Chapter 3
Conceptualisations of Nature in Indian Traditions of Thought

Abstract This chapter analyses the equivalents of the term "nature" in Indian philosophy. After an initial survey of various concepts related to nature, I discuss in some detail a few terms like *prakṛti*, *nisarga*, *padārtha,* and *dravya* from different schools of Indian philosophy. The process of evolution and creation of the material world and the way things are related to each other is described. As some of these terms persist in the contemporary times as equivalents of nature, I dwell at length on some pre-modern interpretations of these concepts and also briefly suggest the ecological implications of such understandings.

Keywords Translation · *Loka* · *Prakṛti* · *Nisarga* · Nature in Indian philosophies · Categories · *Padārtha* · *Dravya*

3.1 Conceptualisations of Nature in India: Available Sources

Religious and cultural world views have often shaped our relationship and our conduct towards our environment. Gottlieb (2004, p. 9) writes of the influence of religious traditions on the human attitude to nature, "In short, religions have neither been simple agents of environmental domination nor unmixed repositories of ecological wisdom. In complex and variable ways, they have been both".

When we see the presence of sacred groves or trees in rural India, we can infer that cosmologies continue to influence the present-day narratives of social and environmental concerns. Particularly in the Indian context, the influence of traditions and textual narratives associated with religious practices and rituals in our attitude to nature cannot be ignored. Singh (2005, p. 106) writing about the Vedas in particular claims that "Ancient Indian texts are a rich source of information and insight on the historical roots of Indian environmentalism". Others like Narayanan (2001, p. 182) have also emphasised the importance of textual and other resources

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for environmental ethics from Hindu thought: "The resources from which the Hindu traditions can draw in approaching environmental problems are several and diverse: there are texts, of course, but also temples and teachers".

The categories and terms used to describe the universe and its components and experience of the world in Indian thought are distinct from Western philosophical conceptualisations of nature as "non-human". The dichotomy of human beings versus the rest of nature is not a rigid value designator either. Rather, one could say that the conceptualisation is based on a certain world view of "beings and the metaphysical worlds" they live in. I refer to this as a *loka*-centric view of the universe. According to Indian cosmology, the cosmos consists of many worlds called *loka*s (which are sometimes mythical and not *on* the earth) and also beings (*bhūta*s) that inhabit such worlds.[1] Kinsley (1995, p. 55) elaborates on this perception, when he explains "In many Hindu scriptures, it is clear that the world is perceived as being alive with forces, powers, spirits, and deities that express themselves through what we call natural phenomena". All elements of a cosmos find a place in a complex hierarchical humanised cosmic order in Indian thought.

In Indian thought, though there were many pre-modern schools that had similar metaphysical and ethical positions, they do not have as much prominence as the dominant forms of philosophical systems—the Vedantic schools of thought, such as non-dualism, dualism, and special dualism. Some of these concepts continued to flourish and were embedded in other traditions of knowledge such as Āyurveda or Tantra. Therefore, the resources for environmental ethics in Indian philosophy will have to be drawn from a set of pre-modern traditions that are to be found in a context that is historically earlier to the awareness of an environmental crisis.

As we know that rituals and traditions influenced by such conceptions continue to evolve in practice along with discourses of nature that are perpetrated by mythology as well as the narratives of the divine, it is possible to at least undertake a study of nature in Indian philosophy. Not all writers are convinced that there are equivalent terms for nature in an Indian context. Summarising the idea of nature in some streams of Asian thought, Barnhart (1997) suggests that it is appropriate to look for a family resemblance in the varied notions of nature. He suggests that these streams of thought are clustered around an idea of reality that is different from Western thought: "I would suggest that the dominant distinction in these Asian traditions is not body/mind but relative versus of absolute beings or Being" (p. 424). His key point is that the main interpretation that differentiates the Western concept of nature from Indian conceptualisations is that the idea of nature is defined by its exclusion of "non-human or non-artificial". If the concept of Western nature were to lose this sense, then conceptualisation of the Eastern and Western notions of nature would be more of a "family resemblance".

[1]For details on some of these sacred beliefs, see Chap. 7 of this book on the idea of nature landscapes as sacred.

3.2 Problems of Translation

What are some of the philosophical terms related to the concept of nature in Indian thought? The concept of nature in Western thought has evolved within particular historical and cultural contexts. Therefore, it is unlikely that we would find a completely equivalent term for the exact word "nature" in Indian traditions of thought.

Mohanty (1999, p. 220) suggests that four trends somewhat similar to Greek thought evolved out of a search for the ultimate element in Indian thought. His arguments are summarised below.

1. The "conception of natural law", which took two forms the imposed law "came to be the law of the unseen (*adṛṣṭa*)" and immanent, "as the real source of unity underlying the plurality of appearances, led to the idea of *brahman*, the *ekam sat*, the one existent (another transformation of the Vedic *ṛta*)…" (p. 220)
2. The atomic theory of the Vaiśeṣikas, which is different from Greek atomism. He writes "The Indian atomists, however, stopped with qualitative atoms (the earth-atom, the air-atom, the fire-atom, and the water-atom), each with its distinctive simple quality" (p. 220).
3. The essentialism found in some form in the Nyāya-Vaiṣeśika school.
4. A teleological interpretation that forms a part of the Saṃkhya philosophy.

Before I begin to describe and discuss some of these conceptualisations, I must make some preliminary observations about the problems of translation.[2]

As seen in Chap. 1, we have noted that the word "nature" within the English language has carried many meanings across time and cultures. We must agree with Bruun and Kalland (1995, p. 9) who discuss this complexity: "In discussing nature we are dealing with maybe the most complex concept in western languages that in common usage has a complicated repertoire of meanings". They also add that the concept of nature is in a state of transition even in the current times.

One can say that while the nominal component of "nature" has remained the same, the conceptual component has varied again and again. Firstly, it is clear that in most translations, terms that refer to concepts are treated nominally, like the "name" of some abstract idea which is captured as accurately as possible. It is also believed that using a term in a different language "to name" a particular concept would serve as a translation (Sarukkai 2002). For instance, the word "*prakṛti*" is used to name the concept "nature" as it is used in the context of Western thought. In places where one would use the "concept nature", such as in the phrase "nature conservation", the term "nature" in the Indian languages (like Hindi and its derivatives) is replaced with *prakṛti*. So can we just say that *prakṛti* is nature?

