CHAPTER 1

Introduction

Psychophysical dualism is the theory that mind and matter are ontologically different and are not reducible to each other. Such a theorist may hold that both material and mental entities are there for all the time. Or such a theorist may hold that either material or mental entities come first. In the currently popular scientific picture of the origin of the solar system our mother Earth was separated from the Sun in a distant past and was then devoid of all life and consciousness, for it was too hot and lacked the atmosphere requisite for the origin and sustenance of life. Gradually the Earth cooled down over millions of years and life evolved slowly from the humblest beginnings to the most complex found today in the form of human beings. This scientific account is compatible with dualism and, in particular, with the Nyāya-Vaiśeṣika dualism that is the subject of our study. The Nyāya-Vaiśeṣika holds that a living body is a necessary condition for the origin of conscious states. It follows therefrom that no conscious states can exist if there are no living bodies. It is worth noting that the Biblical and the Koranic accounts of genesis speak of relatively short periods of time spanning over several thousand years, which is at odds with the scientific estimate. But the Hindu accounts of genesis with which the Nyāya-Vaiśeṣika is familiar, usually speak of vast expanses of time to estimate the periods of creation (*sṛṣṭi*).[1] They also usually speak of states of dissolution (*pralaya*) when there is water and other kinds of matter but no animals or plants (and no conscious states belonging to any animals or plants). Since the Nyāya-Vaiśeṣika dualism fits such Hindu accounts of genesis that are not at odds with the current scientific account, the former is also not at odds with the latter.

For a study of this dualism we begin with a brief outline of Nyāya-Vaiśeṣika philosophy. According to the standard view (there

are other views having a smaller following within the Nyāya-Vaiśeṣika tradition), there are seven kinds of reals called substance (*dravya*), qualia (*guṇa*), action (*karma*), universal (*sāmānya*), ultimate individuater (*viśeṣa*), inherence (*samavāya*), and negative entities (*abhāva*). A substance is the substratum (*āśraya*) of qualia and actions in the sense that it is something in which there cannot be any absolute absence (*atyantābhāva*) of the latter.[2] A substance is a continuant and different from its qualia and actions: it may remain the same even when its qualia or actions change. For example, a mango as a substance may remain the same even when its color (a quale) has changed from green to yellow or even when it starts to roll down (a kind of action) after being stationary before. Qualia and actions are often perceptible and if so, the substance to which they belong may also be perceptible. This differs from Locke's view that a substance is imperceptible. That is, in the Nyāya view, not only the yellow or green color of the mango but also the mango is perceived. However, it may be noted that though, in the Nyāya view, a substance may be perceptible if its qualia or actions are perceptible, it is not always so. For example, in the view of many Nyāya philosophers the self (*ātman*) is an imperceptible substance though it possesses perceptible qualia like cognition or desire.

The Nyāya admits five kinds of physical substance called earth, water, fire, air, and *ākāśa* (the substratum of sound).[3] These are physical (*bhautika*) substances in the sense that each possesses a specific quale that is externally perceivable (e.g., earth has smell).[4] Of these the first four are ultimately atomic (*aṇu*) and the last is non-atomic and pervasive (*vibhu*). The self is a spiritual (*cetana*) substance radically different from all of them, for it alone is the substratum of consciousness and lacks any externally perceivable features. Further, the self is both beginningless and endless. We shall later discuss the reasons for these views. But it may be noted that the admission of eternal, spiritual substances is not ruled out by the current scientific account of the origin of the species or of the planetary system. The scientific picture is not concerned with anything that is nonphysical or spiritual, does not either endorse or oppose it and is not interested in whether such entities, if they exist, are eternal or not. As already said, a dualist who holds that conscious states (which are ephemeral) do not exist except when there are living bodies does not contradict the scientific view.

There is also no inconsistency in holding that although the self is a spiritual substance, it can exist devoid of all consciousness. While the qualia depend on the substance, the reverse is not true (in the

view of the Nyāya and many other pro-substance philosophers). Accordingly, although the conscious states are qualia and need the self as their support, the self can exist without them. Further, the radical difference between the self and the physical substances is not wiped out when the self is devoid of consciousness. It still remains true, as the Nyāya would argue, that there is absolute absence of consciousness in the physical substances but not in the self.

