

The Search for Definitions in Early Nyāya-Vaiśeṣika

Nilanjan Das

University of Toronto Mississauga

nilanjan.das@utoronto.ca

Abstract

The search for definitions is ubiquitous in Sanskrit philosophy. In many texts across traditions, we find philosophers presenting their theories by laying down definitions of key theoretical categories, by testing those definitions, and by refuting competing definitions of the same theoretical categories. Call this the *method of definitions*. The aim of this essay is to explore a challenge that arises for this method: the *paradox of definitions*. It arises from the claim that the method of definitions is either (i) redundant because it does not provide us any knowledge that we did not already possess, or (ii) impossible to successfully pursue because it leads to an infinite regress. Neither of these alternatives should be acceptable to the defender of this method. To focus our discussion, I will show how this challenge arose for—and was arguably resolved by—early Nyāya-Vaiśeṣika thinkers active in the first millennium CE and at the very beginning of the second millennium. In response to the paradox of definitions, these Nyāya-Vaiśeṣika thinkers claimed that the purpose of a definition is to remove either *metaphysical* ignorance about the distinction between theoretically significant kinds or kind-membership, or *metalinguistic* ignorance about the meaning or the application-conditions of theoretically significant terms. I will show how this discussion helps us ward off certain misconceptions about the method of definitions in Nyāya-Vaiśeṣika.

The search for definitions is ubiquitous in Sanskrit philosophy. In many texts across traditions, we find philosophers presenting their theories by laying down definitions of key theoretical categories, by testing those definitions, and by refuting competing definitions of the same theoretical categories. Call this the *method of definitions*.¹ The aim of this essay is to explore a challenge that this method faces: the *paradox of definitions*. It arises from the claim that the method of definitions is either (i) redundant because it doesn't provide us any knowledge that we did not already possess, or (ii) impossible to successfully pursue because it leads to an infinite regress. Neither of these alternatives should be acceptable to the defenders of this method.

To focus our discussion, I will show how this challenge arose for—and was resolved by—early Nyāya-Vaiśeṣika thinkers working in the first millennium CE and at the very

¹ This method is discussed by Ganeri (2016) and Das (2018) in the context of characterising Śrīharṣa's (12th century CE) own method of attacking definitions. Several text-traditions—besides Nyāya and Vaiśeṣika—exemplify this method: the tradition of Buddhist epistemology initiated by Dignāga (5th-6th century CE) and Dharmakīrti (7th century CE) and the tradition of Jaina epistemology beginning with Akalaṅka (8th century CE) and carried forward by his commentators such as Prabhācandra (11th century CE) and Vādirājasūri (11th century CE). It is also perhaps interesting to study the parallels between the conceptions of definitions found in Sanskrit traditions and other ancient traditions. As Charles (2006) and Fine (2010) suggest, a version of the distinction between what I later call the *co-extensive property strategy* and the *metalinguistic strategy* are already present in the *Meno*. For other discussions of definitions in Greek philosophy, see the essays in Charles (2010).

beginning of the second millennium CE.² In response to the paradox of definitions, these Nyāya-Vaiśeṣika thinkers claimed that the purpose of a definition is to remove either *metaphysical* ignorance about the distinction between theoretically significant kinds or about kind-membership, or *metalinguistic* ignorance about the meaning or the application-conditions of key theoretical terms.³

Why does this matter? I will argue that our discussion of the method of definitions can ward off at least one misconception about this method. In his introduction to Tachikawa's (1981) study of Udayana's (10th/11th century CE) ontology and metaphysics in *Kiraṇāvalī* and *Lakṣaṇāvalī*, Matilal (1981) makes a number of insightful remarks about definitions. Focusing on definitions of substance in different theoretical contexts, Matilal argues that we cannot construe Sanskrit philosophers like Udayana as seeking conceptual analyses of the expression "substance."

A case in point is the ordinary Sanskrit term *dravya* which we usually translate as 'substance' or 'thing'. Nyaya-Vaiśeṣika defines it in a way it would fit into its ontological scheme of six or seven categories, whereas Patañjali and Bhartṛhari define it as the reference of any substantival expression. Sometimes it is defined as the existent. In each case, I argue that the ordinary meaning of the term has neither been completely respected nor been totally ignored. (Matilal 1981, p. ix)

This leads Matilal to characterise the method of definitions as follows.

A philosopher picks out a term from ordinary discourse, whose usage ordinarily is too loose, too flexible and too vague. The aim of the philosopher's attempt to define it is not so much to give an accurate account of its ordinary usage as to clarify, and in fact, sharpen the concept in a way that will fit into the philosophic scheme he is about to unfold. The domain of the meaning of a term in ordinary usage is like an uncharted land with fuzzy edges, flexible enough to fit into the total thought that each individual is trying to communicate, but too elusive to be neatly demarcated. A philosopher in defining that term tries to focus upon some particular area or other of this uncharted land so that he can use the term along with other terms to describe his system.

² When I use the term "Nyāya-Vaiśeṣika," I do not mean to imply that the Nyāya and the Vaiśeṣika text-traditions ought to be conceived as parts of a single overarching text-tradition. That would be historically incorrect, even though earlier Nyāya authors like Vātsyāyana (4th-5th centuries CE) and Uddyotakara (6th century CE) often consciously sought to bridge the gap between the two traditions and later figures like Udayana (10th/11th century CE) synthesized the commitments of the two text-traditions. For a history of the Vaiśeṣika tradition and its subsequent convergence with Nyāya, see Thakur (2003). When I say "Nyāya-Vaiśeṣika," what I have in mind is a disjunctive category: it covers thinkers who are active solely within the Nyāya text-tradition, thinkers who are active solely within the Vaiśeṣika text-tradition, and thinkers like Udayana who are active in both.

³ For other discussions of definitions in Nyāya-Vaiśeṣika, see Matilal (1981, 1990), Bhattacharya (1990, ch. 5) and Chakrabarti (1995, ch. 4). Some but not all these authors overlook the earlier Nyāya-Vaiśeṣika thinkers whom I discuss. But some of them also discuss figures in later Nyāya, such as Gadādhara Bhaṭṭācārya (17th century CE) and Viśvanātha Nyāyapañcānana (17th century CE) whom I ignore.

Another philosopher attempting to present a different system may focus upon another area of that uncharted land and formulate a different definition. (Matilal 1981, p. ix)

Elsewhere, Matilal repeats the same idea:

In fact, barring some technical as well as some trivial uses of the term ‘definition’, one can regard, with some ingenuity, most definitions as a very useful sort of philosophic activity by which a word or a symbol is explained in the sense that its *meaning* is rendered precise for a discourse, to enable one (the student, the reader) to correctly apply it to things or items it is supposed (or intended) to apply. If definition is understood in this way, then it will seem that the Indian history of *lakṣaṇa* is not a strange sort of activity entirely unrelated to the Western notion of definition. (Matilal 1990, p. 181)

What Matilal has in mind is not conceptual analysis, but rather what Carnap called “explication” or what contemporary philosophers call “conceptual engineering,” which involves replacing our ordinary concepts with closely related but distinct concepts that are better suited to serve our theoretical and practical purposes (in some cases, in virtue of being more precise).⁴

Matilal’s view might be right as a characterisation of what a Nyāya-Vaiśeṣika philosopher *is actually doing*. But, as I will show, it is inaccurate as a characterisation of what Nyāya-Vaiśeṣika philosophers—active in the first millennium CE and at the beginning of the second millennium—*took themselves to be doing*. I will argue that, for such thinkers, there need not be any single purpose that a definition serves: the same definition may not only yield metaphysical knowledge about the distinctions between theoretically significant kinds that we are independently familiar with, but may also provide us with metalinguistic knowledge about the ordinary meaning or application-conditions of expressions borrowed from natural language. So, a definition—when it plays the latter role—may indeed function as a conceptual analysis. But these thinkers are definitely not—or do not think that they are—in the business of precisifying our ordinary concepts.

Here is how I shall proceed. In the first section entitled “The Method of Definitions in Very Early Nyāya-Vaiśeṣika,” I will explain how very early Nyāya-Vaiśeṣika thinkers understood and justified the method of definitions. Then, in a section called “The Paradox of Definitions,” following the 10th century Nyāya philosopher Bhāsarvajña, I will construct the paradox of definitions. Then, in the next three sections, “The Refined Co-Extensive Property Strategy,” “The Distinguishing Property Strategy,” and “The Metalinguistic Strategy,” I will outline three different strategies that the Nyāya-Vaiśeṣika philosophers adopted as solutions

⁴ Here, I am relying on an interpretation of Carnap due to Flocke (forthcoming). For other work on conceptual engineering, see Haslanger (2000), Cappelen (2018), Chalmers (forthcoming), and the essays in Burgess, Cappelen, and Plunkett (2020).

to this paradox. Finally, in the “Conclusion,” I will say why Matilal’s characterisation of the method of definitions is questionable.

The Method of Definitions in Very Early Nyāya-Vaiśeṣika

The Sanskrit term that I have been translating so far as “definition” is “*lakṣaṇa*.”⁵ The Nyāya-Vaiśeṣika thinkers use this term in two ways. First, “*lakṣaṇa*” could refer to a defining characteristic (*lakṣaṇadharmā*), a property in terms of which something is defined. Second, “*lakṣaṇa*” could refer to a sentence that conveys such a defining characteristic (*lakṣaṇavākya*). To disambiguate the use of “*lakṣaṇa*” in Nyāya-Vaiśeṣika texts, I will translate “*lakṣaṇa*” as “defining characteristic” when it is used in the first sense, and as “definition” when it is used in the second. Lastly, I will call anything that is to be defined the *target of a definition* (*lakṣya*). The target of a definition will typically be a theoretically significant kind—like perception or earth—rather than a linguistic expression like “perception” or “earth” (or the corresponding concepts).⁶ In this section, I shall explore how very early Nyāya and Vaiśeṣika thinkers—writing between the 2nd and the 6th centuries CE—understood and justified the purpose of definitions.

A. Definitions in Very Early Nyāya

The Nyāya text-tradition grew out of the *Nyāyasūtra*—composed around 2nd century CE and attributed to Akṣapāda Gautama—and its influential commentary (*bhāṣya*) written by Vātsyāyana (4th-5th century CE). Very early Nyāya philosophers, such as Vātsyāyana and his sub-commentator Uddyotakara (6th century CE), often presented Nyāya as a science of rational inquiry.⁷ As Vātsyāyana tells us, the Sanskrit word “*nyāya*” refers to an argument whose premises are supported by the different methods of knowing (*pramāṇa*) such as perception (*pratyakṣa*), inference (*anumāna*), analogy (*upamāna*), and testimony (*śabda*).⁸

⁵ The Sanskrit term “*lakṣaṇa*” is derived from the verbal root “*√lakṣ*” by adding the suffix “*lyuṭ*” to it. The verbal root “*√lakṣ*” means to observe or to recognise. So, etymologically, the term refers to something by means of which an object is observed or recognized (*lakṣyate 'neneti*): in other words, a mark, a sign, an indication, or a characteristic.

⁶ Bhattacharya (1990, ch. 5) claims that this aspect of *lakṣaṇas* constitutes a key difference between the Nyāya conception of *lakṣaṇa* and what he calls the “Western” conception of definitions. For Bhattacharya, according to this “Western” conception, a definition is the explication of the meaning of a linguistic expression, so the target of a definition is a linguistic expression. I disagree: *real definitions*, as we shall see later, do not explicate the meaning of any linguistic expression. So, I will retain the English word “definition” instead of switching to Bhattacharya’s unwieldy convention of using “definition*” to talk about the Nyāya conception of *lakṣaṇa*.

⁷ NBh 3.11-13 ad NS 1.1.1: “Still, what is this *nyāya*? *Nyāya* is the examination of some object by means of the methods of knowing. And it is an inference that is based on perception and authoritative testimony (*āgama*); it is rational inquiry (*ānvīkṣā*). Rational inquiry is the subsequent investigation of what has been observed (*īkṣitasya*) on the basis of perception and inference. That which proceeds by means of it is said to be the science of rational inquiry (*ānvīkṣikī*), i.e., the science of Nyāya or the treatise of Nyāya.” (*kaḥ punar ayaṃ nyāyah? pramāṇair arthaparīkṣaṇam nyāyah | pratyakṣāgamāśritam anumānam, sā 'nvīkṣā | pratyakṣāgamābhyām īkṣitasyānvīkṣaṇam ānvīkṣā | tayā pravartata ity ānvīkṣikī nyāyavidyā nyāyaśāstram*)

⁸ NBh 4.13-17 ad NS 1.1.1: “The five parts of the entire collection of linguistic expressions, in which the proof of an object to be proved is completed, are the thesis (*pratijñā*) and so on; they are called “the parts of an

The text-tradition of Nyāya is devoted to the study of such reasoning: it is concerned with the sources of knowledge that form the basis of such reasoning, the knowable objects that it could be directed at, the defects of such reasoning, and its applications in the context of debates. The very first *sūtra* in the *Nyāyasūtra* gives us a list of the sixteen topics of discussion that form the subject-matter of Nyāya:

The attainment of the highest good (*niḥśreyasa*) takes place due to the awareness (*jñāna*)⁹ regarding the nature (*tattva*) of:

- (i) the methods of knowing and the knowable objects (*prameya*);
- (ii) uncertainty (*saṃśaya*), purpose (*prayojana*), examples (*dr̥ṣṭānta*), commitments (*siddhānta*), parts of an argument (*avayava*), suppositional reasoning (*tarka*), ascertainment (*nirṇaya*);
- (iii) truth-directed debate (*vāda*), victory-directed debate (*jalpa*), destructive debate (*vitandā*), defective reasons (*hetvābhāsa*), tricks (*chala*), sophistical rejoinders (*jāti*), and defeat situations (*nigrahasthāna*).¹⁰

argument” [in NS 1.1.1] with reference to the collection. In those parts, there is a confluence of the methods of knowing. The thesis is [based on] authoritative testimony. The statement of the reason (*hetu*) is [based on] inference. The illustration (*udāharaṇa*) is [based on] perception. The application (*upanayana*) is [based on] analogy. The conclusion (*nigamana*) is a demonstration of the capacity that all these methods have for a confluence with respect to a single object. This precisely is called the ‘highest *nyāya*.’ Truth-directed, victory-directed, and destructive debates proceed by means of this [*nyāya*], and not in any way other than this.” (*sādhaniyārthasya yāvati śabdasaṃśayāni siddhiḥ parisamāpyate tasya pañcāvayavāḥ pratijñādayaḥ, samūham apekṣyāvayavā ucyante | teṣu pramāṇasaṃśayāḥ, āgamaḥ pratijñā | hetur anumānam | udāharaṇam pratyakṣam | upanayanam upamānam | sarveṣāṃ ekārthasaṃśayāḥ sāmānyapradarśanam nigamanam iti | so 'yaṃ paramo nyāya iti | etena vādajalpavitandāḥ pravartante nāto 'nyatheti*)

⁹ Here, I translate the Sanskrit word “*jñāna*” as “awareness.” Typically, this Sanskrit word picks out contentful, occurrent mental states, like experiences and thoughts. But, often, it is translated as “cognition” rather than “awareness.” This is slightly misleading. Typically, in contemporary philosophy and cognitive science, the term “cognition” is reserved for mental states, like beliefs and judgements, whose contents can be verbally reported and directly used for reasoning and the control of action. But, for at least some Sanskrit philosophers, a *jñāna* needn’t be like this: for example, for Buddhist philosophers working within the tradition of Dignāga and Dharmakīrti and Nyāya philosophers beginning with Gaṅgeśa Upādhyāya (14th century CE), non-conceptual perceptual experiences count as *jñānas*, but do not have contents that can be verbally reported or directly used for reasoning and the control of action. So, I choose the more neutral term “awareness” to refer to all *jñānas*.