[2]I am aware here that the idea is more about translation of "concepts" which can be regarded under the same theories and philosophy of translation. Many of these ideas presented here are a result of my discussion with Dr. Sundar Sarukkai on his paper "Translating Concepts: some issues in the methodology of history of non-Western science" (Sarukkai 2010).

This would be using a historically pre-modern term to refer to a modern concept or idea. This, however, is not the only the issue around equivalence.

Bruun and Kalland (1995) aptly summarise the complicated project of investigating nature as a concept both in Eastern and Western thoughts. They point out that even within a single tradition of thought in the Western tradition nature has references to the physical world, and at the same time, it refers to an abstract space containing many principles and ideas. It also comes attached to a number of other concepts such as "environment" or "landscape" or even the concept of qualities or "properties". The conceptualisation of nature in Indian thought is complex. To examine the idea of "nature" within Indian traditions of thought involves a difficult process of translation, even if the main purpose is to merely describe it. As Sarukkai (2002) notes, within a naïve view of translation, it is believed that somehow in the process of translation, "the essence" remains intact. He points out that any kind of translation—intralingual, interlingual, or intersemiotic—raises the main problem of translation—that of incommensurability. After a discussion on these types of translation, he summarises that complete equivalence is almost impossible to achieve in any translation. And he notes "The idea of complete equivalence, as also the notion of faithful translation, has been the bane but also the stimulus towards generating more complex theories of translation". He adds that any primary impulse that inspires an act of translation responds to "an original" that is an "already given".

Extending this to conceptual translation, I consider the idea of "nature" from Western thought as the original concept for my work.[3] Though not engaging in a complete comparative study of the two traditions of thought, I engage with Indian conceptual thought with a background reference to the Western concept of nature and the possibility of an ecological ethics. I insist that the very problem of translation becomes an advantage in this project. The fact that the concept of "*prakṛti*" is not equal in all respects to the concept of "nature" allows us to develop an alternative representation of nature itself. Instead of similarities in the conceptualisations, examining the diversity here will allow for emergent derivations of environmental ethics. Take for example the word *nisarga* that is sometimes used to represent the concept of nature. While nature derives from the idea of "the way things are", or from the idea of "an entity opposed to human beings" originally, in Sanskrit, *nisarga* derives its meaning from the idea of creation.

Barnhart (1997) also raises an interesting point about the differences in meaning of "nature" and the "equivalents of nature" in Asian context. He claims that Western philosophy has been engaged in the task of reconciling the two different meanings of nature: the first which refers to "not artificial, free of human contrivances" and the second meaning which carries a sense of "the way something is, its *physis*". He argues rightly that the equivalents of nature in Asian thought are closer to the second meaning and therefore could lead to different paradigms of ethics in environmental philosophy.

[3]From a discussion with Dr. Sundar Sarukkai in February 2010.

Despite the differences in interpretations, we are sure that the terms related to nature in the Indian traditions have certainly existed and evolved within different traditions of thought, thereby providing us with a rich source of conceptual categories to understand the world around us. Among the terms equivalent to nature in Indian thought, there are two types. One set of such terms carries the original metaphysically relevant meaning of nature, similar to that of "*physis*" in Greek or "*natura*" in Latin. The second set of terms are related to a broader sense of nature, conceptually different but referring to the sense of the natural world or parts of the environment. Indian philosophical thought has a wide spectrum of theories about the world ranging from realist to the extremely idealist schools. In simpler terms, some philosophies like Nyāya insist on the metaphysical reality of the world and its various components. On the other hand, some like the Advaita school believe that the world is only a false projection of some ultimate reality. However, in their own spheres, each of these philosophies has something to contribute to the idea of nature.

From an initial survey of the literature related to nature, I found the terms *prakṛti* and *nisarga* in Sanskrit are related to both interpretations of the term nature. These terms show many instances of synchronic usage to the word "nature" in textual traditions.[4] It is also important to note that there is no strict one-to-one correspondence of any of these terms with the term nature nor are the textual instantiations of these terms strictly equivalent to the current semiotic usages of these words in common Indian languages. It would be, however, prudent to say that these terms are deeply related to the conceptualisation of nature in Indian thought. The two terms—*prakṛti* and *nisarga*—used for nature in many Indian languages hold symbolic and semiotic meanings derived from their philosophical usages and therefore lend themselves to somewhat richer conceptualisations of nature for purposes of understanding the relationship between human beings and nature.

One significant point to keep in mind here is that these types of conceptualisations are linked to a system of metaphysics within a larger school of Indian philosophical thought and they have to be understood within that context. On the other hand, the problems with such conceptualisations are the poor applicability of such philosophical ponderings on metaphysics to the real-world issues of nature. Rolston (1987) stresses that the idea of nature has to be such that there is a "translating scheme" of sorts between the categories of a vision of nature that informs conceptually and the practical on the ground decisions related to conservation:

> A metaphysics can hardly be expected to provide a blueprint for action, but if a metaphysics cannot orient action in some meaningful way, then it is of no help where the West needs help—valuing the environment that humans inhabit. Such a theory cannot be put into practice environmentally, though perhaps it can be put into practice in other ways—existentially or soteriologically (p. 186).

[4]Detailed examples of such usages will be provided in the following sections of this chapter.

He insists that alternative metaphysics may help to counter the metaphysics that gave rise to modern science, creating a "metascience" understanding of the world that may not necessarily contradict science, but instead provide us with an alternate logical system to understand nature (pp. 182–184). There will be problems in trying to adapt Eastern metaphysics to Eurocentric sciences. But conceptually analysing nature will need us to explore all possible streams of thought to lay a foundation perhaps for future work.

One could categorise the conceptualisations of nature in Indian philosophy into three types. The first type includes those terms and equivalents of nature that are concerned with compositionality of the universe or cosmos at its most fundamental unit of constitution. Nature in this kind of conceptualisation is like the essence or basic building block of a cosmos or creation.