Besides the self and the five physical substances the Nyāya also admits three other kinds of substance. The first two of these are space (*dik*) and time, each of which is one, infinite, and continuous. These two do not possess any externally perceivable specific quale. So they are not 'physical' insofar as being physical is to be understood in terms of having some externally perceivable specific quale. They are both imperceptible. They are nevertheless inferred as two of the common (*sādhāraṇa*) causal conditions without which nothing non-eternal can come into being.[5]

The last remaining kind of substance is the inner sense (*manas*). The inner sense is imperceptible but is inferred to account for the direct awareness of internal states like pleasure.[6] It is also inferred to account for the fact that there are occasions when although two or more perceptions could arise at the same time only one does. The inner sense is an indispensable instrument (*karaṇa*) just as an external sense organ like the eye is an indispensable instrument. Accordingly, the inner sense is not the cognizer or the thinker that provides the ground of our personal identity. It is not the owner of the internal states; the latter belong only to the self. The inner sense too is not a 'physical' substance in the traditional Nyāya-Vaiśeṣika sense, for it too lacks any externally perceivable specific quale.[7]

Although space, time, and the inner sense are not physical, they are not spiritual either, for there is absolute absence of consciousness in them. This is why the self radically differs from these as well.

Qualia are features of a substance that do not primarily generate motion and are as particular as the substances to which they belong. Examples are color, smell, and the like. In the Nyāya view the particular red color of a particular mango is causally dependent on and inheres in that mango and cannot belong to anything else. Thus *guṇa* is always a particular though it instantiates universals. For example, the particular red color of a certain mango is an instance of the universal redness that is the common property of all particular red colors. The universal redness (*raktatva*) is ontologically different from particular red colors (*rakta-rūpa-vyakti*) that too are

ontologically different from the substances. Since *guṇas* are non-repeatable features, we call them (for the lack of anything better) qualia (without implying that they are always mental) and not qualities or properties as they are sometimes called, for qualities or properties are repeatable features. Thus qualia are quality particulars and not quality universals. Among the qualia are cognition, desire, and so on, regarded as qualia of the self. These will be studied in chapters 3 and 4.

Actions are features of a substance that primarily generate motion (resulting in conjunction with or disjunction from other substances). Like qualia they are as particular as the substances to which they belong and for the same reason. That is, an action is causally dependent on and inheres in the particular substance to which it belongs and, therefore, cannot belong to any other substance.

All substances, qualia, and actions are particulars. But they possess recurrent properties that are shared by other substances, qualia, or actions. These recurrent properties shared by many particulars are the universals. Examples are cowness and greenness. Universals are not mere concepts or names. They are objective, independent of the particulars that share them and are, in fact, changeless and eternal. But unlike Platonic Ideas they are not in some sense transcendent exemplars that can only be grasped by the reason and that particulars can only approximate. In the Nyāya view the particulars are as real as the universals themselves. The latter are present in the former and (if the particular loci are perceptible) are perceptible as well. For example, cowness is perceptible as are individual cows and redness is perceptible as are particular red colors.

Sometimes two particulars cannot be found to be different in any recognizable way although they have already been accepted to be different on substantial grounds. Such may be the case with two atoms that may be indiscernible in every respect but that are known to be different on the very grounds that prove their existence. In these cases ultimate individuators (*viśeṣa*) are inferred to keep the eternal substances concerned distinct (the reasoning involves an application of Leibniz's law of identity of indiscernibles).

The relation between a universal and a particular is natural (*svābhāvika*) and the latter cannot exist without the former. For example, an individual cow cannot but be a cow as long as it exists and, in the Nyāya jargon, cowness is present in it from the moment of its birth till the moment of its death. Such intimate relation between two relata at least one of which cannot exist without the other is called *samavāya*, which for the lack of anything better we translate

as "inherence." Inherence is also the relation between a quale or an action and its substance, between a substantial whole (*avayavin*) such as a pot and its parts (and between an eternal substance and its individuator).

Negative entities are objective counterparts of true negative judgments, such as there is no book on the table. In the Nyāya view such judgments are not covert affirmations and require the admission of negative entities such as the absence of the book on the table. Negative entities always have a locus (*anuyogin*) [the table being the locus in the above example] and a negatum (*pratiyogin*) [the book being the negatum in the same example].

It will take us very far afield if we discuss the many rigorous arguments produced by Nyāya philosophers in defense of the above ontology.[8] However, although we use this ontology throughout our work, much of it is not critically presupposed in the Nyāya-Vaiśeṣika philosophy of mind. For the latter the crucial claims are the following. The self is a kind of substance different from internal states like cognition, desire, or pleasure. The latter are qualia that belong only to the self and not to any physical substances. Thus the Nyāya is committed to both of what may be called qualia dualism and substance dualism. It holds that there are qualia of the self which are not reducible to qualia of any other kind of substance. It also holds that the self is a different kind of substance over and above the other substances. We discuss in later chapters some of the arguments for these views.