¹⁰ NS 1.1.1:

pramāṇaprameyasamśayaprayojanadr̥ṣṭāntasiddhāntāvayavatarkanirṇayavādajalpavitandāhetvābhāsacchalajā tinigrahasthānānām tattvajñānān niḥśreyasādhiḡamaḥ || My translation of “*tattva*” as “nature” fits its etymology: the word is derived by adding a “*tvā*” suffix to “*ta*” (which is the equivalent of the demonstrative “that”). It roughly means an object’s state of being what it is. But this is different from the way Vātsyāyana explains the term in his preamble to the *Nyāyasūtra* (NBh 1.16-18): “Still, what is *tattva*? It is the existence of something that exists, and the non-existence of something that doesn’t exist. That which is existent—when it is being apprehended as it is and without any error in the form, ‘This is existent’—is *tattva*. And that which is non-existent—when it is being apprehended as it is and without error in the form, ‘This is non-existent,’—is *tattva*.” (*kiṃ punas tattvam? sataś ca sadbhāvo 'sata cāsadbhāvah | sat sad iti gr̥hyamāṇam yathābhūtam aviparītam tattvam bhavati | asac cāsad iti gr̥hyamāṇam yathābhūtam aviparītam tattvam bhavati* |) This implies that *tattva* is the ontological status of any object; while this ontological status may be one aspect of the nature of an object, it does not exhaust it. However, as we shall soon see, Vātsyāyana uses the word “*tattva*” a bit differently in

The first of these groups includes the methods and objects of inquiry; the second includes the conditions and components of inquiry; the third includes different forms of debate as well as the strategies to be used in such debates. The *sūtra* claims that we can achieve the highest good by gaining awareness regarding the nature of these entities.

Vātsyāyana and Uddyotakara unpack this thought as follows. According to a traditional scheme of classification that can be traced back to Kauṭilya’s (3rd-2nd centuries BCE) *Arthaśāstra*, the science of rational inquiry is one of the four primary sciences (*vidyā*) along with the triple (*trayī*), i.e., the study of three Vedas, economics (*vārtā*), and government (*daṇḍanīti*).¹¹ Vātsyāyana notes that each of these sciences promotes its own proprietary highest good by generating an awareness about the nature (*tattvajñāna*) of the objects that it is concerned with.¹² The triple promotes the goal of attaining heavenly bliss (*svargaprāpti*) by providing knowledge about sacrifices like *agnihotra* enjoined in the Vedas. Economics promotes the aim of material prosperity, e.g., attaining a crop of grain (*sasyādhigama*), by providing knowledge about the suitability of a piece of land for cultivation, and so forth. Government promotes the goal of political success, e.g., the conquest of the world (*prthivīvijaya*), by teaching the king when to apply policies of conciliation, generosity, punishment, and sowing dissension.¹³ As Uddyotakara tells us, Nyāya promotes the practical

another context to refer to the true nature of an object; see the passage in fn. 12. Uddyotakara’s explanation of the term “*tattva*” also supports my translation (NV 10.17-19): “*Tattva* is the entities’ being the cause of the arising of an awareness regarding themselves in the way they are distinguished (*yathavyavasthita*) [from other entities]. A certain entity, which is distinguished [from other entities] in a certain way, serves as the cause of the arising of an awareness regarding something of that kind. So, this is its *tattva*.” (*tattvam padārthānām yathāvasthitāmapratyayotpattinimittatvam | yaḥ yathāvyavasthitaḥ padārthaḥ saḥ tathābhūtasya pratyayasyotpattinimittam bhavātīty etat tattvam |*) For Uddyotakara, the *tattva* of an entity is its causal capacity to give rise to a state of awareness regarding itself as distinct from other entities. Arguably, this capacity is nothing but the nature of that entity, which helps us distinguish it from other objects of similar and dissimilar kinds.

¹¹ See Olivelle’s (2013, pp. 66-68) translation of the relevant section of the *Arthaśāstra*.

¹² NBh 5.18-6.3: “This very science of rational inquiry, which is divided into kinds of entities (*padārthaiḥ*) such as the methods of knowing and so forth, ‘is the lamp of all the sciences, the means of all actions, the basis of all *dharma*s, and has been described in the enumeration of the sciences.’ So, this awareness of the nature [of things] [mentioned in the *Nyāyasūtra* 1.1.1.], which is for the sake of attaining the highest good, is to be understood in accordance with each science. However, in this science of the inner self, the awareness of the nature [of things] is the awareness of the self and so on. The attainment of the highest good is the attainment of liberation” (*seyam ānvīkṣikī pramāṇādibhiḥ padārthair vibhajyamānā – pradīpaḥ sarvavidyānām upāyaḥ sarvakarmaṇām | āsrayaḥ sarvadharmānām vidyoddeśe prakīrtitā || tad idaṃ tattvajñānam niḥśreyasādhigamārtham yathāvidyaṃ veditavyam | iha tv adhyātmavidyāyām ātmādijñānam tattvajñānam | niḥśreyasādhigamo ’pavargaprāptiḥ |*) The verse quoted by Vātsyāyana is from the second chapter of Kauṭilya’s *Arthaśāstra*, called “The Enumeration of the Sciences” (*vidyoddeśa*) in where the science of rational inquiry is mentioned alongside the three other sciences; for an alternative translation, see Olivelle (2013, p. 67).

¹³ NV 20.12-21: “So, this awareness of the nature [of things], which is for the sake of attaining the highest good, is to be understood in accordance with each science. In all the sciences, there is an awareness of the nature [of things] as well as the attainment of a highest good. [Question:] First of all, what is the awareness of the nature [of things] in the triple? And what is the attainment of the highest good? [Reply:] First of all, the awareness of the nature [of things] consists in the comprehensive awareness of [components such as] welcome, etc. (*svāgatādiparijñānam*) of the means such as the *agnihotra* sacrifice and so on, as well as the comprehensive

aims of these other sciences indirectly by providing knowledge about the tools of rational inquiry—the methods of knowing and so on—that are needed to investigate the subject-matter of these other sciences. But Vātsyāyana and Uddyotakara want to emphasize that Nyāya is not simply a handmaiden to these other sciences. It itself functions as an autonomous science, what they call a “science of the inner self” (*adhyātmavidyā*). Its own proprietary aim is liberation (*mokṣa* or *apavarga*), the complete cessation of all pain. It promotes this aim by providing knowledge about the nature of certain knowable objects such as the self (*ātman*), the body (*śarīra*), the senses (*indriya*), and so forth.

Both Vātsyāyana and Uddyotakara agree that a treatise (*śāstra*) of Nyāya—such as the *Nyāyasūtra*—makes these kinds of practically useful knowledge accessible to us by

awareness of [the means] being unobstructed, etc. (*anupahatādiparijñānam*). Moreover, the attainment of the highest good is the attainment of heavenly bliss. That is to say: in this [triple], heavenly bliss is stated to be the result. [Question:] What is the awareness of the nature [of things] in economics? And what is the attainment of the highest good? [Reply:] The comprehensive awareness of the land, etc. is the awareness of the true nature [of things]. The awareness of the nature [of things] is this [awareness] which takes the form, “The land is not damaged by thorns and so on.” The highest good is the attainment of a crop of grain, which is the result of that awareness. [Question:] What is the awareness of the nature [of things] in government? And what is the attainment of the highest good? [Reply:] The application of conciliation, generosity, punishment, and sowing dissension—according to the time, the place, and one’s power—is the awareness of the nature [of things]. The attainment of the highest good is the conquest of the world. **However, in this science of the internal world, the awareness of the nature [of things] is the awareness of the self and so on. The attainment of the highest good is the attainment of liberation.”** (*tad idam tattvajñānam niḥśreyasādhigamaś ca yathāvidyam vedītavyam* | *sarvāsu vidyāsu tattvajñānam asti niḥśreyasādhigamaś ca iti* | *trayyāṃ tāvat kiṃ tattvajñānam kaś ca niḥśreyasādhigama iti? tattvajñānam tāvat agnihotrādisāadhanānām svāgatādiparijñānam anupahatādiparijñānam ca* | *niḥśreyasādhigamo 'pi svargaprāptiḥ* | *tathā hy atra svargaḥ phalaṃ śrūyata iti* | *atha vārtāyāṃ kiṃ tattvajñānam kaś ca niḥśreyasādhigama iti* | *bhūmyādiparijñānam tattvajñānam* | *bhūmiḥ kaṅtakādyanupahatety etad tattvajñānam* | *niḥśreyasam sasyādhigamas tatphalam* | *daṇḍanītyāṃ kiṃ tattvajñānam kaś ca niḥśreyasādhigama iti* ? *sāmadānadaṇḍabhedānām yathākālam yathādeśam yathāśakti viniyogaḥ tattvajñānam* | *niḥśreyasam api prthivīvijaya iti* | ***iha tu adhyātmavidyāyām ātmādijñānam tattvajñānam niḥśreyasādhigamo 'pavargaprāptir iti*** |)

Elsewhere, Uddyotakara makes two relevant remarks. First, he distinguishes goods (*śreyas*) into two kinds—observed and unobserved—and claims that the only observed good is pleasure (*sukha*) while the unobserved good consists in the cessation of what is harmful, i.e., pain (NV 2.2-5): “Moreover, a good is either pleasure or the cessation of what is harmful. That good—when divided—is distinguished into two kinds, depending on whether it is observed or unobserved. The observed [good] is pleasure. The unobserved [good] is the cessation of what is harmful. The cessation of what is harmful, too, can be of two kinds: absolute and non-absolute. The non-absolute [cessation of what is harmful] takes place through the avoidance of causes of pain, such as thorns and so on. But the absolute [cessation of what is harmful] takes place through the abandonment of pain that is divided into twenty-one varieties.” (*śreyah punaḥ sukham ahitanivṛttiś ca* | *tac chreya bhidyamānam dvedhā vyavatiṣṭhate dr̥ṣṭādr̥ṣṭabhedena* | *dr̥ṣṭam sukham* | *adr̥ṣṭam ahitanivṛttiḥ* | *ahitanivṛttir apy ātyantikī cānātyantikī ca* | *anātyantikī kaṅtakāder duḥkhasāadhanasya parihāreṇa* | *ātyantikī punar ekaviṃśatiprabhedabhinnaduḥkhaḥānyā* |) Second, he applies this distinction between goods to the highest goods (NV 10.19-22): “Moreover, the highest good is of two kinds depending on the distinction between what is observed and what is unobserved. Of those two, the observed highest good is due to the awareness of the nature of entities such as methods of knowing and so on...But the other [or higher] highest good arises from the awareness of the nature of a knowable object like the self, etc.” (*niḥśreyasam punar dr̥ṣṭādr̥ṣṭabhedāt dvedhā bhavati* | *tatra paramānādipadārthatattvajñānān dr̥ṣṭāniḥśreyasam* | *...param tu niḥśreyasam ātmādeḥ prameyasya tattvajñānād bhavātīti* |) As it is clear from the context (NV 10.22-11.9), the highest good of the unobserved kind is liberation, which consists in the complete cessation of all pain. So, Uddyotakara’s view is that Nyāya promotes the observed highest goods, pursued by the other sciences, by providing knowledge about the methods of knowing and so on, but—insofar as it functions as a science of the inner self—it promotes the unobserved highest good of liberation by providing knowledge about knowable objects like the self and so on. For further discussion of the early Nyāya theory of liberation, see Das (2020c).

employing the method of definitions. The *Nyāyasūtra* and its commentaries explore the subject-matter of Nyāya in three steps: by enumerating the relevant epistemological kinds, by offering definitions of those kinds, and then by examining those definitions. Vātsyāyana explains the idea in his commentary on *Nyāyasūtra* 1.1.3, which says, “Perception, inference, analogy, and testimony are the methods of knowing.”¹⁴ Vātsyāyana explains:

Moreover, the activity (*pravṛtti*) of this treatise is of three kinds: enumeration (*uddeśa*), definition (*lakṣaṇa*), and examination (*parīkṣā*). Amongst those, enumeration is the mentioning of a mere kind of entity by means of its name. Amongst those, a defining characteristic (*lakṣaṇa*) is a property that distinguishes the nature (*tattva*) of something that has been enumerated. An examination is the determination of an object that has been defined with respect to whether it obtains in accordance with its defining characteristic (*yathālakṣaṇam*) or not.¹⁵

Notice a peculiarity of this passage. In the first sentence where Vātsyāyana is describing the way in which the *Nyāyasūtra* explores its subject-matter, he seems to be using the word “*lakṣaṇa*” to refer to the act of stating a defining characteristic. But, when he explains what a *lakṣaṇa* is, he seems to be using the word “*lakṣaṇa*” to refer to a defining characteristic, i.e., a property that distinguishes the nature of something.

Vātsyāyana does not tell us how a defining characteristic distinguishes the true nature of something that has been enumerated. In his sub-commentary *Nyāyavārttika*, Uddyotakara answers this question. While commenting on *Nyāyasūtra* 1.1.3, he asks why the four-fold classification (*vibhāga*) of the methods of knowing is required over and above the definitions of those methods themselves. The answer: the point of classifying the methods of knowing is simply to show that there are *exactly* four of them. So, the classification lays down a restriction (*niyama*) on the range of things that could be a method of knowing. The definitions of those methods cannot yield such a restriction by themselves.

[The opponent:] The fourfoldness [of the methods of knowing] is apprehended on the basis of their defining characteristics.

[Reply:] No, since a defining characteristic is the reason for distinguishing one thing from another (*itaretaravyavacchedahetuvāt*). Suppose you think, “The fourfoldness [of the methods of knowing] is apprehended on the basis of their defining characteristics. That is why defining characteristics of those four have been stated.” No, since a defining characteristic is the reason for distinguishing one thing from

¹⁴ NS 1.1.3: *pratyakṣānumānopamānaśabdāḥ pramāṇāni* |

¹⁵ NBh 8.7-9 ad NS 1.1.3: *trividhā cāsya śāstrasya pravṛttir uddeśo lakṣaṇam parīkṣā ceti | tatra nāmadheyena padārthamātrasyābhīdhānam uddeśaḥ | tatrodḍiṣṭasya tattvavyavacchedako dharmo lakṣaṇam | lakṣitasya yathālakṣaṇam upapadyate na veti pramāṇair avadhāraṇam parīkṣā* | Here, at least, the translation “*tattva*” as “*nature*” seems uncontroversial, since a definition doesn’t straightforwardly give us any clue about the ontological status of any object, but only tells us what it is.

another. Certainly, a defining characteristic distinguishes (*vyavacchinatti*) a kind of entity that is the target of the definition from objects of similar and dissimilar kinds. However, it is not capable of imposing a restriction, since it has a different object [or purpose], given that the impossibility of something else is not apprehended on the basis of it. This is because, on the basis of a defining characteristic, the impossibility of something else is not apprehended. So, if the four [methods of knowing] were not stated but the defining characteristics of those four were taught, then there could be a state of uncertainty [that takes the form]: “Are there existing [methods of knowing] that have not been defined, or only non-existent ones?” Therefore, for the sake of removing that state of uncertainty, the enumeration of a classification is appropriate.¹⁶

The passage is repetitive, but the idea is clear. The function of a defining characteristic is to distinguish objects of a certain kind from other objects of similar and dissimilar kinds. That is the sense in which a defining characteristic is a reason for distinguishing one thing from another (*itaravyavacchedahetu*). So, a definition for each method of knowing can only lay down a distinguishing characteristic of all instances of that method. But it cannot tell us whether there are other methods of knowing. Thus, to show that there are only four methods of knowing, we need an exhaustive classification of those methods. This is what *Nyāyasūtra* 1.1.3 gives us.¹⁷

The same point comes across clearly in Uddyotakara’s discussion of the Nyāya definition of perception (*pratyakṣa*). Here, perception isn’t understood as a method of knowing, but rather as a knowledge-event (*pramā*), i.e., as a veridical perceptual experience in undergoing which we gain knowledge. *Nyāyasūtra* 1.1.4 says:

¹⁶ NV 26.7-16 ad NS 1.1.3: *lakṣaṇataś catuṣṭvādhigatiḥ iti cet—na, lakṣaṇasya itaravyavacchedahetutvāt | syād eṣā buddhir lakṣaṇataḥ pramāṇacatuṣṭvaṃ gamyata iti, yasmāt caturṇām lakṣaṇam uktam iti | na, lakṣaṇasyetaravyavacchedahetutvāt | lakṣaṇam khalu lakṣyaṃ padārtham samānāsamānajātīyebhyaḥ vyavacchinatti, niyamaṃ tu na śaknoti kartum anyārthatvāt iti | anyāsaṃbhavasya tato ’nadhigateḥ | na hi lakṣaṇato ’nyāsaṃbhavo ’dhigamyate | tatas caturṇām anabhidhāne caturṇām lakṣaṇopadeṣe syāt saṃśayaḥ:-- kim vidyamānāni na lakṣitāni, utāho avidyamānānīti | tasmāt saṃśayanivṛtyartham yukto vibhāgodeśa iti |*

¹⁷ Uddyotakara makes a similar point while justifying the five-fold classification of the pseudo-reasons (*hetvābhāsa*) (NV 162.7-10 ad NS 1.2.4): “[The opponent:] The five-foldness of the pseudo-reasons is known on the basis of their defining characteristics. The five-foldness is known by means of just these [*sūtras*], which are the definitional *sūtras* for the five pseudo-reasons. So, a *sūtra* that is given for the sake of a restriction [like NS 1.2.4] is futile. [Reply:] It is not the case that it is futile, because a defining characteristic distinguishes one thing from another. A defining characteristic distinguishes one thing from another. However, it does not serve the purpose of laying down a restriction, because a restriction is not known by means of a defining characteristic.” (*lakṣaṇata eva pañcatvaṃ gamyata iti cet? yany etāni pañcahetvābhāsānām lakṣaṇasūtrāṇi tair eva pañcatvaṃ gamyata iti niyamārtham sūtram anarthakam | nānarthakam, lakṣaṇasya itaretaravyavacchedakatvāt | itaretaravyavacchedakam lakṣaṇam, na punar niyamārtham | na hi niyamo lakṣaṇena gamyata iti |*)

Perception is an awareness which is produced by the contact between a sense and an object, which is non-erroneous, which is non-linguistic, and which has the nature of determination.¹⁸

Both Vātsyāyana and Uddyotakara are aware that there are other causes of perception such as the conjunction between the self and the inner sense or *manas* (*ātmamaṇaḥsaṃyoga*), the conjunction between the sense that detects the object and the inner sense (*indriyamaṇaḥsaṃyoga*), the conjunction between the relevant object and light (*viśayaprakāśasaṃyoga*), and so on.¹⁹ This raises the question of why perception is characterised in the *sūtra* only with reference to sense-object contact. Uddyotakara responds by noting that the *sūtra* is a definition of perception: its task is to rule out other objects of similar and dissimilar kinds from the scope of perception.²⁰ Here, other objects of dissimilar kinds include errors and states of uncertainty, while other objects of similar kinds include other knowledge-events that arise from inference, analogy, or testimony. The definition rules out errors and states of uncertainty by imposing the condition that perception is both non-erroneous and has the nature of determination. To rule out other knowledge-events, the definition mentions a unique cause of perception—sense-object contact—that only causes perceptual knowledge-events but not other kinds of knowledge-events. The upshot: for Vātsyāyana and Uddyotakara, a defining characteristic for instances of a kind *K* is a property that distinguishes all and only instances of *K* from other objects of similar and dissimilar kinds.

For these thinkers, the Nyāya definitions of epistemological kinds like the methods of knowing are not *stipulative definitions* like the definitions of terms like “*nadī*” or “*vrddhi*” in Pāṇinian grammar. Such stipulative definitions assign meanings to terms that are used in ordinary speech, but are not subject to the requirement that these meanings have to cohere with the uses of those terms in ordinary speech. By contrast, according to the very early Nyāya thinkers, the Nyāya definitions of epistemological kinds are supposed to cohere with our ordinary thought and discourse. For example, in his commentary on *Nyāyasūtra* 2.1.17, Vātsyāyana points out that the expression “method of knowing” is a term that picks out an event-maker (*kāraṇaśabda*): it refers to the instrument (*kāraṇa*) by which a knowledge-event

¹⁸ NS 1.1.4: *indriyārthasannikarṣottpannam jñānam avyapadeśyam avyabhicāri vyavasāyātmakam pratyakṣam*

¹⁹ A full list given at NV 29.20-23 ad NS 1.1.4.

²⁰ NV 30.3-5 ad NS 1.1.4: “This *sūtra* is not for the sake of determining a cause, but rather for distinguishing [perception] from objects of similar and dissimilar kinds, on account of which a unique cause of perception is being stated, but the non-unique causes are not being denied.” (*nedaṃ kāraṇāvadhāraṇārtham sūtram, api tu samānāsamānajātīyaviśeṣaṇārtham | yat pratyakṣasyāsādhāraṇam kāraṇam abhidhīyate, na punar sādharmaṇam kāraṇam nivartyata iti* |) Similarly, compare NV 194.4-6 ad NS 2.1.21: “Even on the position that [the property of arising from sense-object contact] is a defining characteristic [of perception], there is no problem; for the contact between the sense and the object is unique [to perception]. The contact between the sense and the object is a cause in virtue of being the producer of perception, and it is a defining characteristic in virtue of distinguishing it from objects of similar and dissimilar kinds” (*lakṣaṇapakṣe 'pi na doṣaḥ | asādhāraṇatvāt indriyārthasannikarṣasyeti | indriyārthasannikarṣaḥ pratyakṣotpādakatvāt kāraṇam ca, samānāsamānajātīyebhyo viśeṣakatvāt lakṣaṇam ceti*)

(*pramā*), i.e., an event of knowledge-acquisition or learning, is brought about. In this sense, it is the cause of an apprehension (*upalabdhihetu*). However, a method of knowing can also be an intentional object of an apprehension (*upalabdhiṣaya*): we can be aware of the methods of knowing that are defined within the Nyāya system. Vātsyāyana explains the idea as follows.

Moreover, the methods of knowing such as perception and the rest are objects of awareness. The distinctions (*viśeṣāḥ*) amongst them are apprehended in the form, “I apprehend by perception,” “I apprehend by inference,” “I apprehend by analogy,” “I apprehend by authoritative testimony,” “My awareness is perceptual,” “My awareness is inferential,” “My awareness is analogical,” “My awareness is based on authoritative testimony.” And, when they are conveyed on the basis of their defining characteristics, they are apprehended in a specific manner (*viśeṣeṇa*) through descriptions like, “an awareness that arises from sense-object contact,” and so on.²¹

Vātsyāyana’s observation is simple: we often ascribe states of perceptual, inferential, or testimony-based awareness to ourselves. These patterns of first-personal thought suggest that we are aware of methods of knowing like perception, inference, and so on. However, the definitions given in the *Nyāyasūtra* are useful insofar as they help us understand in a more specific manner what these methods of knowing are. Thus, for Vātsyāyana, the purpose of these definitions is to generate a more specific awareness regarding certain epistemological kinds that we are independently familiar with.

B. Definitions in Very Early Vaiśeṣika

This conception of definitions is not accepted only by these Nyāya thinkers; their Vaiśeṣika cousins also share it.

Unlike the *Nyāyasūtra*, the focus of the *Vaiśeṣikasūtra*—composed also around 2nd century by Kaṇāda—is exclusively on ontology, on the question of what exists. The *Vaiśeṣikasūtra* lists six ontological categories: substance (*dravya*), quality (*guṇa*), motion (*karman*), universal (*sāmānya*), ultimate differentiator (*viśeṣa*), and inherence (*samavāya*). It goes on to discuss the similarities (*sādharmya*) and the dissimilarities (*vaidharmya*) amongst these ontological categories as well as the sub-categories that they are divided into. Like the *Nyāyasūtra*, the *Vaiśeṣikasūtra* too motivates its theoretical enterprise by appealing to a practical aim, namely *dharma*.

²¹ NBh 64.6-11 ad NS 2.1.17: *saṃvedyāni ca pratyakṣādīni pramāṇāni, pratyakṣeṇopalabhe anumānenopalabhe upamānenopalabhe āgamenopalabhe | pratyakṣam me jñānam anumānikaṃ me jñānam aupamānikaṃ me jñānam āgamikaṃ me jñānam iti viśeṣā grhyante | lakṣaṇatā ca jñāpyamānāni jñāyante viśeṣeṇendriyārthasannikarṣotpannam jñānam ity evamādinā |*

Now, therefore, we shall explain *dharma*.²²

Dharma is that due to which prosperity (*abhyudaya*) and the highest good (*niḥśreyasa*) are accomplished.²³

In his explanation of these *sūtras*, the commentator Candrānanda (between 6th and 10th centuries CE) tells us a story about how the sage Kaṇāda (or Kaṇabhakṣa, as he is sometimes called) came to compose the *Vaiśeṣikasūtra*. His aim was to address the question—posed to him by a Brahmin who had been studying the Veda—about how one might achieve the state of repose, described in the Upaniṣads, where the disembodied self is unaffected by joy and sorrow. The answer, given by Kaṇāda, was *dharma*.²⁴ But what is *dharma*? As the second *sūtra* tells us, it is “that due to which prosperity (*abhyudaya*) and the highest good (*niḥśreyasa*) are accomplished.” In this context, *dharma* is a kind of karmic merit that is accumulated in the self (*ātman*) as a result of virtuous actions such as the performance of sacrifices and the worship of deities. This, in time, leads to good results such as prosperity and the highest good. Here, prosperity consists either in some desirable form of afterlife (e.g., being born with a desired body in the realm of Brahmā or some other heaven) or the cessation of what is undesirable (*anartha*). By contrast, the highest good is liberation (*mokṣa*), the disembodied state in which the self no longer possesses its specific qualities such as pleasure, pain, and so on.²⁵

How is the subject-matter of the Vaiśeṣika system connected to such *dharma*? The *Vaiśeṣikasūtra* does not answer this question. But both Praśastapāda (6th century CE) and Candrānanda make the connection explicit. In *Padārthadharmasaṅgraha*, Praśastapāda writes:

²² VS 1.1.1: *athāto dharmam vyākhyāsyāmaḥ |*

²³ VS 1.1.2: *yato 'bhyudayaniḥśreyasasiddhiḥ sa dharmah |*

²⁴ VSV 2-4 ad VS 1.1.1: “The following was revealed to a certain Brahmin whose impurities had been removed by Vedic practice: ‘Joy and sorrow, however, do not affect one who has no body’” (*Chāndoya Upaniṣad* 8.12.1). Then, having reflected on this sentence, that Brahmin went to Kaṇabhakṣa. Then, he said: ‘Blessed One! By this sentence, becoming disembodied is described as the means to repose (*kṣema*). So, tell me: what is the means [to disembodiment]?’ Then, the sage said: “*Dharma*.” (*kasyacid brāhmaṇasya vedābhyāsavaśena vyapagatakalmaṣasyedaṃ pratibabhau: ‘aśarīraṃ vāva santaṃ priyāpriye na sprśata’ iti | tata idaṃ vākyam ālocya kaṇabhakṣaṇam ājagāma | tato 'bhyuvāca: “bhagavann! anena vākyena vyapahataśarīra[tva]sya kṣemasādhanatā kathyate | tad ucyatām: ka upāya?” iti | tato munir abhyuvāca: “dharma” iti |*) My translation of the Upaniṣadic passage is borrowed from Olivelle (1998, p. 285).

²⁵ VSV 12-15 ad VS 1.1.2: “Since actions such as sacrifices, the worship of deities, and so on—which are brought about by means of ghee, flowers, and the like—are incapable of yielding any result at a later time because they are destroyed at that very [earlier] time, the cause from which prosperity and the highest good arise should be understood as *dharma*. Prosperity consists in the attainment of a desired body in the realms of Brahmā and so on, and the cessation of what is undesirable. The highest good is liberation which takes the form of the absence of specific [or Vaiśeṣika] qualities of the inner self” (*vyāgadavatāpūjādikriyānām ājyapuṣpādinirvartyānām tadaiva vinaṣṭatvād uttarakālam phaladānāśakter yasmād dhetor abhyudayaniḥśreyase bhavataḥ, sa “dharma” iti boddhavyaḥ | abhyudayo brahmādilokeṣu ceṣṭaśarīraprāptiḥ, anarthoparamaś ca | niḥśreyasam adhyātmano vaiśeṣikaguṇābhāvarūpo mokṣaḥ |*)

The awareness of the similarities, the dissimilarities, and the nature (*tattva*) of the six kinds of entities (*padārtha*), i.e., substance, quality, motion, universal, ultimate differentiator, and inherence, is the cause of the highest good.²⁶

Similarly, Candrānanda tells us:

Thus, if the highest good is to be accomplished, then the comprehensive awareness of the similarities and the dissimilarities amongst the six kinds of entities serves as the cause of *dharma* when detachment arises through the mediation of the perception of the defects of intentional objects. If prosperity is to be accomplished, those entities, once again, have the status of being the cause of *dharma*. In [the injunction], “One should sacrifice on even ground,” earth has [that status]. In [injunctions] such as, “He brings water downwards,” other substances respectively [have that status]. In contrast, qualities have [that status] in the case of [injunctions] such as, “One should immolate a black animal.” On the other hand, motions have [that status] in the case of [the injunctions] such as, “They thresh rice.” And, since substances and the rest are the cause of prosperity and the highest good insofar as their similarities and dissimilarities are specifically apprehended, [Kaṇāda] first states their similarities...²⁷

The kind of knowledge that the Vaiśeṣika system provides—the knowledge of the similarities, the dissimilarities, and the nature of the six ontological categories—can give rise to the kind of *dharma* that results in prosperity or liberation. Start with liberation. When we gain insight into the nature of the six ontological categories, we may gain the ability to see more clearly why the intentional objects that we ordinarily desire are defective. This, in turn, may pave the way for detachment (*vairāgya*), a state of desirelessness. This detachment will cause the kind of *dharma* that will liberate us. Similarly, Vedic injunctions like “One should sacrifice on even ground,” and so forth, speak not only of substances like earth and water, but also their qualities and motions, e.g., the black colour of an animal and the action of threshing rice. Thus, to understand exactly what those injunctions say, we need to know the true nature of such substances, qualities, and motions. Without such knowledge, we would not be able to successfully perform the enjoined sacrifices that could result in a prosperous afterlife or could ward off bad outcomes. Thus, the knowledge of the nature of the Vaiśeṣika ontological categories is practically useful. Both Praśastapāda and Candrānanda emphasize the fact that we can only gain the requisite form of knowledge about the six ontological categories by learning about their similarities and dissimilarities.

²⁶ PDS 4.4-5: *dravyaguṇakarmasāmānyaviśeṣasamavāyānām ṣaṇṇām padārthānām sādharmaṃyavaidharmyatattvajñānam niḥśreyasahetuḥ* |

²⁷ VSV 4.4-9 ad VS 1.1.6: *evam ṣaṇṇām padārthānām sādharmaṃyavaidharmyaparijñānam viśayadoṣadarśanadvāreṇa vairāgyotpattau satyām niḥśreyase sādhye dharmahetuḥ | abhyudaye sādhye dharmahetutvaṃ punar amīṣām: 'same yajet'eti prthivyāḥ; 'adho 'ṃbūni nayatī'tyādi yathāsvam anyeṣām dravyāṇām; guṇānām tu 'kṛṣṇam ālabhet'etyādi; karmaṇām tu 'vrīhīn avahantī'tyādi | vijñātasādharmaṃyavaidharmyāñām ca dravyādīnām abhyudayaniḥśreyasahetutvāt, sādharmaṃyāṃ tāvat kathayati |*

It is precisely this kind of knowledge that the method of definitions is designed to give us. It is supposed to inform us about the defining characteristic of each ontological category (or sub-category) in virtue of which it could be distinguished from other categories (or sub-categories). This idea is borne out by the subsequent discussion of the three initial ontological categories—substance, quality, and motion—in the *Vaiśeṣikasūtra* itself.

