of question-and-answer session, with one side advancing a thesis, and the other interrogating him or her. As Ballantyne put it in his lengthy reply to Hamilton, "the five-membered exposition [is not] the Hindu syllogism at all, but the Hindu rhetorical exposition" (1859, p. 149). If the five-step format is understood as a stylized representation of the stages in a rhetorical debate, then it exhibits "a more natural mode of reasoning than is compatible with the compressed limits of the syllogism" (V. Kennedy 1839). The presence of five, rather than three, steps is natural, they suggest, when we recall that each step is a response to a silent interlocutor:

1. What is your thesis? That the hill has fire on it.
2. Why? Because there is smoke there.
3. So what? Where there is smoke, there is fire: e.g. the kitchen.
4. And? The hill is such a smoky place.
5. So? Therefore, it has fire.

Nevertheless, the impression remained that the Indian analysis of the reasoning process was clumsy and imprecise, and that the Indian philosophers were unable, with any accuracy, to articulate the essentials of a properly formulated argument (cf. Blakey 1851, p. 385).

The citation of an example in the third step only served to reinforce this impression, and to encourage those critics for whom Indian rational processes never moved beyond the level of the analogical. The exact meaning of Ritter's assertion, that the introduction of an example vitiates the universality of the conclusion, is not entirely clear, but apparently implies that the inference proceeds from particular to particular without the intervention of such a generalization as would be expressed by the major premise in a syllogism. Keith was later to claim that "the fact that reasoning can only proceed by means of a general proposition had not yet been appreciated in the [Nyāya] school, for this reasoning still was from particular to particular by analogy" (1924, p. 87). Others objected that the example was simply superfluous: the evaluation of an argument as valid or invalid in no way depends on the citation of an instance of the major premise.

Once again, authors like Ballantyne, Müller, and Röer strove to show that the citation of an example had a legitimate point. Ballantyne relied once more on the distinction between logic and rhetoric, claiming that the example helped to convince one's dialectical opponent of the truth

of the general rule. For Müller, the function of the example was to indicate what he called the 'modality' of the general rule. He noted that Indian logicians distinguish between three kinds of such rule: those whose antecedent holds over the whole domain ("Whatever is nameable is knowable"), those whose antecedent holds over only part of the domain ("Whatever has smoke has fire"), and those whose antecedent holds over none of the domain ("Anything except earth which is different from the elements other than earth has odour").⁴ According to Müller, the example indicates which kind of rule is being employed in the third step.

Röer took yet another tack. Relying on the distinction between valid and sound inference, he argued that "the Nyāya wanted not only to give rules for the correctness of the logical operation, but to guard against false premises" (1850, p. xxiii). Citing an example could then be seen as a gesture in the direction of an inductive confirmation of the major premise, upon whose truth the soundness of the inference rests.

For my present purpose, to reconstruct European perceptions of Indian rationalist thought, it is unnecessary to evaluate the relative merits of these hypothetical justifications of the inclusion of an example. I would like instead to point out an irony here. Of all the philosophers of the nineteenth century, J. S. Mill was one of the most influential. He became famous, in particular, for his critique of syllogistic reasoning, namely that, since the major premise "all men are mortal" already 'includes' the conclusion "Socrates is mortal," the premises of a syllogism already assert what they are supposed to prove. The real grounds for the inference, he claimed, were just the observed instances on which our belief in the major premise rests, and therefore the inference is from particular to particular, in which, as he puts it, the major premise is just a "memorandum" of previously observed instances. Mill's doctrine seemed to the Western expositors of Nyāya to be very similar to the Indian pattern of inference, with its emphasis on citing examples, and they constantly referred to his theory in their expositions. The irony is that Mill, though he worked as an Indian colonial administrator for most of his life, regarded Indian thought as undeveloped, and must have found unsettling the suggestion that there were resonances in it of his own ideas. It is a striking fact that Mill never once refers to the Indian syllogism or to the Indian rationalist schools, though he was certainly acquainted with the orientalist, like Ballantyne, who promoted them.

Still another way in which the Nyāya argument pattern fails to be properly syllogistic was noted by V. Kennedy:

I need scarcely observe that this [Nyāya] argument is reducible to [a] regular syllogism. . . . But it seems, at the same time, evident that the argument of Gautama and the syllogism of Aristotle are . . . essentially different. . . . For the

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validity of the syllogism depends upon this axiom, that if two terms agree with one and the same third, they agree with each other.... The argument of Gautama [however] cannot be formed unless a distinct notion of the properties of the subjects by which the question is to be proved has been first conceived. (1839, p. 146)

The slightly obscure point to which V. Kennedy draws attention is that the middle term in an Aristotelian syllogism is, in effect, a variable. In other words, we can represent the syllogistic schema as having the following form: if there is some property H such that whatever has F has H, and whatever has H has G, then whatever has F has G. On the other hand, V. Kennedy claims, the 'reason-property' (*hetu*) in the Nyāya argument is something explicitly mentioned and known to be possessed by the subject. Unfortunately, this line of thought is based on poor acquaintance with the texts, for, as S. Bhattacharyya has shown in his paper on the middle term (Bhattacharyya 1968), the Nyāya authors were well aware of the arbitrariness of the reason-property.