We have given above a brief outline of Nyāya ontology. Our discussion will be facilitated if it is clear which methodological principles governing philosophical disputes are employed in this work. For our study we adopt some ground rules of Nyāya epistemology that it may be thus useful to state at this point. At the very outset we offer, from the Nyāya point of view, a (mild) antiskeptical argument. The aim is not to show that some cognitions are reliable but to show that there are some cognitions that cannot be false (or doubtful). A cognition, in the Nyāya view, is false if what is featured as the qualifier (*prakāra*) is absent in the qualificand (*viśeṣya*). For example, the cognition of the flower being red is false if the qualifier, namely, the red color, is missing in the flower, the qualificand. It follows that only a cognition in which something is featured as a qualifier can be false. Now, the cognition of something as qualified by something must be preceded by the cognition of the qualifier. In the above example one cannot be aware of the flower being red unless one is already aware of the red color. The prior

awareness of the qualifier may itself be an awareness of something qualified by still another qualifier. But this process cannot go on forever. That is, each and every awareness of a qualifier cannot be an awareness having yet another qualifier. That opens the door of a vicious infinite regress that cuts at the root of the very possibility of qualificative or judgmental awareness. This is unacceptable. So there must be some kind of an awareness of a qualifier in which nothing is featured as a qualifier. Such awareness is indeterminate or nonjudgmental (*nirvikalpaka*). (BPP 277) Since it is devoid of any qualifier, it cannot be false (or doubtful). This opens up the possibility that there are other cases of cognition too that are not false or doubtful. An all-engulfing skepticism is, the Nyāya claims, self-refuting. If one claims that no cognition is reliable, the question is: What about this very denial? Is it reliable or not? If it is reliable, it is false to say that no cognition is reliable. But if it is unreliable, there may be some cognition that is reliable. (NS 2.1.13)

In the Nyāya view perception, external or internal, is reliable unless countermanded by another perception or some other evidence. Even when we use some other evidence to undermine a given perception, some dependence on perception becomes inevitable. For example, when a person misperceives a rope as a snake and later learns from another person that the thing was actually a rope and realizes his mistake, he is relying on the testimony he heard of which at least the hearing part is a form of perceiving. This is merely illustrative. But it may suggest that a given perception cannot be disallowed without giving credence to some other perception, such as reading some letters, hearing some sounds, and so on. Dependence on perception is also unavoidable in other forms of cognizing, such as inferring fire from seeing smoke. Unless one can rely on seeing smoke, one cannot rely on the inference of fire either. So the Nyāya holds that a perceptual foundation is needed in all cases of inferences about matters of fact. A perceptual basis is further necessary in the two other forms of cognizing accepted by the Nyāya, namely, *upamāna* (which has an analogical component) and testimony. So the Nyāya philosophers disagree with those who reject perception as a source of reliable information. Perceptions are certainly corrigible. But we have to rely on some perception to correct the error in a given perception and we have to rely on some perception in other forms of cognizing as well. Accordingly, either we have to accept the credibility of perception or we land in skepticism. The Nyāya chooses the former (a thorough discussion of the reasons for not choosing skepticism is beyond the scope of this work) and advocates what may be called the

principle of credibility of perception. We adopt this and hold that our perceptions, except when countermanded, provide a reliable basis for making philosophical claims.

The Nyāya also advocates what may be called the principle of credibility of induction (*vyāptigraha*). Inductions are specially useful, for when combined with observation reports or other inductions, they can serve as premises of a valid deduction about something unobserved. For example, the induction that all men are mortal, when combined with the observational premise that this is a man, validly yields the conclusion that this is mortal. Now, in an induction that all *a* is *b* the former is called the pervaded (*vyāpya*) and the latter, the pervader (*vyāpaka*). An induction is credible or reliable if it meets the conditions of observation (or awareness) of co-presence of the pervaded with the pervader or observation (or awareness) of co-absence of the pervaded with the pervader (or both) and the lack of any counter-example (which is the observation or awareness of the presence of the putative pervaded without the putative pervader). For example, smoke and fire are observed to be co-present in a kitchen and to be co-absent in a lake. There is also no known case of there being smoke without fire. So it is permissible to generalize that wherever there is smoke there is fire. On the other hand, it is false to generalize that wherever there is fire there is smoke. Fire and smoke are observed to be co-present in a kitchen and to be co-absent in a lake; still fire is observed to be present in an electric heater without smoke and this shows that they are not always together.