The defining characteristic (*lakṣaṇa*) of a substance is that it possesses motion; it possesses qualities; it is the substrate cause (*samavāyikāraṇa*) [for other substances, qualities, and motions].²⁸

The defining characteristic (*lakṣaṇa*) of a quality is that it has a substance as its substratum; it does not possess qualities; it does not serve as an independent cause with respect to conjunction (*saṃyoga*) and separation (*vibhāga*) [between substances].²⁹

The defining characteristic (*lakṣaṇa*) of a motion is that it belongs to a single substance; it is without qualities; it serves as an independent cause with respect to conjunction and separation [between substances].³⁰

On a natural reading of these *sūtras*, they lay down the defining characteristics of the three primary ontological categories.³¹ The three listed characteristics of substances are: the possession of qualities, the possession of motion, and the property of serving as the substrate cause. Each of these characteristics belongs to substances alone. Therefore, each on its own can count as a distinguishing characteristic of substances. By contrast, some of the listed characteristics of qualities are shared with motions: like a motion, a quality will reside in a substance by a relation of inherence, and will not itself possess further qualities. However, unlike a motion, a quality cannot independently bring two substances into contact with each other and separate them from each other. Therefore, in this case, the three characteristics jointly constitute a distinguishing characteristic of qualities. Finally, in the case of motions, the three characteristics—of residing in a single substance (which some qualities like contact do not have), of not possessing further qualities, and serving as an independent cause with respect to contact and separation—together constitute a distinguishing characteristic. (We will later see why these are not regarded as defensible defining characteristics of these categories by later Vaiśeṣika writers.)

This is arguably an instance of the method of definitions: the *sūtras* partially present a polycategorical ontology by defining the three primary ontological categories. This method is pursued throughout the *Vaiśeṣikasūtra*: we encounter similar characterisations of universals, ultimate differentiators (VS 1.2.3ff) and inherence (VS 7.2.29). Slightly later Vaiśeṣika texts—such as Praśastapāda's *Padārthadharmasamgraha*—continue this trend. Following the

²⁸ VS 1.1.14: *kriyāvad guṇavat samavāyikāraṇam iti dravyalakṣaṇam* |

²⁹ VS 1.1.15: *dravyāśrayy agunavān saṃyogavibhāgeṣv akāraṇam anapekṣa iti guṇalakṣaṇam* |

³⁰ VS 1.1.16: *ekadravyam aguṇam saṃyogavibhāgeṣv anapekṣam kāraṇam iti karmalakṣaṇam* |

³¹ See Thakur (2003, p. 30) for an explanation of these *sūtras* along these lines.

Vaiśeṣikasūtra, Praśastapāda himself explains the Vaiśeṣika ontological scheme first by listing the different ontological categories and sub-categories, and then by discussing their similarities and dissimilarities. According to later commentators like Vyomaśiva (10th century CE), Śrīdhara (10th century CE) and Udayana (10th/11th century CE), these dissimilarities should be construed as defining characteristics of the relevant ontological categories. For instance, when Praśastapāda says, “Earth (*pr̥thivī*) [is dissimilar from other entities] because is connected to earthhood,”³² he is treating the defining characteristic of earth—earthhood—as a feature on the basis of which the distinctness of earth from other entities can be proved. The point is even clearer in the context of his discussion of the distinguishing characteristics of universals: having listed a few distinguishing characteristics of universals, Praśastapāda tells us, “Due to the difference in their defining characteristics, the status of these universals as a category that is distinct from substances, qualities, and motions is established.”³³ This suggests that, for Praśastapāda too, the function of a defining characteristic is to help us distinguish instances of a certain ontological category (or sub-category) from instances of other ontological categories (or sub-categories). We shall soon see how some of these remarks made by Praśastapāda become the site of methodological reflections on definitions for later Vaiśeṣika commentators.

Let us sum up. The conception of definitions that emerges from the work of these very early Nyāya-Vaiśeṣika writers can be stated as follows.

The Co-Extensive Property strategy. The purpose of a definition of any kind *K* is to lay down a characteristic *C* that distinguishes *all* instances of *K* from *all* other objects of similar and dissimilar kinds.

In other words, a defining characteristic of a kind *K* must be co-extensive with the property of being *K*, i.e., must belong to all and only instances of *K*. As later Nyāya-Vaiśeṣika writers point out, this—at the very least—implies that definitions should be *extensionally adequate*: if *C* is the defining characteristic of instances of *K*, then all *actual* instances of *K* must possess *C* but no other actual object should.³⁴ This means that, *C* cannot suffer from three faults: underextension (*avyāpti*), overextension (*ativyāpti*), and impossibility (*asambhava*). A defining characteristic of instances of a kind *K* is underextended just in case it is absent from instances of *K*. It is overextended just in case it is present in some objects that are not instances of *K*. It is impossible just in case it is not present in any instance of *K* at all. If a

³² PDS 28.9: *pr̥thivītvābhisambandhāt pr̥thivī* |

³³ PDS 272.10: *lakṣaṇabhedād eṣāṃ dravyaguṇakarmebhyaḥ padārthāntaratvaṃ siddham* |

³⁴ To be fair, these Nyāya-Vaiśeṣika thinkers themselves do not put the matter in terms of extensional adequacy. The later Naiyāyikas put the idea in terms of *bidirectional invariable concomitance* (*samanīyatatva*). Two properties *X* and *Y* are bidirectionally invariably concomitant if and only if *X* does not occur at a place where the absence of *Y* occurs, and *Y* does not occur at a place where the absence of *X* occurs. Suppose *K* is the kind to be defined, and *C* is the defining characteristic of instances of *K*. The later Naiyāyikas claim that the delimitor of the property of being the target of definition (*lakṣyatāvachhedaka*)—i.e., the property of being an instance of *K*—and the defining characteristic *C* must be bidirectionally invariably concomitant. This implies that these two properties must have the same extension. For discussion of this notion, see Matilal (1990, pp. 164ff.) and Bhattacharya (1990, ch. 5).

defining characteristic is free from these three faults, then there cannot be any *actual* counterexamples to the relevant definition.

However, it is possible that defenders of this proposal also want definitions to be *intensionally adequate*: if *C* is a defining characteristic of instances of a kind *K*, all and only *possible* instances of *K* must possess *C*. In other words, there should be no possible counterexamples to the definition. If the early Nyāya thinkers thought that definitions should be extensionally but not intensionally adequate, then they would allow definitions of the following kind: “For all *x*, *x* is a renate if and only if *x* is a cordate.” This definition is extensionally adequate: all actual renates, i.e., creatures born with kidneys, are cordates, i.e., creatures born with hearts, and there are no actual non-renates that are cordates. But this definition is not intensionally adequate. For there can be *possible* creatures that are born with kidneys but are not born with hearts. Typically, the definitions that the early Nyāya and Vaiśeṣika thinkers offer are not of this kind: since defining characteristics are supposed to distinguish the nature of the instances of the relevant kind, they are typically designed not only to avoid actual counterexamples, but also possible ones.

The Paradox of Definitions

In contemporary Anglophone philosophy, the method of conceptual analysis has been widely discussed: it has both supporters and decriers.³⁵ On one construal, the aim of this method is to capture the meanings or application-conditions of theoretically interesting terms. For instance, a successful conceptual analysis of the word “know” should tell us what the word “know” means. But, if we are competent speakers of English, we are already in a position to know this. Thus, a conceptual analysis that takes the form, “For any agent *S* and any proposition *P*, *S* knows *P* if and only if *S* is *F*” must be *analytic*: its content must be something that we can know to be true simply in virtue of knowing the meanings of the expressions (such as “know” and “*F*”) that constitute it. But, then, such a conceptual analysis will be uninformative. So, the worry is that a conceptual analysis cannot be both successful and informative. But that seems puzzling: we expect successful conceptual analyses to be informative. This problem—often traced back to G.E. Moore—is known as the *paradox of analysis*.³⁶

Some Nyāya-Vaiśeṣika thinkers who were writing towards the end of the first millennium CE realized that the method of definitions faces a similar challenge: the *paradox of definitions*. As we have seen, the early Nyāya-Vaiśeṣika thinkers thought that the method of definitions yields knowledge about the nature of the epistemological or ontological kinds that they were concerned with. This kind of knowledge was supposed to be practically useful not only for achieving ordinary practical aims, but also liberation, i.e., complete freedom from all suffering. The proponent of the paradox of definitions resists this view: she argues

³⁵ For recent defences of conceptual analysis, see Chalmers (1996) and Jackson (1998). For dissent from it, see Devitt (1996), Kornblith (2002), and Papineau (2013).

³⁶ The basic idea underlying the paradox is implicit in Moore (1903), but was formulated clearly by Langford (1942). Wiggins (2007) traces the paradox back to an exchange between Husserl and Frege.

that the method of definitions is either redundant because it does not provide us with any unacquired knowledge, or impossible to successfully pursue because it leads to an infinite regress.

While there are several different ways of articulating this challenge,³⁷ I will focus—for the ease of exposition—on a statement of the challenge found in Bhāsarvajña’s *Nyāyabhūṣaṇa*. Before embarking on the project of defining the Nyāya epistemological kinds, Bhāsarvajña addresses a sceptic who thinks that the method of definitions has no use in a philosophical system like Nyāya. In support of his claim, the sceptic quotes a verse from a Jaina epistemological text called *Nyāyavatāra* by Siddhasena Divākara (5th century CE).

The methods of knowing are well-established, and there is activity based on them. No purpose is apprehended when it comes to stating the defining characteristics of the methods of knowing.”³⁸

On a simple reading, the verse says the following. We are already familiar with what the methods of knowing are, and we rationally engage in physical, mental, and linguistic activities on the basis of our familiarity with these methods. So, an explicit definition of the methods of knowing can only tell us what we already know. But that is pointless.

Bhāsarvajña explains the verse in greater detail:

By means of this verse, the following is being said. First, the target of definition is not created (*kriyate*) [by its defining characteristic]. This is because a cow, etc. is observed to exist at the same time as its defining characteristic such as a dewlap, and because the target of a definition such as the self is eternal. Nor does the target of a definition become an object of awareness (*jñāpyate*) [due to its defining characteristic]. This is because, even when a defining characteristic is not well-established, the awareness of the target of a definition is observed amongst ordinary people, and because the undesirable consequence of a regress will be difficult to avoid.³⁹

There are two options: either the defining characteristic causes the target of the definition to come into existence, or it indicates—or produces an awareness regarding—the target of the definition. The first option is clearly a non-starter. The defining characteristic of a cow—e.g., its dewlap—does not create the cow, because both exist at the same time. And eternal objects like the self cannot be created at all.

³⁷ Later, in this paper, I consider other formulations of this problem given by Śrīdhara, Vyomaśiva, and Udayana.

³⁸ NBhū 6.10-11: *prasiddhāni pramāṇāni vyavahāras ca tatkr̥taḥ | pramāṇalakṣaṇasyoktau jñāyate na prayojanam* || This is verse I.2 in *Nyāyavatāra* (NA 353.7-8).

³⁹ NBhū 6.12-15: *anenaitad ucyate—na hi tāval lakṣaṇena lakṣyaṃ kriyate, gavādeḥ sāsñādīlakṣaṇenaikakālatvadarśanād, ātmādīlakṣyaśya ca nityatvāt | nāpi jñāpyate, lakṣaṇāprasiddhāv api loke lakṣyapratītidarśanāt, anavasthāprasaṅgāś ca durnivārah syāt* |

The second option is subject to a dilemma. Suppose a kind *K* is a theoretically significant kind—like *perception*—that is often invoked (explicitly or implicitly) in ordinary speech and thought. Suppose also that the Nyāya-Vaiśeṣika thinkers are right: the purpose of any definition of *K* is to state a defining characteristic *C* that puts us in a position to distinguish instances of *K* from other objects. There are two options.

Possibility 1. We can identify an object *o* as an instance of a kind *K*, without antecedently being taught what the defining characteristic of *K* is.

Possibility 2. We can identify an object *o* as an instance of a kind *K*, only on the basis of antecedently being taught what the defining characteristic of *K* is.

Possibility 1 seems true of many categories that philosophers are typically concerned with. Even when ordinary people have not been taught any defining characteristic that distinguishes all and only instances of a kind *K* from other objects, they can still reliably classify objects as belonging to that kind *K*. Suppose I am on a trip to the zoo with my nephew. As we are loitering in front of the zebra enclosure, my nephew exclaims, “Look, a zebra!” From this, I can reliably infer that he perceives a zebra in the enclosure. But this judgement need not be based on any further judgement about whether my nephew’s state of awareness possesses the defining characteristic of perception. In fact, I might never have been explicitly told what that defining characteristic is. This suggests that I already (perhaps implicitly) know what perception is, independently of being taught its defining characteristic. So, the problem for the Nyāya-Vaiśeṣika thinkers is this. If *Possibility 1* is true of the Nyāya-Vaiśeṣika epistemological and ontological kinds, then their definitions for those kinds will be useless. Since people already know what those kinds are, providing definitions for them will be redundant.

Turn then to *Possibility 2*. A Nyāya-Vaiśeṣika thinker could argue that even though ordinary people are able to reliably categorise objects under various kinds, they still cannot know what those kinds *exactly* are without being taught definitions. Thus, in the example above, even though I am able to classify states of awareness as states of perception, I do not know what perception precisely is, because I have not been taught a correct definition of perception. Only a correct definition of perception—found in a philosophy textbook—can help me to figure this out. The problem is that this leads to an infinite regress. Any definition of a kind *K*—if it is to be intelligible—must invoke other familiar concepts. Just as a test case, recall the Nyāya definition of perception: namely, that a perceptual knowledge-event “is an awareness which is produced by the contact between a sense and an object, which is non-erroneous, which is non-linguistic and has the nature of determination.” This definition invokes other kind-concepts such as *error*, *arising*, *the senses*, *object*, *determination*, and so on. Once again, we can pose the same dilemma regarding each of the kinds picked out by these concepts. Do we know what these kinds of objects are without being taught their definitions, or not? If we know what they are, then it is useless to offer definitions for them. But it seems arbitrary to say that we do not need definitions for these other familiar kinds, but need a definition for something as familiar as perception. By contrast, if we do not know

what these kinds are and, therefore, stand in need of further definitions that can remove such ignorance, then there will be a regress. This is because the definitions of these kinds—in order to be intelligible—must invoke even further kind-concepts. Then, we can pose the same dilemma once again. And so on *ad infinitum*.

The lesson is clear. If the very early Nyāya-Vaiśeṣika thinkers are right about the purpose of definitions, then either it will be pointless to provide a definition for any familiar kind *K* that we ordinarily think and speak about, or there will be a regress of definitions.

Bhāsarvajña considers a possible Nyāya response to this argument. One might think that a definition is useful just in case it helps us lay down the conditions for correctly using certain linguistic expressions. Ordinarily, we not only speak of the different methods of knowing like perception and testimony, but also of normative relations between such methods, like the relation between what is defeated and its defeater (*bādhyabādhakabhāva*). For instance, if you tell me that Devadatta is at home but then I go to his house and see that he is not, I can say to you: “What you said is defeated by my perception.” Here, I am treating my perception as a defeater (*bādhaka*) for your earlier statement. On a standard view of defeat (*bādha*), a method of gaining awareness can defeat another method of gaining awareness only if the former is a method of knowing. But, if I did not explicitly know what distinguishes perception from other methods of gaining awareness that are not sources of knowledge, I could not use words like “defeat” in a systematically correct manner. That is why it is necessary to know the definitions of the different methods of knowing. More generally, the idea is that our mastery over epistemological vocabulary depends on our explicit grasp of the defining characteristics of the relevant epistemological kinds. That is why learning definitions can be useful for making sure that we are not misusing our epistemological vocabulary.