The second type of conceptualisations is based on the idea of nature as the phenomenal whole, the experience of creation itself. The idea of nature as the cosmos and the universe is common enough in many pre-modern traditions. In Indian, thought creation is referred to as *sarga*. The word "*nisarga*" etymologically means "downward" evolution or creation.[5] As a prefix, "*ni*" usually refers to a negation of the word. The word *sarga* clearly refers to creation. So then, *nisarga* would mean the same as non-created or self-created. This, however, is in opposition to many passages in the Vedas and other texts that clearly indicate the world is "created" and has evolved downwards from a supreme being. The prefix "*ni*" could also mean downwards.[6] This term can be interpreted from almost all cosmologies of creation described in Indian traditions that see evolution from a primordial being or cause.

Yet a third type of conceptualisation can be said to be more cultural than philosophical. Nature is understood through a tradition of narratives and practices as divine, or feminine, as non-human or as sacred landscape. In other forms of interpretations, nature also represents place and geography of the terrestrial. Nature as described by Literature and other cultural traditions also falls under this set of ideas.

The evolution of this universe finds its mention in Vedas, and most classical philosophies of Indian thought insist that what is found in the Veda is valid knowledge and must be accepted as authority. However, the different schools of thought and philosophers interpret the statements of the Vedas in different ways and are also free to use their own perspectives to understand the conceptual insights from these texts.

The question in the study of a pre-modern philosophy of nature can also be metaphysically interpreted. We could for instance ask of the Indian philosophical system, what kinds of things are there in this creation and how are they related to each other. Mohanty (1999, p. 205) lists the two main ways of theorising change and permanence in Indian thought:

[5]This meaning was provided by Sri Siddharth Arya, one of the few traditional *Sāṁkhya* scholars of the *gurukul* system in India.

[6]Like in verbs such as *nipatati*—falls down, and *niṣati*—sits down.

> The problems of continuity versus discontinuity and change versus permanence concerned the Indian thinkers as much as they did the European thinkers. Hindu thinking took two forms: the atomism of the *Vaiśeṣikas* and the theory of original, *Ur*-Nature (*Prakṛti*) of *Sāṁkhya*. The former found discontinuity at the root of things, the latter continuity. The former saw in the last analysis unchanging atoms, the latter understood the ***Ur***-Nature as an incessant becoming—homogeneous at first, of like into like (*sadṛśapariṇāma*), and only subsequently heterogeneous, i.e. of like into unlike (*visadṛśapariṇāma*).[7]

Given the premise that the category of human–non-human is not very distinctive, one could analyse nature in Indian philosophy through a comparison of the existents in different schools of thought. In the following sections of this chapter, some key thematic positions of the metaphysics of nature are examined. The first is the conceptualisation of nature as constituted by some fundamental things. Similar to some of the Greek philosophers, the Nyāya-Vaiṣeśika school answers the question "what is nature?" by describing what kinds of things are there in nature. They also posit constituents of reality at the most fundamental and irreducible levels in terms of a theory of atomism and categories. Then, there is the discussion about the original nature, *prakṛti* from the school of Sāṁkhya, which is sometimes called a teleological philosophy. This is similar to conceptualisations of nature as origin. Finally, a third alternative would examine nature as a god-created reality with a variation from the usual theological arguments of the West. This panentheistic tradition of *viśiṣṭādvaita philosophy* is one of the significant Vedanta schools that also underlies the practices of a religious sect in the south of India.

3.3 Nature as Categories: Nyāya-Vaiśeṣika Classifications

One could refer to the Nyāya-Vaiśeṣika school as two independent schools of philosophical thought, Nyāya and Vaiśeṣika, but it has been agreed by scholars that both schools have been syncretic and supportive of each other's claim (Potter and Bhattacharya 1993, p. 12). In this section, I draw upon texts of both traditions where some of the fundamental principles are agreed upon by both schools.

According to Potter and Bhattacharya (1993, p. 48), the reality described by Nyāya-Vaiśeṣika consists of substrata (*dharmin*), their properties (*dharma*), and the relations (*saṃbandha*) between them. Nyāya-Vaiśeṣika lists fundamental entities of the reality called *padārtha* which can be loosely translated as category. For Nyāya-Vaiśeṣika, the substrata and their properties are different entities listed in separate categories.

Accordingly, the world is made up fundamental categories or labelled constituents called *padārtha.* The word *padārtha* can be translated as the "meaning of a word", while another meaning could be purpose or resource. Mohanty (2000) translates *padārtha* within the context of the Indian theory of meaning as "what is referred to by words". The Nyāya-Vaiśeṣika school offers one of the most

[7]Emphasis in the original quotation.

descriptive accounts of a realist world categorised into knowable and nameable existents within the context of a systematic knowledge. The categories include ontological lists of kinds and concepts. These lists seem to be descriptive, but it is not clear as to the exact methods that philosophers used to select them (p. 57). But it is clear that for Kaṇāda, the Vaiśeṣika philosopher, these are objects of valid knowledge (Sinha 2006, pp. 339–355). Nyāya extends the number of categories to one more than the original six, the seventh being *absence*.

One could posit that these categories are the basic fundamental units of the created world, or *nisarga*. So nature for Nyāya-Vaiśeṣika (NV), inclusive of the human being, is constituted by *padārtha*. The following is a list of *padārthas* from Vaiśeṣika texts as translated in Potter and Bhattacharyya (1993, p. 49):

1. Substance
2. Quality
3. Motion
4. Universal
5. Individuator
6. Inherence

Kanāda, the main philosopher of the Vaiśeṣika school, puts forward the theory of the physical world indicating that all beings (*bhūta*) and all things derived from what "has come to be" (*bhautika*) can be listed under three dimensions of reality. These are matter in the form of eternal elements (*nityadravyāṇi*), organic bodies (*śarīra*), and the internal organs (*indriya*, *manas,* and the self).

*Dravya*s are one of the nine irreducible *padārthas* (categories) listed above. Dasgupta (1922, pp. 3, 4) translates this term as "thing". Sometimes, this is also translated as "substance". Mohanty (2000, p. 44) also translates this as "thing" and defines the concept as

> (1) The locus of qualities (*guṇa*s) and actions (*karmas*) (2) as the material cause (or inherence cause) of the effects (i.e., that in which effect inheres).