It may be noted that if an inductive premise that fulfils the above three conditions is available in support of a view upheld within a fully developed philosophical system (such as the Nyāya-Vaiśeṣika), it is no small gain. Assuming that no observational refutation is available, the epistemic value of such a premise may be (and, very likely, will be) sought to be neutralized by careful analysis by philosophical opponents. But this attempt will surely invite response from the proponent (as long as the latter has a fully developed system to fall back on). Such critical analysis and response may go on indefinitely: the probability of reaching an impartial judgment about who comes out ahead is not, if the history of philosophy is any lesson, very high. Under the circumstances, if an empirically confirmed and empirically unconfuted inductive premise is available in support of one's view, it is of significant weight.

Of course, the above three conditions do not tell the whole story. Besides them, Nyāya philosophers require investigating whether the connection between the (assumed) pervader and the (assumed)

pervaded is dependent on an additional third factor (*upādhi*). They have offered a classification of such third factors and studied how an induction may be vitiated by them in different ways. They also consider whether the reasonableness of an induction is hindered by an unfavorable subjunctive argument (*pratikūla-tarka*) or bolstered by a favorable subjunctive argument (*anukūla-tarka*). They further explore whether the pervader or the pervaded is unsubstantiated (*aprasiddha*) and evaluate an induction by considerations of economy (*lāghava*). Without any doubt, the Nyāya account of induction, though old, is very advanced and contains important developments that are useful for current studies of induction. Since the space is limited and since we have already discussed the Nyāya view in an earlier work,[9] we do not explore in detail these additional dimensions here.

It may be pointed out that the evidence cited as observation (or awareness) of co-presence or of co-absence or of a counterexample should be acceptable to both sides in a philosophical (or scientific) debate. This may be called the principle of general acceptability of inductive examples (abbreviated as GAIE), which we utilize repeatedly in this work. It seems to work for empirical sciences where observations are checked and independently rechecked before any claims based on them are accepted. Nevertheless, there is room for disagreement over this principle (some philosophers tend to think that a plausible scenario that may not have broad support can still be a counterexample) and we do not propose to settle that here. However, we indicate some reasons why the principle is useful.

The principle is useful to avoid partiality and prevent either party from gaining undue advantage over the other as also frivolous acceptance or rejection of an induction. Without this principle either party could be in a position to make claims about co-presence or co-absence or deviation (which gives a counterexample) that appears to the other party to be quite absurd.

For example, suppose one generalizes that all swans are white after observing many white rats. One should be entitled to reject it as frivolous, for rats are not generally acceptable as swans. Again, suppose one generalizes that all swans are white after observing many white swans. Although this is false and can be disconfirmed by producing one black swan, this should not be allowed to be falsified merely by producing a black cat. If a black cat is ever offered as a counterexample, one who holds that all swans are white should be entitled to dismiss it as frivolous. Again, suppose one generalizes that all fish breathe under water after observing many fish that do so. Whether this is true or false, this should not be casually abandoned

merely if one offers as counterexamples whales, which cannot breathe under water. One should be allowed to explore whether whales (which are mammals) are fish or not and until whales are shown to be fish, one should remain entitled to continue to claim that all fish breathe under water.

Since, in particular, a single counterexample suffices to refute a generalization confirmed by numerous examples, the counterexample should be a good one, be more than merely logically possible or plausible and should be generally acceptable or acceptable to both sides of an issue. At any rate, a counterexample should not be required to meet a standard lower than that of a confirming example but rather the same standard. In other words, the epistemic burden of both the proponent and the opponent of a thesis should be the same; the burden should not be allowed to become different (i.e., lower or higher) merely by switching sides on some issue. This implies that examples that are treated differently by different theories are not acceptable as either confirming or disconfirming examples; both confirmation and disconfirmation should proceed on the basis of examples that are undisputable by either side or generally acceptable.

One may say that so far as observation reports like whether something is a cat or a swan is concerned, one should let science (or common sense) tell the way it is and that one should have an open mind only about theories. But, unfortunately, it is far from clear where to draw the line between an observation report and a theory. A disagreement over whether something is a cat or a swan may seem to be trivial and irrelevant. If someone does claim a cat to be a swan, we may point out such things as that a cat does not fly while a swan does, that a cat is a mammal while a swan is not, that his claim does not fit with his behavior, that his claim to be accepted would require too far-reaching changes within our belief systems, and so on. It is also more than likely that near total agreement on whether something is a cat or a swan will be reached. But philosophical issues often involve disagreements over borderline or disputed cases where such near total agreement is hard to achieve. For example, consider the disagreement over whether a painting is obscene (where differences of opinions even among experts are galore) or whether a system of government is just (where communists and capitalists do not see eye to eye) or, more relevantly to our present concern, the disagreement over whether an internal state like cognition is physical or nonphysical. Some dualists may claim that we are directly acquainted with such a state and that it is more than obvious that it is nonphysical. Then this should suffice, some may suppose, as a counterexample to the materialist