This response also does not quite succeed.

[A Naiyāyika:] Moreover, the linguistic activity of treating something as defeated or as a defeater—which takes the form of applying and not applying [certain linguistic expressions]—is not established without a defining characteristic for the methods of knowing and so on.

[Reply:] No, because even that [activity] is established. Even [the activity] that is characterised by [expressions like] “defeated” and “defeater” is in fact established amongst ordinary people.

[A Naiyāyika:] A linguistic label [such as “defeated” or “defeater”] is not well-established in a properly restricted manner (*niyamena*).

[Reply:] No, because it is well-established. That is to say: even a woman or a *śūdra* is observed to be saying, “Your statement is defeated by perception itself,” and so on.

Therefore, a defining characteristic of the methods of knowing, etc. serves no purpose.⁴⁰

The Nyāya response here assumes that ordinary people are liable to misuse epistemological terms like “defeat” unless they have an explicit grasp of the defining characteristics of methods of knowing such as perception. But that is wrong. Ordinary people correctly engage in the linguistic practice of treating something as defeated or as a defeater without explicitly knowing any such defining characteristic. As Bhāsarvajña tells us, even women and people of lower castes accurately speak of perception, testimony and defeat, despite being deprived of the privilege of being taught the definitions of these categories. Therefore, to engage in linguistic practices of the sort described above, an agent does not need to explicitly learn the definition of any method of knowing. They only need to have the linguistic competence to correctly apply the relevant linguistic expressions.

The similarity between this problem and the paradox of analysis is worth noting. The paradox of analysis is based on the claim that a successful conceptual analysis of a term cannot be informative. By contrast, the problem that Bhāsarvajña develops here is based on the idea that the method of definitions is either redundant because a definition tells us what we already know, or impossible to successfully pursue because it leads to a regress. In either case, the method is unfit for use. Yet, defenders of the method—the Nyāya-Vaiśeṣika thinkers—would have us believe that definitions are useful. This is the paradox of definitions.

In the next three sections, we shall consider three Nyāya-Vaiśeṣika solutions to this paradox. All three solutions are motivated by the same idea. The addressee of a philosophical text like the *Nyāyasūtra* or the *Vaiśeṣikasūtra* does not start out with a blank slate: she is familiar with the epistemological and ontological kinds and terms that are discussed in these texts, but that awareness is too unspecific for her to *specifically* know what distinguishes these epistemological or ontological kinds from one another, or how the relevant terms are exactly to be used. Thus, the purpose of definitions is to remove such metaphysical or metalinguistic ignorance.⁴¹ This idea is fleshed out through three distinct approaches: (a) the *refined co-extensive property strategy*, (b) the *distinguishing property strategy*, and (c) the *metalinguistic strategy*. The *refined co-extensive property approach* is adopted most prominently by Vācaspati Miśra (9th century CE) and developed by Vyomaśiva and Śrīdhara (both active in the 10th century CE) as well as Udayana. The *distinguishing property strategy* is pursued by Bhāsarvajña alone. Finally, the *metalinguistic strategy* is presented by Vyomaśiva, Śrīdhara, and Udayana, as an alternative to the refined co-extensive property strategy.

⁴⁰ NBhū 6.16-20: *atha pravṛttinivṛttirūpaḥ śābdo bādhyabādhakavyavahāraś ca pramāṇādiṣu lakṣaṇam antareṇa na sidhyatīti, na; tasyāpi siddhatvāt | loke bādhyabādhakalakṣaṇo 'pi siddha eveti | samjñā niyamenāprasiddheti cet, na; prasiddhatvāt | tathā hi strīśūdrādayo 'pi bruvanto dṛśyante—tvadīyaṃ vacaḥ praṭyakṣeṇaiva bādhyata ity evamādi | tasmāt pramāṇādīlakṣaṇaṃ nisprayojanam iti |*

⁴¹ Similar solutions to paradoxes of inquiry were discussed by both Kumārila Bhaṭṭa (7th century CE) and Śaṅkara (8th century CE). For discussion, see Carpenter and Ganeri (2010).

The Refined Co-Extensive Property strategy

Amongst the three strategies, the refined co-extensive property strategy is the most conservative: it attempts to preserve almost everything that the early Nyāya-Vaiśeṣika thinkers say about definitions, while making a further claim about the epistemic role of definitions.

A. Purpose: Removing Metaphysical Ignorance

In his sub-commentary *Nyāyavārttikatārparyatīkā* on the *Nyāyasūtra*, Vācaspati Miśra offers an interpretation of Uddyotakara's view that the purpose of a definition is to distinguish objects of a certain kind from other objects of similar and dissimilar kinds. Vācaspati takes this to mean that the point of a definition of an epistemological or ontological kind is to dispel some confusion (*vyāmoha*) about the nature of that kind.

Certainly, a person, who due to some confusion is incapable of apprehending the nature of that [perception] which is distinguished from objects of similar and dissimilar kinds, is made aware by means of this defining characteristic, "Perception has this sort of a defining characteristic."⁴²

In his commentary *Nyāyakandalī* on Praśastapāda's *Padārthadharmasaṅgraha*, Śrīdhara builds on this idea, while explaining Praśastapāda's definition of earth in terms of earthhood.

Following the order of enumeration, Praśastapāda has initially stated the dissimilarity of earth: "**Earth [is dissimilar from other entities], because it is connected to earthhood.**"...Alternatively, with respect to someone who hears the expression "earth" in ordinary usage but is not aware what sort of nature (*svarūpa*) it has, a unique property [of earth] is being stated for the sake of conveying its nature that is distinguished from objects of its own kind and of other kinds: "That which is designated as 'earth' in ordinary usage is earth, because it is connected to earthhood." This is just as Uddyotakara has said: "The purpose of a defining characteristic is to distinguish [something] from objects of similar and dissimilar kinds."⁴³

Śrīdhara is imagining an agent who has heard people use the expression "earth," but does not quite know what sort of nature objects of that kind have. A definition of earth can remove such ignorance. On the basis of a defining characteristic like earthhood, a person who is ignorant about the nature of earth can come to understand how its nature is different from the nature of objects of similar and dissimilar kinds. Thus, for both Vācaspati and Śrīdhara, one

⁴² NVTI 86.8-10 ad NS 1.1.4: *yah khalu kutaścīd vyāmohāt samānāsamānajātīyavyāvṛttau tadrūpaṃ na śaknoti grahītum, so 'nena lakṣaṇena bodhyate | evamlakṣaṇakaṃ pratyakṣam iti |*

⁴³ NK 84.8, 84.13-15, 85.6: *uddeśakramenaṃ pṛthivyāḥ prathamam vaidharmyam āha— pṛthivītvābhisambandhāt pṛthivīti | yo vā pṛthivīti loke śṛṇoti na jānāti tasyāḥ svarūpaṃ kīdr̥g iti, tam prati tasyāḥ svaparajātīyavyāvṛttasvarūpapratipādanārtham asādhāraṇo dharmāḥ kathyate, yā loke pṛthivīti vyapadiśyate sā pṛthivī, pṛthivītvābhisambandhāt | yathā ' 'hoddyatakarah— 'samānāsamānajātīyavyavacchedaḥ lakṣaṇārthaḥ' iti |*

function of any definition for any kind *K* is to remove *metaphysical ignorance* about the nature (*svarūpa*) of *K*.

Other Vaiśeṣika commentators, such as Vyomaśiva and Udayana, make Śrīdhara’s idea more precise. On their view, a definition of a kind *K* earns its keep within a theoretical text only insofar as it helps us to *inferentially* distinguish instances of *K* from objects of other kinds. Both Vyomaśiva and Udayana take Praśastapāda to be implicitly stating an inference of the following form:

- (1) *The Thesis (pratijñā)*. Earth is distinct from water and so on.
The Statement of the Reason (hetu). For it possesses earthhood.
The Illustration (udāharāṇa). Whatever is not distinct from water and so on, lacks earthhood, just like water.
The Application (upanaya). Earth does not lack earthhood.
The Conclusion (nigamana). Therefore, it is distinct from water and so on.

In this inference, the target property (*sādhya*)—i.e., the property to be proved—is distinctness from water and so on. The site (*pakṣa*)—i.e., the place where the target property is to be established—is earth. By contrast, the reason (*hetu*)—i.e., the evidence on the basis of which the target property is to be proved—is the defining characteristic of earth, namely earthhood.⁴⁴

In his sub-commentary *Nyāyavārttikatātparyapariśuddhi* on Vācaspati’s commentary, Udayana notes that, if an agent is to draw an inference like this, she cannot be completely mistaken about or unaware of what earth is.

Still, who will be taught by means of this defining characteristic? In reply, [Vācaspati] has said, “**Certainly, a person who...**” And it is not the case that everyone is confused, on account of which there would be no distinction between someone to be taught and someone who teaches. Neither is it the case that there is a confusion with respect to everything, on account of which there would be a regress. Nor is it the case that everything is a cause of confusion, on account of which there would be no awareness. Nor is it the case that there an absence of awareness with regard to everything, on account of which there would be the problem of the site’s being unestablished (*āśrayāsiddhi*). This is the import.⁴⁵

⁴⁴ VV 56.1-4: “Earth is the property-bearer. The target property is ‘...is distinct from other entities,’ since it is connected to earthhood. But that which isn’t distinct from other entities isn’t connected to earthhood, e.g., water and so on. And it is not the case that earth is not connected in that manner to earthhood. Therefore, it is distinct from other entities” (*pr̥thivī dharmiṇī itarebhyo bhidyata iti sādhyo dharmah, pr̥thivītvābhisambandhāt, yas tv itarasmān na bhidyate na cāsau pr̥thivīvena sambaddho yathodakādi, na ca tathā pr̥thivīvena nābhisambaddhā pr̥thivī, tasmād itarebhyo bhidyata iti*). See also Udayana’s presentation of the same inference in the passage quoted in fn. 50.

⁴⁵ NVTP 124.1-5 ad NS 1.1.4: *kaḥ punar anena lakṣaṇena pratipādayiṣyata ityata āha--yaḥ khalv iti | na ca sarve vyāmūdhāḥ, yena pratipādyapratipādakavyavasthā na syāt | na ca sarvatra vyāmoho yenānavasthā syāt, na ca sarve vyāmohahetavo yenāpratipattiḥ syāt | na ca sarvāpratipattiḥ, yenāśrayāsiddhiḥ syād iti bhāvah ||*

Udayana's starting point is an anti-sceptical assumption: while some people might be confused about some matters, not everyone is confused about everything.⁴⁶ All of us possess some knowledge about some matters. On Udayana's view, a definition of a kind *K* removes confusion about the nature of *K* by exploiting the background knowledge that a confused agent already possesses. This may not only include background knowledge about other kinds, but also about *K* itself. Udayana's last remark brings out why such background knowledge is necessary: if an agent had no idea what the kind *K* was, they could not treat all instances of *K* as the site of their inference; the site would be unestablished for them. But this is not the case.

Both Vyomaśiva and Udayana expand on this theme in the context of addressing a version of the paradox of definitions. While glossing Praśastapāda's definition of earth in terms of earthhood, Vyomaśiva writes:

Is it the case that earth, which is distinct from other entities and established by a method of knowing, is made into the site? Or is it simply not established? If it is not established, its being made a site is inappropriate. If it is established as distinct [from other entities] by a method of knowing, then [making it the site of an inference] is futile. If [it is said that] it is apprehended as non-distinct, then that is wrong. This is because the following is observed: the nature of the entities is distinct [from other entities], and property-bearers [i.e., sites of inferences] are apprehended in that form [i.e., as distinct] (*tena ca vapuṣā*) but not in any other form.⁴⁷

Udayana repeats the same challenge:

[The opponent:] If the nature of earth is established, what is the point of a defining characteristic? This is because, if it is established, then it would be futile to establish it, and because, if it is unestablished, the locus [of the defining characteristic] will be unestablished.⁴⁸

⁴⁶ This anti-sceptical assumption may be motivated by the Nyāya theory of content itself. If we were confused about everything, then we could not be aware of anything. Our capacity to be aware of objects itself depends on our having knowledge of those objects. For the Naiyāyikas, a state of awareness cannot be directed at an object—a particular or a property—that does not exist. Even in a case where an agent misascribes a property to a particular to which it does not belong, the agent's erroneous awareness is directly at an existent particular and an existent property (as well as an existent relation that could connect the relevant property to certain particulars). If I misperceive a mother-of-pearl as a piece of silver, I may misascribe the property of silverhood to the mother-of-pearl. But both the mother-of-pearl and the silverhood exist. For the Naiyāyikas, it is possible for an agent to be in such states of error only because they have undergone other knowledge-events, where they have encountered instances of the relevant property at other times or places and have acquired knowledge of that property. So, unless I had veridically perceived silverhood elsewhere, e.g., in a shop that sells silver cutlery, I could not now take the mother-of-pearl before me as a piece of silver.

⁴⁷ VV 57.1-4: *nanu kim itarasmād vyāvṛttā pramāṇasiddhā pṛthivī pakṣīkriyate, atha aprasiddhaiveti? yadi aprasiddhā, pakṣīkaraṇam ayuktam | atha pramāṇasiddhā vyāvṛttatayā, tarhi vyartham | athāvyāvṛttatayopalabdā, tad asat | vyāvṛttam hi padārthānām svarūpam, tena ca vapuṣā gṛhyamāṇā dharmiṇo na rūpāntareṇeti drṣtam |*

⁴⁸ Kir_A 29.1-2: *nanu pṛthivī svarūpasiddhu kiṃ lakṣaṇena? siddhe [siddhau] sādhanasya vaiyarthiyāt, tadasiddhau āsrayāsiddheḥ |*

The opponent’s worry is this: someone who makes an inference like (2) and thereby learns about the distinctness of earth from other entities either already knows what the nature of earth is or does not. If she knows what the nature of earth is, then she knows that earth is distinct from water and the like. For (as Vyomaśiva explains) if someone grasps the nature of the earth, she must grasp it as being distinct from other entities. So, inferring this fact would be futile. By contrast, if the agent does not know what the nature of earth is, then she is unfamiliar with the very site of her inference, i.e., earth. So, the inference will suffer from the fault of the site’s not being established.