The three—*dravya*, *guṇa*, as property, and *karma*—together form a central theme of the NV universe. Substance, or *dravya*, is derived from the basic relationship of locus and what is located there (Potter 1977, p. 69). This is linked to the other two categories, quality (*guṇa*) and action (*karma*), through the relationship of inherence (*samavāya*). Kaṇāda describes *dravya lakśaṇam*—the distinctive features of *dravya*—as a locus for actions and qualities (*kriyāguṇavat*). It also acts as a basis for its own causality (*samayāyi karanā*). As we can see from its definition, any *dravya* (thing) is potentially the locus of any *guṇa* or *karma*, but the non-*dravya* cannot be the locus of anything. Mohanty (2000, p. 44) states that "Qualities and actions and universals inhere in the *dravya*. There are *dravyas* that inhere in other *dravyas* that have parts". *Dravya*, thus, is the only category that can be the locus of anything, including other *dravya*s that may be its parts. There are fundamental *dravya*, those that are partless and composite *dravya*s that have parts.

There are nine kinds of *dravya*s—the five elements, *dik* (directional space), *kāla* (time) *ātman* (soul), and *manas* (mind). The NV philosophers claim that all things

are reducible to these fundamental types. The five material *dravya*s are the four elements and the internal organs. The immaterial *dravya*s are four—time, directional space, space, and the self.

The *dravyas* are also divided sizewise into three categories—atomic, middle sized, and those that are ubiquitous (omnipresent) (Potter 1977, p. 74). The atom (*aṇu*) is minimum sized, partless, and cannot be apprehended by the senses (*Nyāya Sūtra* 4.2.16). The middle-sized ones are different composites that are perceptible, and space is a kind of the third category. The first four of the elements are earth, water, air, and fire and are permanent in their non-composite forms as atoms, but in their composite form, they are impermanent and can be destroyed. The others including the space are eternal.[8] The Vaiśeṣika philosophers posit the formation of the *dravyas* through their theory of atomism:

> Two atoms combine, on the *Vaiśeṣika* theory, to form a binary atom (*dyaṇuka*), and three of the latter sort combine to form a tertiary atom (really consisting of six atoms) or *tryaṇuka*, the smallest perceptible entity (identified with the dust particles one sees streaming along the ray of light through an opening). Out of different combinations of these arise the sundry empirical objects such as sticks and stones (Mohanty 1999, p. 212).

Potter (1977, p. 52) suggests that *dravya* can be understood through the relationship of contact called *saṃyoga* "… (Contact) is capable of relating two substances at least one of which is material (*mūrta*). Contact inheres in the pair of substances". The element space in the NV philosophy does not inhere in other *dravya*s, nor do other *dravya*s inhere in it. This is because space is partless (which is a condition for it to be eternal).

The condition that all things are in contact with *ākaśa* leads us to an interesting hypothesis. If contact has to inhere in a pair of substances, at least one of them has to be material (*mūrta*). *Ākaśa* itself is non-material. So it follows all things are material in any pair of entities in contact. This seems to be another way of stating that things occupy space, but for NV it is important to understand that space is also a thing, a *dravya,* and not an accommodating void. The whole–part relationship in NV philosophy is discussed as the *avayava–avayavin* relationship. The parts of a whole "inhere" in the whole, by this relationship. For NV, the whole is greater than the sum of its parts. Potter (1977) clarifies the position that, "In Nyāya-Vaiśeṣika a whole is produced from its parts but is not constituted by them" (p. 74). The NV philosophers stand in opposition to the doctrine of *satkāryavāda* of the Sāṃkhya philosophers. The whole is a completely new thing produced from parts. This is called *ārambhavāda*:

> According to the Vaiśeṣika and Nyāya, this same principle applies not only to the field of language, but to the world in general: What is truly eternal, such as the ultimate substances and the universals, does not change at all; and where there is change, there must be production, destruction, and replacement (Halbfass 1992, p. 188).

[8]These elements will be discussed in detail in Chap. 4.

What one finds interesting in the explanation of these categories are the relations between them. In a world struggling to define the so-called web of relations between natural elements and human beings in the current times, one could refer back to the sophisticated technical terminology that the Nyāya philosophers use to describe such relations. Potter and Bhattacharyya (1993, pp. 49–50) point to two of these important relationships. One relationship is called *āśrayā-śritasambandha*, the support-dependent relationship.[9] This implies that two of these fundamentals are related in such a way that the resider resides in, or is dependent upon the residence. There is another type of relationship that the Nyāya philosopher posits, such as quality of colour which resides or is sheltered in/by substance. In such a case, the relationship indicates an unequal importance to the support, without which it seems the dependent has no existence. The second kind of relationship is where there are qualifier–qualificand relationships called *viśeṣaṇa-viśeṣyasambandha*. In the second set of relations, directionality is implied and also it seems to be more of an epistemological category (Potter and Bhattacharyya 1993, p. 50). The Nyāya philosophers posit a special relationship to connect substance qualities and different pairs of fundamental substances called inherence—*samavāya*. Inherence technically can be defined as a relationship between two inseparable things as located to the locus. One would say inherence holds the position of glue or a keeping-together force. Accordingly, (from Potter and Bhattacharyya 1993),

> Inherence relates qualities, motions, universals, and individuators to substances. It also relates universals to qualities and universals to motions. Finally it relates composite individuals to the "parts" which are the cause of composite individual (p. 51).

The importance of inherence as relationship that is "marked through knowledge" (p. 51) indicates that inherence is dependent on a subject attending to the relationship between, say, a colour and the substance. Further, inherence is related to its relata through a relation of identity, called *tādātmya* or sameness. That means that inherence is independent of its relata, in some way called into being from potency when two individuals are related.