claim that everything is material. But a materialist would never agree to that. Where is the independent and impartial court of appeal to judge which party is playing fair or foul here?[10] Accordingly, both sides in a philosophical debate should have an equal right to accept or reject an observation report about co-presence, co-absence, or deviation and examples that are treated differently by different theories should be held in abeyance. This has the consequence that an induction based on observation of co-presence or co-absence (or both) acceptable to both parties but challenged by a counterexample acceptable to only one party but not to the other is still reliable. Such an induction, like other inductions, is of course corrigible and may be set aside by some counter evidence that is acceptable to both parties. But until that happens it is credible and a proper basis for philosophical claims.

A Nyāya philosopher says sometimes that an observation report is obviously true and that some sayings are to be ignored (*upekṣaṇīya*) as the ravings of someone insane (*unmatta*). Being commonly accepted (*loka-prasiddhi*) is sometimes cited as a distinctive advantage. A distinction is also drawn between what is not accepted by either side (*anyatarāsiddha*) and what is not accepted by both sides (*ubhayāsiddha*). Still it is implied in much Nyāya writing that all possible proponents or opponents of a philosophical thesis have the equal right to accept or reject an observation report of co-presence, co-absence, or deviation. This is implied in the famous dictum of Gotama that an example (*dṛṣṭānta*) is such that both commoners (*laukika*) and researchers (*parīkṣaka*) may agree on that (NS 1.2.25). There is no suggestion here that it suffices if the example is accepted by only the proponents or only the opponents. Rather the suggestion is that the example should be acceptable to all researchers, whether proponents or opponents. There is also no suggestion that the condition of general acceptibility applies only to confirming and not to disconfirming examples. Rather the suggestion is that it applies to both.

Gotama significantly imposes the condition that the example should be acceptable to common sense as well. This is an important epistemic commitment that implies a certain continuity between ordinary understanding and theoretical understanding and between ordinary language and theoretical language. The implication is not that common sense is a safe and incontrovertible touchstone. (In particular, there is no implication specially in the area of philosophy of mind that folk psychology could never in principle be replaced by neuroscience.) But the implication is clearly that a philosopher or a scientist does not have the liberty of dismissing common sense

summarily (or even after it has served its purpose in providing the starting points of an inquiry as Aristotle sometimes says) when it comes to articulating the evidence for the general claims that philosophers (or scientists) are so fond of making. The evidence for generalization, Gotama requires, should be acceptable not only to researchers but also to common sense. That is, bridges should be built between philosophy, science, or theoretical enterprise on the one hand and common sense on the other when it comes to supporting general, factual claims. Whatever may be one's final judgment of this, it shows that the criterion is epistemic and not dialectical. The criterion might have been dialectical in a way if Gotama had required that examples should be acceptable only to researchers or only to common sense. But by requiring that examples should be acceptable to both researchers and commoners Gotama is in effect demanding that a generalization should have a broad and impartial base.

Why might the criterion have been dialectical in a way had Gotama required that examples should be acceptable only to researchers? The researchers after all are in a position to conduct a more thorough and systematic inquiry than the commoners. The answer may not be rooted in any deep epistemological reason but in practical considerations. Researchers sometimes get to enjoy substantial rewards for their contributions. The motivation for (financial or social or other) rewards may sometimes be too great to conduct an impartial inquiry. Or sometimes researchers may simply overlook something that is known to commoners. Hence Gotama may have felt it prudent to include the commoners too among the observers and take note of additional points of view. The other possible explanation is that Gotama does not share the rationalistic enthusiasm of uncovering through the "natural light of reason" (of which the wiser among us may be thought to have a greater or even exclusive share) the essences of things hidden behind the appearances of the senses. Perception for him is the chief source of knowing. Since both commoners and researchers rely on perception, there may not be sufficient epistemic justification for leaving the commoners out. Without any doubt the researchers can conduct the observation in an environment over which they have much greater control. While such control is an added value, it may also come at a price. Gotama was perhaps not convinced that the possibility of having to pay such a price can be ruled out.