Vyomaśiva’s response to this challenge is illuminating:

This is not so, because earth is made the site [of the inference] in virtue of its being well-established amongst ordinary people. To explain, the following is unrefuted (*abādha*): that object regarding which there is a use of [the expression] “earth” amongst ordinary people has been made the site.⁴⁹

Similarly, Udayana says:

No. For, even though the nature [of earth] is well-established, its distinctness from other entities is to be established. To explain: “earth is distinct from water and so on, because it possesses earthhood. However, that which is not distinct from other [such] entities is not earth, e.g. water, etc. But it is not the case that this [earth] is not earth. Therefore, it is distinct from other entities.”⁵⁰

Both Vyomaśiva and Udayana grant that, before we make an inference like (1), we must be familiar with its site. So, whatever confusion we have about earth must involve only partial ignorance about its nature, and not complete ignorance. For example, we might have noticed that people use the word “earth” to talk about mundane items, like pots and plates, that are made of clay. But we may not know whether earth is distinct from objects of other kinds: namely, the other eight kinds of substances beginning with water, and the five other ontological categories such as qualities and motions. Here, ordinary characterisations of earth in terms of perceptible qualities like odour are not helpful: after all, we often treat both water and wind as fragrant. So, we might wonder whether earth is distinct from these thirteen kinds of entities. Here, a defining characteristic of earth—e.g., earthhood—can help us. Since it belongs to all and only possible instances of earth, it can serve as a reason in an inference which shows that instances of earth are distinct from such other objects. But we cannot draw this inference unless we are antecedently familiar with at least some instances of earth. Thus,

⁴⁹ VV 57.4-6: *naitad evam | lokaprasiddhivaśena pṛthivyāḥ pakṣīkaraṇāt | tathā hi, yatra janānām pṛthivīti vyavahārah sā pakṣīkṛtety abādhaḥ |*

⁵⁰ Kir_A 29.2-3: *na; svarūpasiddhāv apītaravyavacchedasya sādhyamānatvat | tathā hi ‘pṛthivī abādibhyo bhidyate pṛthivītvāt | yat punar itarebhyaḥ na bhidyate nāsau pṛthivī, yathā ‘bādi | na ceyam na pṛthivī, tasmād itarebhyo bhidyate |* Note that, in the Ahmedabad edition of the text (to which I am referring), there is an extra “na” after “itarebhyo” in the last line. This is surely a mistake, since the conclusion of the argument is supposed to be that earth is distinct from other entities. The mistake is absent from the Calcutta edition of the text: see Kir_C 190.3.

a defining characteristic of a kind *K*—insofar as it serves as a reason in an inference like (1)—takes us from a state of general awareness about the nature of *K* to a state of specific awareness regarding its nature.

This yields a solution to the paradox of definitions. The defenders of this view will agree that *Possibility 1* is correct: even without having explicitly learnt any definition of a kind *K*, we are indeed able to classify objects as instances of *K*. However, our awareness regarding the kind *K* in such a case may be *general*: we may have observed people using the relevant linguistic expression to pick out familiar objects, but may be confused about whether instances of *K* are distinct from objects of other kinds. A definition is useful precisely because it fills in this lacuna in our knowledge.

B. Mechanism: Defining Characteristics as Negative-Only Reasons

This is not the end of the story: both Vācaspati and Udayana have more to say about the mechanism by which a definition plays its epistemic role. While commenting on Uddyotakara, Vācaspati says that a definition is a statement of a negative-only reason (*vyatirekīhetuvacana*).⁵¹ Mirroring Vācaspati's claim, Udayana writes in *Kiraṇāvalī*:

A defining characteristic is just a particular kind of negative-only reason. And, thus, our teachers have said, “The purpose of a definition [or a defining characteristic] is to distinguish [something] from objects of similar and dissimilar kinds.”⁵²

To understand why a defining characteristic is a negative-only reason, compare (1) with a different inference.

Suppose I see smoke coming out of a distant hill. I may then remember what I have learnt from earlier experiences: wherever there is smoke, there is fire. So, I can infer that there is fire on the hill. Here, the inference can be stated as follows.

(2) *The Thesis*. The hill contains fire.

The Statement of the Reason. For it contains smoke.

The Illustration. Whatever contains smoke contains fire, e.g., a kitchen.

The Application. This hill possesses smoke.

The Conclusion. So, it possesses fire.

In this case, the target property is fire, the reason is smoke, and the site is the hill. My inference is based on two bits of knowledge. The first is my knowledge that the reason is a property of the site. In this case, I know by perception that the smoke is present on the hill. The second is an inductive generalization that captures a relation of pervasion (*vyāpti*)

⁵¹ See the passage quoted in fn. 52.

⁵² Kir_A 29.8-9: *kevalavyatirekīhetuviśeṣa eva lakṣaṇam | tathā cācāryāḥ 'samānāsamānajātīyavyavacchedo lakṣaṇārthaḥ' iti* | Udayana doesn't tell us who “*ācāryāḥ*” (translated above as “teachers”) refers to. But my assumption is that, following Śrīdhara, he is simply referring to Uddyotakara.

between the reason and the target property: the generalization that the reason is pervaded, i.e., invariably accompanied, by the target property. Here, I know from my earlier experiences that, wherever there is smoke, there is fire. How do I know this? Presumably, I have found that the reason is robustly correlated with the target property: namely, that I have never observed the reason to be present anywhere without the target property. Such cases of correlation (*sahacāra*) will include cases of positive correlation (*anvayasahacāra*) where the reason and the target property are present together, e.g., in the kitchen where there is both smoke and fire. And they will include cases of negative correlation (*vyatirekasahacāra*) where the target property is absent and so is the reason, e.g., a cold lake that lacks both smoke and fire.

To prevent circular reasoning, these cases of correlation must be distinct from the site. We cannot rely on the joint presence of fire and smoke on the hill to learn the generalization that smoke is always accompanied by fire, and then use that generalization to derive the conclusion that there is fire on the hill. Luckily, in the case of (2), we can find cases of both positive and negative correlations outside of the site. That is why the reason in that case—e.g., smoke—is called a *positive-and-negative reason* (*anvayavyatirekīhetu*). Since cases of positive correlation are available for use in the case of a positive-and-negative reason, the agent can look at such cases and directly learn that the target property pervades, or invariably accompanies, the reason: “Whatever contains smoke contains fire.” Call such a relation of pervasion that holds between two positive entities—the reason and the target property—a relation of *positive pervasion* (*anvayavyāpti*).

The problem is that, in the case of inferences like (1), a suitable case of positive correlation outside of the site cannot be found. Since earthhood is a distinguishing feature of all instances of earth, any place where the target property and the reason are jointly present will be an instance of earth. So, such a case of positive correlation will not be distinct from the site. Thus, in this case, we must learn the relevant inductive generalization purely on the basis of cases of negative correlation, cases where the reason and the target property are both absent. The Naiyāyikas call any reason, whose relation of pervasion is known on the basis of negative correlations, a *negative-only reason* (*kevalavyatirekīhetu*). Since cases of positive correlation are not available for use in the case of a negative-only reason, the agent can only look at cases of negative correlation and learn that the absence of the reason pervades, or invariably accompanies, the absence of the target property. In this case, the generalization will take the following form: “Whatever is not distinct from water and so on does not possess earthhood.” Since such a relation of pervasion holds between two absences—the absence of a target property and the absence of a reason—it is called a relation of *negative pervasion* (*vyatirekavyāpti*).

Thus, the proposal about definitions, endorsed by Vācaspati and Udayana, amounts to this.

The Refined Co-Extensive Property Strategy. The purpose of a definition is to lay down a characteristic *C* of instances of *K*, which:

- (i) belongs to all and only instances of *K*, and
- (ii) can serve as a negative-only reason in an inference that proves the distinctness *all* instances of *K* from objects of other kinds.

Here, clause (i) roughly captures the same idea that underlies the *co-extensive property strategy*. But clause (ii) adds something new. For Vācaspati and Udayana, a defining characteristic *C* of instances of a kind *K* also must play an epistemic role: it must serve as a negative-only reason in an inference that proves the distinctness of *all* instances of *K* from objects of other kinds. This proposal suffers from a number of technical problems that I discuss in the appendix to this paper. But let us consider one explanatory virtue of this account.

Vācaspati argues that the thesis that defining characteristics are negative-only reasons helps us make sense of the sequence in which the *Nyāyasūtra* and its commentaries treat the subject-matter of Nyāya. A negative-only reason is non-defective—i.e., capable of proving something—only if it possesses four characteristics. First, it must be present in the site (*pakṣadharmatā*). Second, it must be absent from all dissimilar sites, i.e., places from which the target property is absent (*vipakṣāvṛttitva*). Third, the reason must not be defeated (*abādhitatva*): the absence of the target property from the site must not be established by some other method of knowing. Finally, the reason should not be counterbalanced (*satpratipakṣa*): there shouldn't be a competing reason of equal epistemic strength that can yield the opposite conclusion that the target property is absent from the site. According to Vācaspati, the three stages in which the *Nyāyasūtra* and its commentaries treat its subject-matter—enumeration, definition, and examination—are necessary to make sure that the defining characteristic of any kind *K* (which is listed in the text) has all these features and therefore can prove that instances of *K* are distinct from objects of other kinds.

To explain, a definition is simply the statement of a negative-only reason. For it establishes the target of the definition by distinguishing it from objects of similar and dissimilar kinds. And it is not the case that the property of [the defining characteristic's] being present in the site is established without an observation of the property-bearer [i.e., the site]. So, to present those [property-bearers], the property-bearers are enumerated merely by name. Moreover, even though the property-bearers are indeed enumerated in each definition, nevertheless they are correctly apprehended also on the basis of a sentence that conveys the relation of the treatise [with its purpose]. So, the enumeration is also appropriate. Furthermore, it is not the case that an unexamined reason is a negative-only reason that has the four characteristics [of a non-defective reason]. Therefore, an examination too must necessarily be carried out.⁵³

⁵³ NVT 77.12-17: *tathā hi lakṣaṇam nāma vyatirekīhetuvacanam | tad dhi samānāsamānajātīyebhyo vyavacchidya lakṣyaṁ vyavasthāpayati | na cāsya dharmidarśanam antareṇa pakṣadharmatā sidhyatīti tadupadarśanāya nāmadheyamātreṇa dharmiṇām uddeśaḥ | yady api ca pratilakṣaṇam uddiṣṭā eva dharmiṇaḥ, tathāpi śāstrābhisaṁbandhaparād api vākyāt samadhigamyanta ity uddeśo 'py uktah | na cāparīkṣito hetur vyatirekī catūruḥo bhavatīti parīkṣā 'py avāśyaṁ kartavyā |*

We can unpack the idea as follows. To recognize that the defining characteristic for a kind *K* satisfies condition (i), the addressee of the definition must already be familiar with the site, i.e., the kind *K*. Otherwise, she would not be able to determine whether the defining characteristic is present in the site. That is why the enumeration of the different theoretically significant kinds—which will be defined later in the text—is necessary at the beginning of a theoretical text (when its connection with its purpose is being described). Analogously, to show that a defining characteristic satisfies conditions (i)-(iv), it is important to test the definition in light of counterexamples, arguments, and other relevant bits of evidence. Counterexamples are necessary to check whether the defining characteristic for *K* is present in all and only instances of *K*. If it were absent from some or all instances of *K*, then it would violate condition (i) since it would not be present everywhere in the site. As a result, it would suffer from the fault of either being unestablished by its nature (*svarūpāsiddhi*) or being partially established in the site (*bhāgāsiddhi*). If the defining characteristic were present in objects other than instances of *K*, it would violate condition (ii), because it would be present in something that is *not* distinct from objects of other kinds. So, it would suffer from the fault of deviating from the target property (*vyabhicāra*). Finally, arguments and other relevant bits of evidence are necessary to check whether the defining characteristic satisfies conditions (iii) and (iv). If there were perceptual or testimonial evidence that decisively shows that instances of *K* are not distinct from other kinds of entities, then the defining characteristic would be defeated (*bādhita*). Similarly, if there were an equally strong argument for the conclusion that instances of *K* are not distinct from objects of similar and dissimilar kinds, then the reason would be counterbalanced (*satpratipakṣa*). Therefore, the idea that a defining characteristic functions as a negative-only reason sheds light on the three-fold structure of theoretical texts like the *Nyāyasūtra*.

The Distinguishing Property Strategy

Amongst three Nyāya-Vaiśeṣika strategies for solving the paradox of definitions. Bhāsarvajña's distinguishing property strategy is perhaps the most radical. While he agrees to some extent with other Nyāya-Vaiśeṣika thinkers about the purpose of definitions, he rejects the co-extensive property strategy.

A. Purpose: Removing Uncertainty about Kind-Membership

Vācaspati, Vyomaśiva, Śrīdhara, and Udayana think that the function of a definition of a kind is to remove metaphysical ignorance about that kind. Bhāsarvajña begins from a similar idea: the purpose of a definition is to remove uncertainty about kind-membership.

Begin with Bhāsarvajña's reply to the paradox of definitions.

First, in response to this position that [the target of a definition] arises [from its defining characteristic], the refutation is just [our] non-acceptance [of this position]. However, an apprehension is indeed observed with respect to a cow, etc. through the

mediation of a defining characteristic. To explain: in virtue of perceiving a unique defining characteristic in many cows, a person ascertains his own cow, but someone who is unfamiliar with the defining characteristic is uncertain. Thus, [similar] examples should be noted everywhere, even in the case of specific kinds of vegetables, minerals, animals, jewels, and so forth
(*sthāvarajaṅgamaratnādiviśeṣesu*).⁵⁴

If an agent explicitly grasps a defining characteristic *C* that distinguishes instances of a kind *K* from other objects, then she can use *C* to correctly ascertain (in some contexts) that an object *o* is an instance of *K*. For example, having observed many cows, I might come to explicitly know that having a dewlap, etc. is the defining characteristic of cows. So, I should be able to correctly determine that the animal in my own stable is a cow by looking at its dewlap, etc. But someone who has not encountered many cows will be unfamiliar with such a defining characteristic. So, she can be uncertain about the same matter. But, if this person were now told that only cows have dewlaps, she could indeed correctly conclude that the animal in my stable is a cow using that defining characteristic. This lends support to the thesis that definitions are useful because they can help us to resolve uncertainty about kind-membership.

Bhāsarvajña is careful to emphasize that this proposal is not subject to a regress worry.⁵⁵ This is because a definition is not *always* required to resolve uncertainty about kind-membership. Take a stock example of uncertainty. Out for a walk at dusk, I see an object of a certain height at a distance. Since it is dark, I cannot tell whether it is a person or tree-trunk. So, I am uncertain about whether it is a person or a tree-trunk. But, as I approach the object, I notice that the object has a crooked shape and has branches and leaves. Since I know that these features belong only to tree-trunks and not to persons, I can conclude that it is a tree-trunk. Here, I resolve my uncertainty on the basis of my background knowledge that certain specific characteristics (*viśeṣa*)—such as crookedness, having branches and leaves, and so on—belong only to tree-trunks and not to persons. But this does not mean that such background knowledge (or awareness) of specific characteristics is always required for resolving uncertainty. In this very example, to ascertain that the object before me is crooked, I do not need to check whether some further specific characteristic of crooked objects is present in the object before me or not; I can just *see* that the object before me is crooked.

⁵⁴ NBhū 7.1-4: *atra tāvad utpattipakṣe 'nabhyupagama eva parihārah | pratipattis tu lakṣaṇadvāreṇa drṣṭaiva gavādau | tathā hi—bahuṣv api goṣv asādhāraṇalakṣaṇadarśanenātmiyāṃ gāṃ niścinoti, lakṣaṇānabhijñās tu sandihyata iti | evaṃ sarvatra sthāvarajaṅgamaratnādiviśeṣeṣv apy udāharaṇaṃ draṣṭavyam |*

⁵⁵ NBhū 7.4-8: “[The opponent:] Given that a defining characteristic too is ascertained on the basis of another defining characteristic, there will be a regress. [Reply:] For the rule [that a defining characteristic is required for generating certainty about kind-membership] is accepted only with respect to matters that are subject to uncertainty. The following rule is accepted: “Only with respect to a thing about which there is uncertainty, there is certainty on the basis of the apprehension of a defining characteristic.” And it is not the case that there is uncertainty with respect to everything. For no uncertainty arises regarding the crookedness and other specific characteristic of a tree-trunk in the same way as there is uncertainty with respect to that tree-trunk.”
(*lakṣaṇasyāpi lakṣaṇāntareṇa niścaye saty anavastheti cet, na; sandehaviṣaya eva niyamābhyupagamāt | yatraiva vastuni sandehas tatraiva lakṣaṇopalambhapūrvako niścaya ity ayaṃ niyamo 'bhyupagamyate | na ca sarvatra sandeho 'sti, na hi sthāṇvādiṣv iva vakrādiviśeṣeṣv api sandeha utpadyate |*)

Still, one might wonder why the regress stops at this stage. How can I be certain that an object before me is crooked, unless I also antecedently know that the object before me possesses a specific characteristic that sets crooked objects apart from straight ones? And, if such background knowledge regarding specific characteristics were always necessary for generating certainty about kind-membership, would a regress not follow? Bhāsarvajña's response to this worry is flat-footed: he thinks that this kind of endless uncertainty is not supported by what we observe.