The idea of inherence is very interesting to postulate as a way of "seeing relationships" when we see two related objects. Take for instance the concept of nature as constituted by many objects that are said to be its parts.[10] Here, I am only trying to interpret the idea of nature that can be construed as the set of all objects, processes, and relationships that constitute our environment. Drawing upon earlier described conceptualisation of nature and from a realist position, one could argue that these relations exist independent of the human subject's cognitive attention. If we for the time being jeopardise the realist position accorded to Nyāya and admit

[9]The term used by Potter and Bhattacharyya (1993) is resider–residence, but since the primitive locus of the Nyāya is a loci relationship that can be defined by "in" or "at" or "on", the translation "residence" seems to be biased to view of the loci as a container that I want to avoid. The possibilities of shelter are not spatiotemporal or related to materiality in this case.

[10]In philosophical context, the relation between whole and parts is a much debated subject and to refer to nature as whole constituted by parts is also problematic.

as per the texts the Nyāya claim that inherence is subject to knowability and namebility, then we can hypothesise that the inherence relations in nature require attention of the human being. So it is "perception" of relationships between nature and its constituents that makes us "know" that something is a part of nature.[11] Even if the absolute metaphysical reality does not validate the idea that nature is whole, the fact that we are able to see—let us say a category we call forest—as constituting a part of a larger category of nature, one could say inherence relates the two. The category forest is sheltered by the nature that is the shelterer. Since the relation of inherence does not require that both relata are tangible and substances, it is also possible to relate qualities and create ecological relations through invoking Nyāya categories.

The above discussion shows interesting possibilities of invoking alternate metaphysics in the service of contemporary ecological concepts. The category of sheltered and the shelterer is also present in a different way in Sāṃkhya philosophy that will be taken up for discussion in a later chapter in detail.

3.4 *Prakṛti*: A Survey of Meanings

The sanskritised word for nature in many Indian languages is *prakṛti*, derived from Sanskrit. "Nature" is translated into *Prakṛti* in many Indian languages. The reverse translation of *Prakṛti* into English word nature is problematic. *Prakṛti* is nature—in the sense that it is the source and power from which things are produced—not nature in the sense of an extra-human world that the word nature signifies. *Prakṛti* in Sanskrit particularly is also used as a technical term in the Vedas. It also refers to the primary sounds, stems of words, and primary sacrifices from which multiple modifications (*vikṛti*) are derived. In rituals, *prakṛti* means model rituals or archetypal sacrifices from which variations can be derived.

Jacobsen (2002) traces three clusters of meanings for the word *prakṛti*. Besides its technical reference within *Sāṃkhya* philosophy,[12] the word *prakṛti* is often used in many texts such as those of drama, mythology, phonetics, or grammar. Jacobsen (2002) describes these three clusters of meanings for this term:

1. *Prakṛti* is "that *which precedes*", "*first*", "*that which is in its own form*"; therefore, it is used in contexts like natural, archetype, one's essential character, and normal.
2. *Prakṛti* in plural refers to "*components, constituents, and the parts*" of a whole such as a human being or the political state.

[11]Valid knowledge called *prama* can be obtained by direct perception according to almost all Indian philosophies.

[12]*Prakṛti* forms a part of the dyad the material principle that coexists with the Consciousness principle (*Puruṣa*). See the following Sect. 3.5 on *Sāṃkhya* philosophy for more details.

3. *Prakṛti* also refers to "*material cause*", "*producer of effects*", and "*innate power of transformation and manifestation*"; here, *prakṛti* gets associated with the field of production and in later periods is associated with women and goddesses.

In *Sāṃkhya*, there are two ontological categories, the sentient *puruṣa* and the insentient "matter" principle called *prakṛti*. These concepts were engendered, and *prakṛti* came to represent the female principle. For instance, Monier-Williams (1990) describe *Prakṛti* as a goddess who is the material cause of the world and all created things. She is the prototype of the female sex. This idea is also directly linked to a perception of the earth as a goddess. Bhattacharya (1982) suggests "In the present form of *Sāṃkhya*, as well as the *Tantras*, the term *Prakṛti* has acquired a purely metaphysical connotation, but basically it stood for the mother Earth, the fruit-bearing soil".

In modern Hindi, the word *prakṛti* is used to mean nature and the term *paryāvaran* to refer to the environment.[13] Another word that is often used in the *Vedas* to mean "surrounding" is *parisara*. It gets its meaning from the prefix *pari*, "to surround".[14]

The opposite term of *prakṛti* as referring to the primary is the term *vikṛti* which means secondary or derivatives (Jacobsen 2002). Sometimes, *prakṛti* is considered to be the primordial unmanifest nature and manifest nature is also referred to as *vikṛti* (Rao 1963). The term "*vikṛti*" in the *Sāṃkhya Kārikā* is used in the meaning of an "evolute": "Primordial nature (*Mūla-prakṛti*) is uncreated. The seven (derivatives)—*mahat*, etc.—are both evolvent (*prakṛti*) and evolutes (*vikṛti*)…" (*Sāṃkhya Kārika* 3, henceforth to be referred to as *SK*) [15] Evolutes are considered to be effects of a primary cause, sharing the materiality but different in terms of being modified.

An important aspect of the concept *Prakṛti* is its oneness as the source of the evolution of its variants. Jacobsen (2002) writes "… the oneness of matter is a presupposition for the empirical world to be a common field of experience" (p. 231). *Prakṛti* evolves into an infinite variety of related evolutes that makes up this phenomenal world, yet maintaining the oneness. The Sāṃkhya school of thought (as well as its subsequent derivative, Sāṃkhya-Yoga philosophy) perhaps offers one of the most comprehensive and clear understandings of *prakṛti* as a philosophical concept.

[13]For example, *prakritic soundarya* (in Hindi)—natural beauty, etc. The word *paryāvaran* (in Hindi) seems to indicate "environment" word in recent times. It means covered around and is very similar to the etymology of "environs"—"around," from *en-* "in" + *viron* "circle, circuit," from (French) *virer* "to turn".

[14]The prefix "*pari*" refers to complete, entire. From S. v "Pari" in Monier-Williams, Leumann, and Cappeller, *A Sanskrit English Dictionary, Parisara* is used to refer to nature in the Kannada language.

[15]For the original verse, see "Sāṁkhya Kārika, Verse 3", trans. Sinha (1979, II ed. Reprint, p. 4).