That the said criterion is epistemic can also be gathered from the concepts of *sapakṣa* and *vipakṣa*. The former is a particular instance different from the inferential subject (*pakṣa*) where the

pervader is certainly (*niścita*) present, while the latter is an instance where the pervader is certainly absent (TS 142). The certainty may sometimes be derived from perception or from common acceptance. But the requirement of certainty disqualifies something doubtful or debatable or questionable to the other party from being passed on as a confirming or disconfirming example. This is also evident from ruling out the inferential subject (*pakṣa*). Since the latter is a part of the bone of contention, it cannot be offered as a confirming or disconfirming example.

Besides perception, induction and deduction, the Nyāya advocates (and we accept) the credibility of testimony (*śabda*) which is a kind of indirect cognition (*parokṣa-jñāna*). One form of it is the reliability of what is commonly accepted (*loka-prasiddha*) except when there is overriding consideration to the contrary. Another form of it is that if the speaker or the author of the testimony is reliable, the testimony (unless there is counter evidence) is reliable.

In general, the Nyāya subscribes to a causal-reliabilist standpoint. If the sources are reliable, the information derived from the sources is also deemed to be reliable unless there is a reason for doubt or rejection. Accordingly, the Nyāya devotes a lot of attention to spelling out precisely what is the reliable method of perceiving, generalizing, inferring, and testifying. This viewpoint allows the Nyāya to have a vast network of reliable information and we adopt that for our study. In a particular application in the philosophy of mind this permits one to have a credible basis for information about other persons even from a dualist point of view. A dualist often holds (as does the Nyāya) that internal states are private. So one cannot directly know what somebody else is thinking or feeling. But since perceiving, generalizing, inferring, and testifying are all reliable except when there is counterevidence, one may gather that other people have internal experiences similar to one's own from the observation of their behavior or their testimony. That is, one is directly aware of one's own experience and observes one's own behavior attending such experience. Then when one observes other people behaving in a similar way, one may infer that other people have similar experiences or one may learn about their experiences from their testimony.

Finally, the Nyāya advocates (and we also accept) the credibility of the best available hypothesis (*prayojaka-kalpanā*) for an explanation of a problematic phenomenon. For example, if a person is fat but never eats during the day, one may form the hypothesis (*arthāpatti*) that the person eats at night. The Nyāya holds that the statement of

the phenomenon requiring explanation or the explanandum should be validly deducible from the explanans, which includes the statement of a general law (*vyāpti*) and the statement or a set of statements describing the relevant circumstances applicable to the thing to be explained. Thus, in the above example, it should be possible to come up with a deduction like the following: Whoever is fat but does not eat during the day, eats at night, for example, X, and so on. This person is fat but does not eat during the day. So this person eats at night (BP 552). Moreover, the hypothesis should be economical (*laghu*). Three primary considerations of economy are economy with respect to constitution (*śarīra*), that with respect to presentation (*upasthiti*) and that with respect to relationship (*sambandha*).[11]

We have given an overview of Nyāya-Vaiśeṣika ontology and epistemology. We now give a brief survey of the names, dates, and works of some major Nyāya-Vaiśeṣika philosophers and other Indian philosophers cited in this work. The chronological data about ancient Indian philosophers are vague and different scholarly estimates of dates of ancient Indian philosophers vary widely. Some scholars prefer to assign the most recent date possible. This does not rule out that the former could be of an earlier date. But in some cases this method may produce misleading results particularly if there is evidence that the former could be of a significantly earlier date. In the same way assigning the earliest possible date may be misleading if there is evidence that it could be of a much later date. So instead of assigning the earliest possible or the latest possible date, we prefer to assign the date that is most likely based on our judgment of the best evidence we have. We avoid discussing the evidence here, for that requires a lot of space and we are not trying to determine the chronology of Indian philosophers in this work. We simply record what appear to us to be the most likely dates for various Indian philosophers.[12]

The Nyāya school was founded by Gotama, the author of the *Nyāyasūtra*. Gotama belongs to the sixth century BCE when the Vedic age comes to an end with the rise of Buddhism and Jainism after the Persians score major military victories over the Indians. The Vedic Hindus appear to have enjoyed a long period of relative peace and prosperity before the Persian aggression. The Persian victory probably led to some soul searching among Hindu thinkers, who, confronted with powerful Buddhist and Jain rivals, found it useful to present in an organized way the main currents of Hindu thought. Gotama's work and other *sūtra* works that provide the beginnings of the Hindu *darśanas* are the products of this effort. The basic ideas found in these

works are often anticipated in the Vedic literature. The *sūtra* works present them in a systematic manner that paved the way for a fruitful dialogue and exchange of ideas among the competing points of view.