Moreover, if that kind of uncertainty were accepted, there would be a conflict with observation.

[The opponent:] Why is there uncertainty only with respect to the tree-trunk, etc. not with respect to sequences of specific characteristics like the crookedness and so on?

[Reply:] Because there is a reason for uncertainty in the case of the tree-trunk, etc., but there is no reason for uncertainty in the other cases.

[The opponent:] No. For, even with respect to this, the objection does not disappear. Why is there no reason for uncertainty also in the case of those specific features such as crookedness?

[Reply:] The response to this should be stated by appealing to the natures of things, which are thus. But we—who describe objects as they are observed—do not deserve any reproach.⁵⁶

When I see a crooked tree-trunk from a short distance, I can see that it is crooked, without any prior knowledge about what distinguishes crooked objects from straight ones. There is no regress here. The opponent might be sceptical. Bhāsarvajña seems to be committed to two claims about this example. The first is that, when I do not see the specific characteristics of the tree-trunk, I can be (rationally) uncertain as to whether the object I see at a distance is a tree-trunk. The second is that, when I come closer to the object, I can determine that it is crooked, without noticing in it any further specific feature that distinguishes crooked objects from straight ones. What explains the difference between the two cases? Bhāsarvajña's response is that the Naiyāyika can only respond to this by appealing to the “natures of things,” and do not deserve to be blamed for describing things as they are observed.

This might appear unsatisfactory at first glance, but I think there is a deeper moral here. The sceptic about the method of definitions thinks that, in order to categorise an object *o* as belonging to a kind *K*, an agent must explicitly know beforehand (i) that a certain

⁵⁶ NBhū 7.8-13: *tadabhyupagame ca pratyakṣādivirodhaḥ syāt | atha kasmāt sthāṇvādiṣv eva sandeho bhavati, na vakrādiviśeṣaparamparāsv apīti ? sthāṇvādiṣu sandehakāraṇasadbhāvād itaratrāsadbhāvād iti | na, atrāpi paryanuyogānivrteḥ, kasmāt tadviśeṣaparamparāsv api sandehakāraṇam na bhavati ? vastusvabhāvair atrottaram vācyam | ye evaṃ bhavanti | vyaṃ tu yathādṛṣtam artham bruvāṇā nopālbham arhāmaḥ |*

characteristic *C* is what distinguishes instances of *K* from objects that are not instances of *K* and (ii) that *o* possesses *C*. Bhāsarvajña denies this. He claims that our ability to categorise objects need not depend on any such explicit knowledge of defining characteristics. To visually categorise an object as crooked, I do not need to explicitly know what distinguishes crooked objects from straight ones. These are just observed facts about our capacities of categorisation. So, the regress worry does not arise.

The sceptic may concede that the regress can be blocked in this way in ordinary cases of this sort. But he may claim that it remains difficult to justify the use of the method of definitions in philosophical contexts. In our ordinary mental, linguistic, and physical activities, we presuppose the existence of the epistemological kinds, such as methods of knowing, etc., that Nyāya teaches us about. Since those activities are successful, it is undeniable that we are independently familiar with these epistemological kinds. So, in principle, we could independently investigate and learn about the nature of these epistemological kinds even without relying on a theoretical text like the *Nyāyasūtra*. Thus, the *Nyāyasūtra* only provides us knowledge that is available through other sources and therefore engages in a redundant form of repetition (*anuvāda*).

[The opponent:] Even in the absence of a treatise (*śāstra*), the defining characteristic of a method of knowing and so on would indeed be well-established. If that were not the case, how could ordinary people engage in activities (*vyavahāra*) pertaining to the methods of knowing, etc.? Therefore, a treatise for the sake of [laying down] such defining characteristics is useless.⁵⁷

Bhāsarvajña is willing to accept that the *Nyāyasūtra* indeed engages in repetition. But he insists that such repetition is necessary for removing error.

[Reply:] No, because the repetition is done for the sake of removing error. Certainly, since the error-ridden people who adhere to other views state those defining characteristics in their respective inaccurate ways (*anyathā 'nyathā*), ordinary people too disagree about the methods of knowing and the like. Therefore, by repeating what is in fact a well-established defining characteristic, the error of those people is removed, just as the error of someone who undergoes an erroneous perception of their father is removed through the repetition of a sign of that [father].⁵⁸

Here, Bhāsarvajña grants that the defining characteristics of Nyāya epistemological kinds are independently (perhaps, implicitly) known to people. So, the Nyāya texts are simply repeating information that is independently available through other sources. But this kind of repetition is useful because it alleviates philosophical misconceptions and disagreements.

⁵⁷ NBhū 10.1-2: *śāstram antareṇāpi pramāṇādilakṣaṇam prasiddham eva | anyathā laukikāḥ katham pramāṇādivyavahāram kurvanīty ato 'narthakaṃ tadarthaṃ śāstram iti cet...*

⁵⁸ NBhū 10.2-5: *na, bhrāntinivṛttaye 'nuvādakaraṇāt | darśanāntarābhiniviṣṭaiḥ khalu bhrāntair anyathā 'nyathā lakṣaṇābhidhānena loke 'pi pramāṇādiṣu viśamvādyate, ataḥ prasiddham eva lakṣaṇam anūdya tadbhramo nivarttyate bhrāntapitr darśanasya taccihṇānuvādena bhramanivṛttivat...*

Exponents of other philosophical traditions—such as the Buddhists and Mīmāṃsakas—define familiar epistemological kinds in their respective erroneous ways. Since these thinkers are influential, ordinary people are seduced by their arguments into adopting their erroneous views. So, they come to disagree about the nature of these familiar epistemological kinds. Repeating the already well-known defining characteristics of the methods of knowing, etc. can be a useful antidote to such misconceptions and disagreements. Bhāsarvajña offers the analogy of a child who misperceives her father. There is a sense in which the child is familiar with her father and his distinguishing marks. But, due to forgetfulness or inattention, she may mistake someone else to be her father. The easiest way to dispel such error is simply to remind the child of the distinguishing marks of her father.

Bhāsarvajña offers two kinds of examples to illustrate his point further.⁵⁹ First, in some cases, familiar defining characteristics need to be *re-asserted* to dispel error. For example, the Buddhists think that Nyāya arguments in favour of the existence of the self (*ātman*) are defective inferences. By contrast, the Mīmāṃsakas think that postulation (*arthāpatti*)—which, on the Nyāya view, can be reduced to inference (*anumāna*)—is a distinct method of knowing. For Bhāsarvajña, this only shows that both the Buddhists and the Mīmāṃsakas have misunderstood the nature of inference. To remove such mistakes, it is necessary to restate the definition of inference, even though that may already be (implicitly) known to us. Second, in other cases, competing definitions of the methods of knowing, proposed by other philosophers, must be *refuted*. For example, the Buddhists think that their own arguments against the existence of a self, or against the persistence of objects through time, are non-defective inferences. By contrast, they think that testimony (*śabda*)—which, on the Nyāya view, is not reducible to any other method of knowing—is reducible to inference. Bhāsarvajña takes these claims to be symptoms of error: the Buddhists have adopted an incorrect conception of inference and testimony. To refute this view, it is necessary to refute the Buddhist definitions of these methods of knowing. As Bhāsarvajña goes on to note, this point applies not only to the methods of knowing, but also to all the epistemological kinds listed in *Nyāyasūtra* 1.1.1.

Notice how this solves the paradox of definitions. Like his Nyāya-Vaiśeṣika comrades, Bhāsarvajña is happy to accept *Possibility 1*: the possibility that ordinary people

⁵⁹ NBhū 10.6-11: “To explain: the defining characteristic of a method of knowing, etc. is asserted by repetition in cases where error-ridden people think that that correct methods of knowing directed at the self and the like are fake methods of knowing (*pramāṇābhāsa*), and that methods of knowing like postulation (*arthāpatti*) and so on, which are not distinct entities, are distinct entities. By contrast, the defining characteristic of a method of knowing, etc. is denied in cases where those for whom non-duality [of awareness] and momentariness are sacred (*advaitakṣaṇikatvavedāḥ*) [i.e., the Buddhists] think that even fake methods of knowing directed at the non-existence of permanence, the non-existence of the self, and so on, are methods of knowing like perception, and that even methods of knowing that are distinct entities are not distinct entities. So, in this manner, the need for repetition is to be noted with respect to the defining characteristics of the self and so on, and with respect to the defining characteristics of uncertainty and so on” (*tathā hi—pratyakṣādīlakṣaṇam anūdya yatra bhrāntāḥ samyak pramāṇeṣv apy ātmādiviṣayeṣu pramāṇābhāsatām anarthāntareṣv apy arthāpattiyādiṣv arthāntaratām ca pratīpadyante, tatra vidhīyate | yatra punaḥ pramāṇābhāseṣv apy advaitakṣaṇikatvavedā nityatvātmādyasattvādiviṣayeṣu pratyakṣādīpramāṇatām arthāntareṣv apy anarthāntaratām ca pratīpadyante, tatra pratīṣidhyate – ity evam ātmādīlakṣaṇeṣu samśayādīlakṣaṇeṣu cānuvādaprayojanaṃ draṣṭavyam iti |*)

can classify objects as instances of a kind *K* without explicitly knowing what the defining characteristic of instances of *K* is. To identify something as crooked, we do not need to explicitly learn, or reflect on, the defining characteristic of crooked objects. However, it is still useful for theoretical texts like the *Nyāyasāstra* to offer explicit definitions of familiar epistemological or ontological kinds. This is because such definitions can ward off errors made by other philosophers and can resolve disagreements induced by such errors.

B. Against the Co-extensive Property strategy

Even though Bhāsarvajña seems to be broadly in agreement with other Nyāya-Vaiśeṣika thinkers about the purpose of definitions, he rejects the co-extensive property strategy endorsed by them. First, he jettisons the requirement that a defining characteristic must be extensionally adequate. Second, he seems to distance himself from the view that a defining characteristic is useful insofar as it serves as a reason in an inference that shows that all instances of a certain kind are distinct from objects of other kinds.

What motivates this departure is the analogy that Bhāsarvajña wants to make between defining characteristics and specific characteristics of objects that remove uncertainty about them. This is clear from his response to an opponent who seems to think that there is a conceptual distinction between the two kinds of characteristics.

[The opponent:] Even with respect to an intentional object of uncertainty, certainty arises due to the observation of a specific characteristic, not due to the observation of a defining characteristic.⁶⁰

In the tree-trunk example, I ascertain that the object before me is a tree-trunk, by noticing a specific characteristic, e.g., its crooked shape. This specific characteristic only distinguishes the tree-trunk from a person, but not from everything else. Thus, if the co-extensive strategy is correct, this specific characteristic cannot be a defining characteristic of a tree-trunk, because it is definitely overextended and may even be underextended. It is present in objects other than tree-trunks and may even be missing from some tree-trunks. So, it is not clear why Bhāsarvajña thinks that defining characteristics are necessary for resolving such uncertainty.

Bhāsarvajña's response is revealing.

No, since the terms “specific characteristic” (*viśeṣa*), “mark” (*aṅka*), “sign,” (*cihna*) and “defining characteristic” (*lakṣaṇa*) are synonyms.

[The opponent:] Then, there would be the undesirable consequence that even underextended and overextended properties would be defining characteristics.

⁶⁰ NBhū 7.13: *sandehaviṣaye 'pi niścayo viśeṣadarśanāt, na lakṣanadarśanād iti cet* |

[Reply:] No, since an overextended property can be a distinguishing feature (*viśeṣaka*). If even horns, etc. are apprehended through some dissimilarity (*kenacid vailakṣaṇyena*), then they are accepted to be a defining characteristic of cows. A specific characteristic that is underextended is also accepted to be a defining characteristic, e.g., a substance's possession of motion. For it is not the case that the possession of motion, when it is being apprehended, does not give rise to the certainty that the possessor of motion is a substance. This is because, for someone who purports to claim that only what possesses motion is a substance, a problem of underextension is raised as follows, "There would be the undesirable consequence that motionless ether (*ākāśa*) would not be a substance." But, for someone who purports to claim that what possesses motion can only be a substance, the defining characteristic is beyond reproach.⁶¹

The central claim: both underextended and overextended properties can serve as defining characteristics depending on the context. On Bhāsarvajña's view, a characteristic *C* serves as a defining characteristic of a kind *K* just in case it helps an agent resolve her uncertainty about whether some object *o* belongs to that kind *K* or not. Imagine a context where an agent is confused about whether an animal is a cow or a horse or a lion. In that context, learning that it has horns might help her to determine that it is a cow. Horses and lions do not possess horns; only cows do. So, in that case, the property of having horns may indeed serve as a defining characteristic of a cow. But, obviously, the possession of horns is not co-extensive with the property of being a cow. It is overextended: many animals that are not cows have horns. Similarly, take a context where an agent is wondering whether a tree is a substance or some other kind of entity. Here, the fact that the tree is gently swaying in the wind—along with the fact that substances alone can possess motion—might help her to determine that it is a substance. So, in this scenario, the property of possessing motion may indeed serve as a defining characteristic of substances. But this property is not co-extensive with the property of being a substance. It is underextended: there are motionless substances like ether (*ākāśa*), space (*dik*) and time (*kāla*).

Bhāsarvajña extends this observation to other definitions offered within the *Nyāyasūtra*.⁶² *Nyāyasūtra* 1.1.10 tells us that mental states like desire and so on are the

⁶¹ NBhū 7.15-8.6: *nā; viśeṣāṅkacihnalakṣaṇaśabdānām paryāyatvāt | avyāpakātivyāpakayor api lakṣaṇatvaprasaṅga iti cet, na; ativyāpakasyāpi viśeṣakatvāt | viśeṣādya api kenacid vailakṣaṇyenaāvagamya yadā, tadā golakṣaṇatveneṣṭam | avyāpako 'pi viśeṣo lakṣaṇatvenābhyupagamyate, yathā dravyasya kriyāvattvam ; na hi kriyāvattvam upalabhyamānaṁ dravyaniścayaṁ na karoti | yad eva kriyāvat tad eva dravyam ity abhiprāyavataḥ khalv avyāptidoṣa udbhāvyate niṣkriyasyākāśāder adravyatvaprasaṅga iti | yat kriyāvat tad dravyam evety abhiprāyavatas tu niravadyaṁ lakṣaṇam iti |*

⁶² NBhū 8.6-13: "By this reasoning, the following are explained: (a) that desire, etc. is the defining characteristic of the self, (b) that being the substratum of effort is [the defining characteristic] of the body, (c) the absence of simultaneous production of awareness is [the defining characteristic] of the inner sense; (d) that the defining characteristic of ascertainment (*nirṇaya*) is "the determination of an object which arises, after uncertainty, by means of taking up a position and a counter-position." However, even though the aforementioned defining characteristics are absent from other targets such as a liberated self and so on, the treatment of objects as self and so on (*ātmādivyavahāra*) is established on the basis of some other defining characteristic. Just as the ether and the like are treated as substances on the basis of their possession of qualities despite the absence of the

marks (*liṅga*) of the self. If we take this to be a definition of the self, then it would be extensionally inadequate. For, according to the Naiyāyikas, the self—when it is liberated—possesses no mental state at all. Analogously, *Nyāyasūtra* 1.1.11 defines the body as the substratum of effort (*ceṣṭāśraya*). But, as Bhāsarvajña notes, when a body is caught under rocks and cannot move, then it cannot be a substratum of any effort. *Nyāyasūtra* 1.1.16 says that “the mark of the inner sense (*manas*) is the non-simultaneous production of states of awareness” (*yugapajjñānānutpattir manaso liṅgam*). The underlying thought is that the inner sense—insofar as it functions as a capacity of attention—is in contact with each sense at a time, and therefore, prevents the subject from being simultaneously aware of the objects that are in perceptual contact with the distinct senses. In response, Bhāsarvajña points out that a crippled inner sense (*raṅḍāntaḥkaraṇa*)—an inner sense that has been abandoned by a liberated self—will not have this as its defining characteristic, since it would not produce any awareness at all. Finally, ascertainment (*nirṇaya*) is defined in *Nyāyasūtra* 1.1.41 as “the determination of an object, which arises after uncertainty by means of taking up a position and a counter-position” (*vimṛśya pakṣapratipakṣābhyām arthāvadhāraṇam*). But this makes sense only in the context of a debate. If I hold a piece of fruit in the palm of my hand, I see the fruit clearly and distinctly. In that scenario, my ascertainment of the fruit need not be preceded by any uncertainty. In each of these cases, the purpose of the definition is not to state a defining characteristic that is extensionally adequate. If that were the purpose, then it would be subject to obvious counterexamples.