3.5 *Prakṛti* in *Sāṃkhya* Philosophy

Prakṛti is an equivalent for nature associated with Sāṃkhya and Sāṃkhya-Yoga schools of thought. Both are dualistic systems of thought. According to Sāṃkhya philosophy, *prakṛti* is a part of a dyad, a creation component that functions both for the enjoyment and salvation of *puruṣa*, the conscious principle. The term *prakṛti* is broader than the term nature. The entire materiality of the cosmos is said to have evolved from a primordial cause often referred to as *mūla-prakṛti*.[16] The idea that nature as *prakṛti* is the primordial origin brings into focus relatedness between all created entities based on common origin. As mentioned earlier, it is possible to imagine how *prakṛti* comes to be represented as the mother goddess in later traditions. The goddess Durga is often called *jaganmāta*, the mother of the worlds or *ādi śakti*, the primordial energy.

As origin, nature in Sāṃkhya precedes the components of creation, such as the five elements. In Sāṃkhya, the manifest world is a series of material effects from a primordial material cause. In other words, *prakṛti* is different from the five elements in the natural world that are referred to *pañcha mahābhūtā*.[17] These gross materials are evolutes of *prakṛti* and form the gross stuff—*pañchabhūtā*s—called matter principles, by interactions with one another.

Also central to Sāṃkhya philosophy is the theory of causation called *sat-kārya vāda*. This is summarised by Larson and Bhattacharya (1987) as "a tripartite process of emergence that is both logical and natural". The *SK* states "The effect (*kārya*) resides (*satkārya*) in the cause (*hetu*) in a potential state prior to the operation of the cause" (*SK* quoted in Larson and Bhattacharya 1987, p. 153). There are three realms of creation in nature—*Tattva*, *Bhāva,* and *Bhūta.* The *Tattva* is the ontological realm, *Bhāva* is the epistemological realm, and *Bhūta* sarga or beings realm of creation corresponds to the phenomenal world of perception (*SK* quoted in Larson and Bhattacharya 1987).

In this philosophy, *prakṛti* is also used in the sense of being the ultimate first principle that all psycho-physical creation evolves from. The entire manifest world is pervaded by the "first" primordial nature (*mūla-prakṛti*), which has three coconstituting principles called *guṇas*. The *guṇas* and the *pañcha mahābhūtā* are invoked to explain the diversity of beings in the world. The world in all its varieties in the three realms is accepted as real by the *Sāṃkhya* philosophers. The oneness of *prakṛti* as primordial material is unlike the substantive oneness of *Brahman* in Vedanta philosophy. Ghosh (1977) speaks of this distinction and describes the need for Sāṃkhya philosophers to explain the diversity: "Sankya (*Sāṃkhya*) parts company, therefore with monism and undertakes a critical examination of its detail in order to discover what else is needed for their explanation".

[16]Material does not refer to the gross matter alone but encompasses all created "stuff" of the universe.

[17]These elements are earth, water, fire, air, and ethereal space. See Chap. 4 for a discussion on the five elements.

While it is easy to explain the insentient components of the world as different permutations and combinations of the five great elements, explaining the varieties of life forms needs a different hypothesis. The Sāṃkhya philosophers make an argument for the diversity and multiplicity of the sentient universe by invoking the idea of *guṇa*s that coconstitute *prakṛti*. Dasgupta (1922) translates *guṇa*s as "feeling substances". The cosmos which arises from *prakṛti* consists of both affective and material stuff. "The characterisation of these guṇas is in terms of psychic states or affective conditions but these are much more than that" (Larson 1979, p. 162). *Guṇa* is often translated as "quality", but the Sāṃkhya meaning is very clear in its formulation (Rao 1963): "*Sattva*, etc. are substances, and not *guṇas* in the *Vaiśeṣika* sense of the word".[18]

The commentator Vijnāna Bhikṣu describes the meanings of the word "*guṇa*" thus as follows:

In this, Sāṃkhya, Śastra, and in the Veda, etc., the word *guṇa* is employed to denote them (sattva, etc.) because they exist only to serve the ends of the *puruṣa* (and are, therefore, of secondary importance), and also because they form the cord (as it were), namely *mahat*, which essentially consist of the three *guṇas*, and which bind the brute beast (so as to speak), *puruṣa*.[19]

By this definition, *guṇa* is the "rope" that binds the *puruṣa*. The meaning of *guṇa* according to the *SK* is described by Larson (1979) thus as follows:

> … According to the *Kārika*, the *guṇas* include two levels of meaning: [1] as psychic or moral conditions—that is, *sattva* as pleasure, goodness etc.; Rajas as pain, passion, etc., And *Tamas* as indifference, dullness; and [2] as factors involved in the unmanifest and the manifest world—that is, *Sattva* as a illumination, thought, etc.; *Rajas* as activation, energy etc.; And *Tamas* as heaviness etc.

Ghosh (1977) explains that that the coherence of the three *guṇa*s in different proportions results in the entire world of creation in Sāṃkhya. And he writes "perceptibility (*sattva*), mutability (*rajas*) and inertness (*tamas*) explain every form of knowable existence or appearance". The *SK* also mentions the interactions of the *guṇa*s, "the three *guṇa*s mutually dominate, support, activate and interact with one another to produce the world" (*SK* 12). The implication of *guṇas* being "feeling substances" is that they induce values in objects that may constitute in the world. All of the world is therefore subjected to predominance of any one of the *guṇas* and is judged by the occurrence of these *guṇa*s.

According to *SK*,[20] the *guṇa*s are experienced as *priti* (agreeable), *apriti* (disagreeable), and *viśāda* (oppressive). The commentary for verse 12 of the *Sāṃkhya Kārika* suggests that each of the *guṇas* can be the cause for each other. The commentary illustrates it with an example of how a king acting as a protector

[18]The Vaiśeṣika reference is in sense or quality, or property of something. See Narain (1961), for an interesting discussion on *guṇa*.

[19]See Vijnāna Bhikṣu's commentary of "*Sāṁkhya Pravachana-Sūtram*, Book I, Sūtra 61" in Sinha (1979, p. 95).

[20]Summary and translation by Potter and Larson, in Larson and Bhattacharya (1987, p. 154).