IV

While some European philosophers and historians of philosophy were content simply to criticize the Indian analysis of a reasoned argument as a clumsy version of the syllogism, others, influenced primarily by Hegel, looked for a wider perspective. The German historian of philosophy, Ueberweg, while noting that "to the authors of the Nyāya doctrine... the Syllogism was known," dismissed Indian philosophy thus, in his *History of Philosophy*: "Philosophy as a science could [not] originate among the Orientals, who, though susceptible of the elements of high culture, were content simply to retain them in a spirit of passive resignation" (Ueberweg [1863] 1872 : 14). This idea, that 'Oriental' philosophy was tradition-bound and hence static and unoriginal, was echoed by yet another historian of philosophy, Windelband: "As was natural in consequence of the peculiar restraint of the Oriental mind, they lacked for their fruitful and independent development, the initiative activity of individuals" (*A History of Philosophy* 1891 : 23).

Here, then, was an explanation of the Indian thinkers' alleged failure to develop a properly scientific conception of philosophy. Though they stumbled across the patterns of syllogistic reasoning, their traditionalist habits of mind stopped them from turning it into the basis of a methodical system of logic. "The foundation of logic as a science," says Ueberweg, "is a work of the Greek mind, which equally removed from the hardness of the Northern and the softness of the Oriental, harmoniously united power and impressibility" ([1857] 1871). Even Röer, whose analysis of the Nyāya was one of the most sophisticated of the time, subscribed to a version of this myth:

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That Hindu philosophy will have any great influence on the development of European philosophy and mediately of European civilization must be denied. You are compelled to think by reading the works of the Greeks, they introduce you into the process of their thoughts, and by this force you to accompany them with your own thoughts, until you arrive as it were by your own mind at the principles of their systems. . . . The Hindus, on the other hand, are dogmatical. They commence synthetically with a statement of their principles, yet do not condescend to unfold the train of thought which has led them (1850, pp. iv–v).

This “inherent fault” in the mode of exposition of the Indians’ philosophical texts “perhaps, more than anything else, contributed to the narrow limits of their mental horizon.”

The picture, then, was of Indian rationalist thought as moribund, and in particular of the Indian syllogism as a clumsy, barnacled version of its proper, Aristotelian form. This picture lay behind the endeavors of even those orientalist like Ballantyne who thought they could perceive in the Nyāya system the beginnings of a scientific conception of philosophy. As head of the Sanskrit College in Benares, Ballantyne inherited from another Scottish orientalist, Muir, the program of educating intelligent brahmins by translating Christian and Western philosophical texts into Sanskrit. The students at this college were looked upon to disperse European ideas among their countrymen by “inculcating the mass with the knowledge of the West,” as Ballantyne put it. Ballantyne’s educational approach was based on what later came to be called the concept of ‘fulfillment’—the idea that Indian religious and philosophical doctrines should not be directly refuted, but instead developed and improved until they resembled their European counterparts. “The method which I have found to answer best,” says Ballantyne, “is to take as a starting point some established point in their own philosophy, and to show how the philosophers of Europe have followed up the enquiry” (1852, p. xi). To this end, Ballantyne composed in Sanskrit his *Synopsis of Science*, which, though deriving its arrangement and style from the *Nyāya-sūtras*, was meant to be “a consistent digest of European knowledge for the use of India.” Within this text, the treatment of inference acquired special importance, for “our modern conception of Induction being that to which is particularly to be attributed our superior progress in science, it appeared highly important . . . that the Hindu speculations on the subject should be carefully investigated” (1852 : xxvi).

Thus even Ballantyne, who was the first to produce good translations of Indian logical texts, and who defended the Nyāya system whenever he found it criticized (cf. Ballantyne 1848, 1849a,b,c [three publications], 1859), ultimately saw the Indian account only as a transitional step from which to develop to a more sophisticated, European mode of

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scientific knowledge. The extent to which he succeeded might be gauged from the tribute paid to him by Müller:

Till very lately they [the Brahmans] entertained a very low opinion of European Logic, some account of which had been supplied to them from the popular work of Abercrombie.... By the exertions of Dr. Ballantyne, the Principle of the Sanskrit College at Benares, some of the best English works have been made accessible to the Pandits, and at the present day we might hear the merits of Bacon's *Novum Organon* discussed in the streets of Benares. (1853, p. 300)