The *Nyāyasūtra* is a philosophical masterpiece covering a wide range of topics in a decisive, precise, and rigorous manner. It is extremely cryptic and is obviously intended to be supplemented by oral instructions of the teacher to the student. It was never intended to be studied on one's own (as some modern scholars try to do and, not surprisingly, miss a lot). The importance of the oral tradition that has existed without any real discontinuity from the antiquity to the present, can hardly be exaggerated for the Nyāya including the *Nyāyasūtra*. The only sensible approach is to study it first with the help of a pandit well versed in the oral tradition.

It may be noted that arguments for the self occupy a central position in the *Nyāyasūtra*. This is not surprising if we keep in mind that the self plays a pivotal role in Hinduism. In keeping with the Hindu tradition, Gotama has declared release (*apavarga*) from worldly bondage and suffering to be the ultimate goal of life (*parama-puruṣārtha*). This goal can be achieved only by removing false beliefs (*mithyajñāna*) about the primary (*mukhya*) knowables (*prameya*). Gotama has given a list of twelve primary knowables. The self is at the head of this list. The self is clearly the cornerstone of the fundamental Hindu doctrines of afterlife, rebirth, transmigration, karma, and God. So false views about the self (two typical examples of which from the Hindu point of view are (1) that the self does not exist [*nairātmya-vāda*] and (2) that the self is the body [*dehātma-vāda*]) are discussed and sought to be refuted.

The first available commentary on the *Nyāyasūtra* is the *Nyāya-bhāṣya* of Vatsyayana (2nd century BCE). It is invaluable for an understanding of the *Nyāyasūtra* and provides an amplified interpretation of Gotama's aphorisms that has become the standard interpretation. However, Vastsyayana is also an original thinker in his own right. He disagrees with Gotama on a number of points and introduces a large number of topics not directly mentioned by Gotama that too have become a part of the orthodox Nyāya. As an example drawn from the philosophy of mind, we mention that Gotama nowhere explicitly calls *manas* (translated by us as the inner sense) a sense organ (*indriya*). Vatsyayana does so without any hesitation, attributes this to Gotama himself, and this view has become a part of the Nyāya tradition.

Other leading Nyāya philosophers of the old school are Uddyotakara (6th century CE), the author of *Nyāyavārttika*, Bhasarvajna (9th century CE), the author of *Nyāyabhūṣaṇa*, Vacaspati Misra (9th

century CE), the author of *Tātparyatīkā*, Jayanta Bhatta (10th century CE), the author of *Nyāyamañjarī* and Udayana (11th century CE), the author of *Pariśuddhi*, *Nyāyakusumāñjali*, and *Ātmatattvaviveka*.

Far-reaching changes were brought about within the Nyāya around the twelfth century CE with the rise of the so-called new Nyāya. The four most influential philosophers of the new school are Gangesa (13th century CE), the author of *Tattvacintāmaṇi*, Raghunatha Siromani (15th century CE), the author of *Dīdhiti* and *Padārthatattvanirūpaṇa*, Jagadisa (17th century CE), the author of *Jāgadīsī* and *Śabdaśaktiprakāśikā*, and Gadadhara (17th century CE), the author of *Gādādharī* and *Śaktivāda*.

The sister school of Nyāya, called the Vaiśeṣika, was founded by Kanada, the author of *Vaiśeṣikasūtra*. This is a philosophical masterpiece of similar antiquity as the *Nyāyasūtra* and written in a similar aphoristic but rigorous style. Some other leading philosophers of this school are Prasastapada (2nd century CE), the author of *Padārthadharmasaṃgraha*, Sridhara (10th century CE), the author of *Nyāyakandalī*, Udayana (11th century CE), the author of *Kiraṇāvalī*, Srivallabha (11th century CE), the author of *Nyāyalīlāvatī* and Samkara Misra (15th century CE), the author of *Upaskāra*.

Two syncretic works that combine the philosophies of the Nyāya and the Vaiśeṣika are the *Tarkasaṃgraha* with the *Dīpikā* of Annam Bhatta (18th century CE) and the *Bhāṣāpariccheda* with the *Siddhāntamuktāvalī* of Visvanatha (18th century CE).

Some leading philosophers of the Buddhist school are Nagarjuna (2nd century CE), the author of *Mūlamādhyamikakārikā* and *Vigrahavyāvartanī*, Vasubandhu (4th century CE), the author of *Vijñaptimātratāsiddhi* and *Tṛṁsikā*, Dignaga (5th century CE), the author of *Nyāyapraveśa* and *Ālambanaparikṣā*, Dharmakirti (7th century CE), the author of *Pramāṇavārttika* and *Nyāyabindu*, Santaraksita (8th century CE), the author of *Tattvasaṃgraha*, Kamalasila (8th century CE), the author of *Pañjikā*, and Ratnakirti (11th century CE), the author of *Apohasiddhi* and *Kṣaṇabhaṅgasiddhi*.