(like *rajas*–action–cause) who brings pleasure to the good people (*sattva* results) yet can still cause mortification and violence to the wicked (*tamas* results).

The qualitative attribute of the *guṇa*s is referred to as pleasure, stupor, or pain, but these affective characters are not mere emotional descriptions of states of mind. One can say that they are some sort of material causes of certain values or predispositional qualities called *bhāva* that are expressed when they are present. While Sāṃkhya texts do not directly elaborate the effects of the three *guṇa*s on different kinds of expressions in the phenomenal world, they insist that the presence of rajas in all possible combinations causes existence to be painful. The liberation theory of this philosophy rests on this pain thesis: Only freedom from all *guṇa*s can free us of pain.

3.6 Implications of the Idea of *Prakṛti* for Sustainability

Writers insist that the distinction of *prakṛti* in the texts of these philosophical systems is geared towards liberation theology (*mokṣa dharma*), and perhaps one should not stretch these concepts beyond their original interpretation. However, *mokṣa dharma* within some of these traditions has never been world denying. While Sāṃkhya philosophy clearly advocates liberation in some form, it also suggests a nuanced understanding of *prakṛti.* It is from this very understanding that one can derive moral or ethical frameworks.

According to Sāṃkhya philosophy, the material world is evolved from a pre-existing ontologically real, material cause. This is called *sat-kārya vāda*. The effects exist potentially in the cause and thus are only transformations of the primordial materiality.[21]

The word *prakṛti* also carries a meaning that refers to Natural or *original*. In this sense, it is also an adjective-like. The adjective *prākṛt* derived from *prakṛt* means original or normal.[22] The meaning of *prakṛti* is "natural" in contrast to something that is an "imitation or a copy" called *anukṛti* or *kṛtrima* in Sanskrit (Apte 1986).[23] The name of the language that is derived similar to *prakṛti*—Prākṛt—usually refers to the natural language spoken by the common people. Historically, within a social context, Prākṛt was considered to be a degenerate form of Sanskrit by grammarians (see Deshpande 1993). The important idea is that it is not an "artificial" language that is contrasted with it, but a refined "well-constructed (*saṃ*)" language—Sanskrit, "*saṃs-kṛtam*".

[21]For a detailed discussion on tripartite process that links material effect and the material cause, see Larson and Bhattacharya (1987, pp. 99–101).

[22]*Prakṛta* is used in the geometry of altar construction where the measuring stick is divided into four lengths each called *prakṛta prakrama*—ordinary measure (from Jacobsen 2002, p. 31).

[23]And also from S. v "*kṛtrima*" in Monier-Williams, Leumann, and Cappeller, *A Sanskrit English Dictionary,* p. 303.

Thus, we find, in the light of Barnhart's (1997) views, it is true that for the Indian tradition "artificial" is in some sense related to the idea of reality rather than human contrivance. All human modifications of nature are only refinements and not re-creations. On the other hand, the idea of artificial is a reference to the fictitious, the non-true, and the imaginative. *Kṛtrima* would be "pretence" or an assumed reality. An adopted son for instance is referred to as *kṛtrimaputra* (Apte 1986).

The idea of "natural" and "artificial" in Indian thought may be of significance here. There is nothing that the human being can do to alter nature that will make it artificial and non-nature. This brings us to two conclusions. The first is that nature does not disappear but is modified and reformed/refined into other forms of reality. Restated in the language of *Sāṃkhya* philosophy, *prakṛti* becomes in parts *prakṛti* (the evolvable) *vikṛti* (the evolved, with no more possibility to evolve). The second conclusion is that given the close link between the idea of reality and of nature, the nature of reality in Indian thought especially with reference to *prakṛti* is fundamentally metaphysical. This insight into the interpretation of *prakṛti* has implications for the idea of conservation.

In the modern sense, there has been a sharp division between the categories of natural and artificial. We are clear that animals and other organisms are not like tables and cars. They are natural kinds. Lee (2005, p. 19) defines natural kinds and processes thus as "Naturally occurring entities and processes are precisely those which have come into existence, continue to exist, and go out of existence, entirely autonomously, and therefore independently of human intentionality and agency (and of supernatural agency for that matter)". An animal or a plant is also not like a lake, a rock, or a mountain that are also instances of natural kinds. On the other hand, artificial kinds would be those that exist dependent on human intentionality and agency.

This interpretation of natural and artificial is conceptually problematic in popular understandings of environment. There is a collapse between category nature–human and the category natural–artificial. While the first is a relationship between agency and object, the second is a category of modification; it is the natural that is processed into artificial. Without going into the details of the philosophy, just taking into account the idea that all materials are but modifications of *prakṛti*, it is simple to conclude that "clay" that we consider natural, and a pot that we consider "unnatural or artificial" are both *prakṛti*. There has been a change in the properties of the two, but intrinsically both are *prakṛti*. Such being the case, looking at the world through the Sāṃkhya perspective, there is a cause-and-effect relationship between natural and the artificial. If nature is all material on earth, the most artificial products of technology are also nature in some sense directly or as emergent. People for instance now see that there is "hidden water" in all products, such as the water (used to dye a pant) is hidden in the jeans pant or even a plastic button (as coolant for the mould).

The distinction between artificial and natural tends to separate the material cause from the material effect, giving more importance to the intelligent cause. In other words, people cannot see the cause in the effect or vice versa. To use a Sāṃkhya metaphor, it would be like refusing to see the mud in the pot while focusing on the potter.

The conversion of "natural" in the form of resources to the artificial is a category of modification; it is the natural that is processed into artificial. There has been naïve blindness in case of sustainability and conservation efforts. If nature is all material on earth, the most artificial products of technology are also nature in some sense directly or emergent. Again, quoting a Sāṃkhya example, milk becomes curds. The problem of diminishing resources is that the modification of *prakṛti* into artifical things is like milk being modified into curds.