V

At the beginning of this essay, I observed that Indian philosophy came to be synonymous with the speculative, spiritual, and nonrational. It is not, as we have now seen, that India did not have rationalist and scientific traditions, nor that European philosophers in the nineteenth century were unaware of them. Yet, initially favorable responses among European intellectual circles to reports of Indian contributions to logic, and enthusiasm for the idea that logic had its origins as much in India as in Greece, gave way to a more skeptical and dismissive evaluation of the Indian material. This change in attitude had its roots, perhaps, in the passing of Europe's 'Oriental Renaissance', and in a harder, utilitarian approach to the government of its Eastern colonies.⁵

The idea that Indian philosophy is 'essentially spiritual', though still all too prevalent, has been shown to be a myth by authors such as Daya Krishna, J. N. Mohanty, and B. K. Matilal. What I have tried to do here is to uncover some of the *origins* of this myth. It has become something of a commonplace to say that such myths are the result of European invention, of the West's desire to discover its 'other' in the East. It seems, however, that such a view cannot represent the entire truth. Those nineteenth-century European scholars who took their inspiration from the work of Colebrooke did try to analyze Indian logical theory with clarity and insight. Though limited both by their lack of acquaintance with important texts and by the methods of logical analysis then available to them, they engaged in a certain kind of 'comparative philosophy' which is still practiced today. Colebrooke, I think, deserves recognition for attempting to set comparative philosophy on a secure methodological basis, as William Jones had earlier done for comparative linguistics.

The origins of the myth lie as much in the Indian intellectual quest for an Indian critique of colonial social policies within the framework of an emergent nationalist movement. This movement, searching in India's intellectual past for a native, non-European way of thinking, saw no reason to promote indigenous traditions of logical or scientific inquiry. It was not until well into the twentieth century that a new generation of academics, including Athalye, Randle, Seal, Tucci, Bochenski, Stcher-

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batski, and Ingalls, began again to examine Indian philosophical texts with renewed logical acumen.

NOTES

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- 1 – Cf. K. N. Panikkar (1986, p. 416) and S. Gopal (1989, introduction). Gopal, Radhakrishnan's biographer and son, tries to use Amilcar Cabral's notion of a "return to the source" in order to explain Radhakrishnan's attitudes toward Indian philosophy. But he tacitly accepts that there is some one body of texts that constitute this source. Note, too, that as originally used by Cabral, the concept of a return to the source refers not to the rediscovery of a past, textually grounded tradition, but to a return to the folk culture of the masses (cf. Cabral 1973, p. 63: "The return to the source . . . is denial by the petite bourgeoisie of the pretended supremacy of the culture of the dominant power over that of the dominated people with which it must identify itself"). Yet in this sense, too, the neo-Hindu 'Vedāntism' is not a "return to the source," for the nineteenth-century culture of the masses, as Vivekananda himself indicates, was not Vedānta but Tantrism—in Bengal at least.
- 2 – In this essay, I will use the term 'rationalism' in opposition to such terms as 'spiritualism' or 'subjectivism'. By 'Indian rationalist thought', I have especially in mind the Nyāya school of Indian philosophy, which was the object of most nineteenth-century interest in the West. The logical texts of the Buddhists, so central to the development of logic in India, were only rediscovered at the end of the nineteenth century, when Vidyabhusana went on his pioneering searches in Tibet.
- 3 – The date for the composition of the *Nyāya-sūtra* is now placed between 200 B.C. and A.D. 150. It is the foundational text for the Nyāya school, forming the basis of many commentaries and original treatises. In the thirteenth century, the school underwent a major reform, acquired the new name 'Navya-nyāya', and began to develop a technical language of great precision. Incidentally, the terms '*avacchedaka*' (delimiter) and '*avacchinna*' (delimited) are among the logical primitives of this language.
- 4 – These were called '*kevalānvaya*', '*anvaya-vyatireka*', and '*kevala-vyatireka*'.

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5 – Cf. Majeed, *Ungoverned Imaginings: James Mill's 'A History of British India' and Orientalism* (1990). James Mill's influence on the study of Indian thought is noted by Kejariwal: "James Mill, now [1834] an important official in the India Office, was beginning to influence policy on India. In his reply to a despatch containing a proposal to improve the Hindu College at Benares and the Mohammedan College in Calcutta, Mill severely remarked: 'In professing to establish seminaries for the purpose of teaching mere Mohammedan literature, the Government bound itself to teach a great deal of what was frivolous, not a little of what was purely mischievous, and a small remainder indeed in which utility was in any way concerned. The great end of Government should be, not to teach Hindu or Mohammedan learning, but useful learning'" (Kejariwal 1988, p. 167). There are, of course, clear parallels here with Macaulay's 1835 "Minute on Indian Education" (see Shah 1990).

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