Carvaka (6th century BCE) is the founder of Indian materialism. Unfortunately, his writings are lost except for some fragments surviving in quotations by others. We have to rely on the philosophical opponents of the Carvaka, such as the Nyāya (as identified in later chapters), as sources for the Cārvāka position. The only available work of the Cārvāka school is the *Tattvopaplavasiṁha* of Jayarasi (7th century CE).

The Sāṃkhya school was founded by Kapila (7th century BCE), whose aphorisms are lost. Three of the most influential philosophers

of this school whose writings are available are Isvarakrsna (2nd century CE), the author of *Sāṃkhyakārikā*, Vacaspati Misra (9th century CE), the author of *Tattvakaumudī*, and Vijnanabhiksu (15th century CE), the author of *Sāṃkhyapravacanabhāṣya*.

The roots of the Advaita school are clearly found in the Upaniṣads some of which, such as the *Vṛhadāraṇyaka*, date back to before the sixth century BCE. Three of the most influential philosophers of this school are Samkara (7th century CE), the author of *Śārīrakabhāṣya* and *Gītābhāṣya*, Vacaspati Misra (9th century CE), the author of *Bhāmatī*, and Madhusadana Sarasvati (16th century CE), the author of *Advaitasiddhi*.

The next chapter is devoted to clarifying some salient features of Nyāya dualism and distinguishing it from Cartesian dualism. The latter is beset with well-known difficulties over the mind-body interaction. These difficulties, we try to show, are avoided by a Nyāya dualist and why: this brings out some of the distinctive and important aspects of the Nyāya position. The third and the fourth chapters give an account of cognition and some other internal states. Since the self (in the Nyāya view) is the substratum of internal states, an account (of the Nyāya understanding) of them is needed. However, in the Nyāya view the self is a permanent substratum although the internal states are fleeting. (This is one main reason why the self is held to be ontologically different from its states.) So the fifth chapter provides a critique of the Buddhist and some neo-Humean views from the Nyāya standpoint and argues for the permanence of the self. The sixth chapter explains the rationale for the doctrine of the self as a substance. After thus discussing why the self is a permanent substance, the seventh, eighth and ninth chapters discuss why the self is immaterial as well. The tenth chapter is devoted to miscellaneous arguments, the eleventh, to proofs of the existence of God, the twelfth and the thirteenth, to the Nyāya critique of respectively the Sāṃkhya and the Advaita views and the fourteenth, to the conclusion. This is followed by an appendix containing an annotated translation of selected portions of Udayana's *Ātmatattvaviveka* so that one may get an overview of Udayana's main lines of reasoning. The upshot of the whole work is that the Nyāya-Vaiśeṣika view of the self as a permanent, immaterial substance that serves as the substratum of internal states such as cognition or desire, is a well-developed, well-argued, and coherent philosophical theory.

Chart of Indian Philosophers and Schools

<u>Nyaya</u>
Gotama
6th century BCE
Vatsyayana
2nd century BCE
Uddyotakara
6th century CE
Bhasarvajna
9th century CE
Vacaspati Misra
9th century CE
Jayanta Bhatta
10th century CE
Udayana
11th century CE
Gangesa
13th century CE
Raghunatha
Siromani
15th century CE
Jagadisa
17th century CE
Gadadhara
17th century CE

<u>Vaisesika</u>
Kanada
6th century BCE
Prasastapada
2nd century CE
Sridhara
10th century CE
Udayana
11th century CE
Srivallabha
11th century CE
Samkara Misra
15th century CE

<u>Syncretic School</u>
Annambhatta
18th century CE
Visvanatha
18th century CE

<u>Bauddha</u>
Nagarjuna
2nd century CE
Vasubandhu
4th century CE
Dignaga
5th century CE
Dharmakirti
7th century CE
Santaraksita
8th century CE
Kamalasila
8th century CE
Ratnakirti
11th century CE

<u>Samkhya</u>
Kapila
7th century BCE
Isvarakrsna
2nd century CE
Vacaspati Misra
9th century CE
Vijnabhiksu
15th century CE

<u>Carvaka</u>
Carvaka
6th century BCE
Jayarasi
7th century CE

<u>Advaita</u>
Samkara
7th century CE
Vacaspati Misra
9th century CE
Madhusudana
Sarasvati
16th century CE