This can lead to an argument that this would be dangerous to follow through in the context of ecological ethics. If everything was nature, there is nothing to conserve as such. But the next part of argument from the Sāṃkhya philosophy answers this objection. While it is true that it is *prakṛti* that is changed into all things we see around us, this is not a two-way reversible transformation nor is it a completely irreversible state of evolution. According to the Sāṃkhya philosophy, change is a formation of new collocations in the presence of concomitant conditions (*sahakāriśakti*) or efficient cause (*nimitta kārana*) (Dasgupta 1922). In normal conditions, these changes are bound by a law called *parināmakramaniyama* or the law of ordered transformation (unchangeable law). This is a limiting law based on the conditions of place (*deśāprabanda*) or limitation of time/season (*kāla prabanda*) limitation by form (*ākārā prabandha*) and finally limitation by causes (*nimittāpabandha*) (Dasgupta 1922). It is from the natural that we can create the artificial; the artificial is not the cause of the natural materially. Every object of human creation is created with the material cause of *prakṛti*. Or to put in the terms of modern ecology, the resources are *nimitta* (the cause) for all the objects around us, sharing a material relationship with the natural. This is ecologically relevant idea. Depletion of our resources—water, minerals, or forests—is bound by the limitation by causes rule. Our more than rapid rate of conversion of nature into its modified form is against conservation efforts. Seen from this angle, conservation is a slowing down of the change, not necessarily eliminating it. We could not probably turn the material artefacts back into their pristine original state (curds cannot become milk), but we could restore and rearrange the change again so we are not being the efficient cause of the rapid change to the natural around us. On the other hand, since nature evolves forming both resource (*prakṛti*) and a consumable or waste (*vikṛti*), one could reduce the second kind and look for resources to reuse, recycle. In fact, biodegradation is nothing but producing *prakṛti* evolutes from *prakṛti* as resource. What is also possible is using the laws of limitation to diminish the change or to cause only those changes that are not irreversible. Recycling water is one such example; actions like using alternate energy sources like solar energy would also come under this category.

3.7 Creation as the Body of God: *Srī-Vaiṣṇava* Tradition

Another important idea that is prevalent in Indian philosophical thought has to do with the whole creation as being the embodied form of god. This creates a common metaphysical grounding for nature reverence. Conceptually, the word *sarga* or

nisarga for this school of philosophy captures this meaning of a "created–sacred universe". According to Mumme (2000), the *Srī-Vaiṣṇava* tradition describes the whole creation as emanation of the divine and the body of god. Though this seems somewhat similar to the idea of sacred nature, it is conceptually a metaphysical interpretation based on classical philosophical traditions and not based on just narratives and oral cosmology.

This idea is very prominent in the *Bhagavad Gītā*. There are verses that indicate that the world is pervaded by the presence of god. It is a form of panentheism where god is not merely the world, but as the origin and the resort of all beings in the world, he transcends them in not being totally embodied Mumme (2000, p. 138). The philosophy of theistic Vedanta (as opposed to the philosophy of *advaita*) especially the one propounded by Ramanuja is called qualified non-dualism—*viśiṣṭādvaita*. In this philosophy, the supreme *Brahman* is not just pure consciousness, but he is god with a divine personality—Viṣṇu—who has transformed into the world. This doctrine is called *brahmaparinamavāda. Viśiṣṭādvaita* philosophy explains the relationship between the cause and effect as different modifications of the same substance (Chari 2004). An often quoted example is that of the gold and its modifications as bracelet, ring, or chain.

The world is real, and it consists of the manifested part of *Brahman* (Sinha 2006, Vol. II, p. 653).[24] The relationship between the Brahman and the world is that of difference and non-difference—*bhedābheda.* At one level, the reality is a singular unity, and at the same time, it consists of multiplicity. Using the metaphor of the ocean and its waves, Ramanuja and his followers clarify that as the waves are identical to the ocean yet different from it, and the ocean cannot be limited to the waves alone, so also the Brahman and the manifest world are related to each other through identity and difference.

The distinction between conscious and unconscious parts of the universe is articulated by the concept of *cit*, the conscious, and *acit*, the unconscious. Matter which is produced by the transformation of the immutable does not have the subjective experience of I-ness (p. 673). The Brahman is associated with *cit* and *acit* in both their manifested form and the unmanifested form (Chari 2004, p. 272). The relationship between Brahman and the world is articulated as an embodied soul–body relationship (*śarīra–śarīri bhava*). The relationship is one where the like soul, as Brahman, controls and fulfils its own purpose through the body and the world. The Brahman is the basis and controller of the universe and is called *Iśvara*. The universe is made up of six metaphysical entities called *tattva*. *Tattva* is similar to the categories (*padārthas*). These *tattva*s are classified into substance (*dravya*) and non-substance (*adravya*). Technically, *dravya* is that which is substratum for modifications or states (*avasthā*s). Such modifications according this school of thought are explained as different from transitory relations that are not inherent and not the permanent nature (*dharma*) of a substance (Chari 2004). A pot on the ground and

[24]This philosophy provides an interesting alternative to the problems of *advaita* where the reality of the world is only an appearance. For more on *advaita*, also see Nelson (2000).

then same pot placed elsewhere is not *avasthās* of it. Nor is the cow-ness of a cow regarded as *avasthā* (p. 23). Chari (2004) adds "Only such an adventitious quality is inseparably related to the substance so long as the two last is regarded as an *avasthā*" (p. 23).

There are six *dravya*s according to this tradition divided into material (*jada*) and non-material substance (*ajada*)—God, individual self, knowledge, transcendental matter, cosmic matter, and time. The last two as *prakṛti*-cosmic matter and *kāla*-time are the material substratum of the universe. The nature of the universe—as constituted by *prakṛti*—follows the same metaphysics as that of Sāṃkhya philosophy. The concept of the world being the body of god has interesting implications for a theory of nature. The creation itself as originating in, sustained by, and identical to the supreme makes it sacred in a very substantive way. The human being like the world is a part of the same divine creation. The nature of the human being and the world is one such important theme that these philosophies explicate. Many of the philosophical schools may describe the various components of the creation that are ordered in a hierarchy of sorts. This order can be natural as in case of *Sāṃkhya* philosophy or it can be ordered by an intelligent being. The panentheistic interpretation of nature as a body of god has implications for issues around the place of the human and the non-human in the order of beings and is a rich source of eco-ethical insights.

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