Bhāsarvajña acknowledges that there may indeed be other definitions that are extensionally adequate and therefore avoid these counterexamples. For example, there may be a definition of the self that explains why even a liberated self should be treated as a self. But Bhāsarvajña notes that, even if such definitions were available, this would not prevent the extensionally inadequate definitions stated in the *Nyāyasūtra* from being useful.

[The opponent:] Let there simply be some other defining characteristic, because that would not be underextended.

[Reply:] No, because this defining characteristic [given in the *Nyāyasūtra*] too is capable of bringing about certainty about its own target, and because a defining

possession of motion, so also (a) liberated selves are treated as selves on the basis of their selfhood; (b) crippled inner senses are treated as inner senses on the basis of their property of being inner senses; (c) bodies caught under rocks are treated as bodies on the basis of their bodyhood; (d) instances of ascertainment that take place with respect to [something placed in] the palm of one’s hand are treated as ascertainment on the basis of their being states of non-erroneous and certain firsthand awareness. So, one should reason in this manner about other cases as well.” (*eteneccḥādy ātmalakṣaṇam, ceṣṭāśrayatvam śarīrasya, yugapajjñānānutpattir manasaḥ, vimṛśyetyādi nirṇayasya lakṣaṇam ca vyākhyātam | lakṣyāntare tu muktātmādāv uktalakṣaṇābhāve ’pi lakṣaṇāntarād ātmādivyavahāraḥ sidhyati | yathā kriyāvattvābhāve ’py ākāśādiṣu guṇavattvādilakṣaṇād dravyavyavahāraḥ, evam ātmavān muktātmāsv ātmavyavahāraḥ, raṅḍāntaḥkaraṇeṣu manastvān manovyavahāraḥ, śilāntargataśarīreṣu śarīratvād indriyāśrayatvāc ca śarīravvyavahāraḥ, karatalādinirṇayeṣv avyabhicāriniścayānubhavatvān nirṇavyavahāraḥ – ity evam anyatrāpy ūhyam iti |*)

characteristic like desire and so on is capable of bringing about an awareness regarding selfhood, etc.⁶³

There are two distinct arguments here. The first says that a defining characteristic—even when it is underextended—can produce certainty regarding its own target. Imagine a debate between the Naiyāyika and a Buddhist about the nature of the self. Suppose the Buddhist claims that the word “self” only picks out either a momentary state of awareness, or a stream of such states of awareness. In such a context, treating mental states like desire, etc. as the defining characteristic of the self may indeed be useful. As Vātsyāyana argues in his commentary on *Nyāyasūtra* 1.1.10, since our ordinary desires are often based on recognition, such desires cannot arise unless there is an enduring subject who undergoes different experiences at different times and unifies them to undergo an episode of recognition. Thus, the definition of the self in terms of desire allows us to block the possibility that a self is a momentary state of awareness or a stream of such states of awareness. Thus, it resolves our uncertainty regarding the nature of the self.

The second argument is somewhat different. In the final analysis, for Nyāya-Vaiśeṣika thinkers, the only property that unifies all and only selves is selfhood (*ātmatva*). However, just as a definition of earth in terms of earthhood is not helpful or informative for someone who is not sufficiently familiar with earth, so also a definition of selves in terms of selfhood is not helpful or informative for someone who does not quite understand what a self is. For Bhāsarvajña’s view, a more informative—but ultimately imperfect—definition of the self as the subject of mental states like desires, etc. is more helpful. Since all selves that are caught in the cycle of rebirth (*saṃsāra*) serve as subjects of such mental states, this definition gives us access to paradigmatic examples of selves. In doing so, it allows us to gain a better understanding of what selfhood consists in. Thus, even though such a definition is not itself extensionally adequate, it serves as a guide to a defining characteristic of selves, i.e., selfhood, that is neither under- nor over-extended.

Bhāsarvajña recognizes that his conception of definitions is unorthodox and likely to be a view that his Nyāya (or Vaiśeṣika) comrades will reject. Given the disagreement between him and other Nyāya thinkers about what a defining characteristic is, we might worry that there will be another regress. Why? Suppose C_1, C_2, \dots, C_n are all the defining characteristics of Nyāya-Vaiśeṣika ontological or epistemological kinds. According to other Nyāya-Vaiśeṣika thinkers, what unifies these defining characteristics is that each of them is a property that distinguishes all instances of the relevant kind from other entities and therefore can serve as a negative-only reason in an inference to the conclusion that instances of the relevant kind are distinct from other entities. But Bhāsarvajña disagrees. To resolve this disagreement, Bhāsarvajña could propose a further defining characteristic C_{n+1} that unifies all these other defining characteristics C_1, C_2, \dots, C_n . But, then, there could be another

⁶³ NBhū 8.13-16: *lakṣaṇāntaram evāstu vyāpakatvād, anarthakam avyāpakalakṣaṇābhidhānam iti cet, na; asyāpi svalakṣyaṇiścāyā samarthatvāt, ātmatvādipratipattāv icchādīlakṣaṇasyaiva samarthatvāc ca* |

disagreement about the defining characteristic that all these defining characteristics have in common. Then, Bhāsarvajña would have to propose a further defining characteristic C_{n+2} that is shared by $C_1, C_2, \dots, C_n, C_{n+1}$. Thus, there would be a regress.

Bhāsarvajña seems to think that this sort of regress is not possible for two reasons. The first reason is similar to the one that Udayana mentions: namely, that people don't disagree about everything.⁶⁴ Suppose Bhāsarvajña and his opponent disagree about what defining characteristics are. How can Bhāsarvajña convince his opponent adopt his conception of defining characteristics? He can appeal to familiar distinctions between conscious beings and unconscious objects, between means and ends, and so on, to explain how the nature of one kind of entity is distinguished by a defining characteristic from that of the other. This, in turn, might help the opponent appreciate the role that defining characteristics are supposed to play in ordinary thought and discourse. So, there cannot be pervasive disagreement. But what if the opponent is not aware of such familiar distinctions? Bhāsarvajña says that such an agent should simply be ignored like an insane person: in such a case, there would be no common stock of examples on the basis of which the opponent could be made to understand the role that defining characteristics play in our ordinary practices.

Bhāsarvajña's second argument is a bit more interesting. He claims that, once a defining characteristic has been proposed for *all* the defining characteristics, there is no need to look for a further defining characteristic. This is because a defining characteristic of all defining characteristics applies to itself: not only does it distinguish *other* defining characteristics from what are not defining characteristics, but also itself.⁶⁵ This sort of self-reference is unproblematic. The utterance, "All sound is impermanent," not only conveys the impermanence of other sounds, but also of itself. The Vedic injunction, "One should study the Veda" (*svādhyāyo 'dhyetavyaḥ*) not only conveys that the rest of the Veda should be studied, but also that it itself should be studied. Similarly, a defining characteristic of defining

⁶⁴ NBhū 8.17-22: "[The opponent:] Given there is disagreement even with respect to a defining characteristic, if one were to state a further defining characteristic, then there would be a regress. [Reply:] No, because it is impossible for there to be disagreement with respect to everything. Why? First of all, if this disagreeing person apprehends the nature of conscious and unconscious things, of means and ends, and so forth, then in a manner analogous to those cases (*tannyāyena*) something can be properly established in response to this particular person. But if this disagreeing person does not apprehend anything, then the utterance of any specific linguistic expression will not take place in response to this particular person. Why? If someone were to say whatever [he likes] even after having seen a tree, etc. then he should be ignored just like an insane person." (*lakṣaṇe 'pi vipratipattau lakṣaṇāntarābhīdhāne saty anavastheti cet, na ; sarvatra vipratipattayasambhavāt | katham ? yadi tāvad ayaṃ vipratipadyamānaḥ cetanācetanopāyopeyādīsvārūpaṃ pratipadyate, tadā puruṣaviśeṣaṃ prati tannyāyenānyo 'py arthaḥ prasādhayitavyaḥ | atha kiñcid api na pratipadyate, tadā puruṣaviśeṣaṃ prati śabdaviśeṣoccāraṇaṃ na prāpnoti | kutaḥ ? vrkṣādīkaṃ dr̥ṣṭvā 'pi yat kiñcid brūyāt, tataś conmattavad upekṣaṇīyaḥ syāt |*)

⁶⁵ NBhū 9.1-5: "Moreover, this sequence of defining characteristics isn't accepted. Why? For, since the defining characteristic of defining characteristics distinguishes the class of all defining characteristics, it distinguishes itself too. This is just as in the following cases. The utterance (*vākya*), 'All sound is impermanent,' conveys its own impermanence as well. This [Vedic] injunction, 'One should study the Veda,' enjoins its own status as something to be studied." (*na ceyam lakṣaṇaparāmparā 'bhyupagamyate, kasmāt? lakṣaṇalakṣaṇasya sakalalakṣaṇavargavyavacchedakatvena svātmano 'pi vyavacchedakatvāt | yathā anityaḥ sarvaḥ śabda ity etad vākyaṃ svātmano 'py anityatām abhidhatte | svādhyāyo 'dhyetavyaḥ ity ayaṃ vidhiḥ svātmano 'py adhyeyatvaṃ vidhatta iti |*)

characteristics will distinguish itself. One might worry that this kind of self-reference violates what we may call the *principle of irreflexivity*: the principle that the instrument (*karana*) of an action or event (*kriyā*) cannot also be its patient (*karman*). A woodcutter can chop wood with her axe, but she cannot chop the axe itself by means of that axe. Similarly, we might think that we can distinguish instances of a kind *K* by means of a defining characteristic *C*, but we cannot distinguish *C* itself from objects of other kinds by means of *C* itself. But Bhāsarvajña sees no problem here. He notes that there are other cases where similar principles of irreflexivity fail: for example, the self can be aware of itself, even though it serves as both the agent and the patient in relation to the relevant act or event of being aware. Such violations of the principle of irreflexivity are harmless, because they do not imply that the instrument of an action or event must always be identical to its patient. In ordinary cases, e.g., in the case where a weaver is making a cloth using tools like her shuttle and her loom, her instruments are clearly not identical to the patient, i.e., the cloth. But this does not mean that, for all actions or events, the instrument and the patient must be distinct.⁶⁶

Even though Bhāsarvajña rejects the co-extensive property strategy, he does not want to stray too far from the view that a defining characteristic can be a source of knowledge.⁶⁷ On Bhāsarvajña's view, there is a clear analogy between defining characteristics and methods of knowing. Just as a method of knowing like perception or inference helps us to correctly ascertain what the nature of an object is, so also does a defining characteristic generate certainty about the nature of objects of a particular kind. This raises the following question. Is a defining characteristic a *sui generis* method of knowing, or does it merely play the role of a method or means by which some other familiar method of knowing (like perception or inference) functions?

⁶⁶ NBhū 9.5-7: “[The opponent:] The identity of the object and the instrument, in relation to the same action, is untenable. [Reply:] No, because it is observed in some cases, just as in the case of the knower and the knowable object. [The opponent:] In virtue of just that example, there should be a lack of distinction in all cases. [Reply:] No, because the distinction amongst the cloth, the shuttle, and the loom [of the weaver] is established by means of perception and so on.” (*karmakaraṇayor ekakriyāyām ekatvam ayuktam iti cet, na, pramāṭrprameyavat kvacid dr̥ṣṭatvāt | taddr̥ṣṭāntenaiva sarvadā 'py abhedaprasaṅga iti cet, na, paṭaturīvemādīnām bhedasya pratyakṣādisiddhatvāt |*)

⁶⁷ NBhū 9.7-15: “Thus, in the same way, since a statement of a defining characteristic is the cause of certainty with respect every intentional object of uncertainty, such a statement isn't useless. [The opponent:] If a defining characteristic itself is the cause of certainty, then does a method of knowing have no purpose? [Reply:] No, since a defining characteristic also has certainty as its end, it is a method of knowing. [The opponent:] Is a defining characteristic is method by which a method of knowing proceeds (*pramāṇaparyāya*), or is it one of the methods of knowing such as perception, but something that is distinct from them? [Reply:] Some say, “It is a negative-only reason.” However, we have already said that the terms “specific characteristic,” “mark,” and “defining characteristic” are synonyms. Therefore, it is not a method (*paryāya*) by which a method of knowing proceeds, because anything that serves as a means for a method of knowing is a method of knowing. Rather, a defining characteristic is something that distinguishes a knowable object. And, in virtue of assisting the senses and so on, it comes to possess designations like “perception,” and so on. [This is why], just like the parts of an argument, a defining characteristic is mentioned separately [in *Nyāyasūtra* 1.1.1 by means of the word “nature” (*tattva*)] for the sake of a certain purpose.” (*tad evaṃ sarvatra sandehaviṣaye niścayahetutvāt na lakṣaṇavacanam niṣprayojanam iti | lakṣaṇasyaiva niścayahetutve nirarthakam pramāṇam iti cet, na, lakṣaṇasyāpi niścayasādhanatvena pramāṇatvāt | atha lakṣaṇam kiṃ pramāṇaparyāyaḥ, uta pratyakṣādīnām anyatamat tadarthāntaraṃ veti ? kevalavyatirekīty eke | asmābhis tv abhihitam eva viśeṣāṅkādisabdāḥ paryāyā itī | ata eva na pramāṇaparyāyaḥ pramāṇasādhanasya sarvasyāpi pramāṇatvāt, lakṣaṇam tu prameyaviśeṣakam eva | tac cendriyādisahakāritvena pratyakṣādivyapadeśam api labhate | tasyāvayavādivat prayojanavaśāt prthag abhidhānam |*)

Someone like Vācaspati—to whom Bhāsarvajña seems to allude—would say that a defining characteristic for a kind *K* plays the role of a negative-only reason in an inference that proves the distinctness of instances of *K* from objects of other kinds. But Bhāsarvajña disagrees: as he has told us, the terms “specific characteristic,” “sign,” “mark,” and “defining characteristic” are synonyms. Therefore, on his view, a defining characteristic for a kind *K* need not be co-extensive with the property of being *K*. So, unlike a negative-only reason, it need not pervade the property of being distinct from objects of other kinds. Rather, on his view, a defining characteristic is a distinguishing feature of a knowable object. But, since it can assist other methods of knowing like the senses (e.g., when one perceptually judges that something is a cow on the basis of perceptually detecting its distinguishing features), it is picked out by labels such as “perception.” In other words, it is a method of knowing in an extended sense: since it serves as an auxiliary condition that assists methods of knowing in distinguishing objects of a certain kind from objects of other kinds, it can be regarded as a method of knowing itself.

From this discussion, we can extract the following view about the purpose of definitions.

The Distinguishing Property Strategy. The purpose of a definition is to lay down a characteristic *C* which,

- (i) in some contexts, can serve as a distinguishing feature (*viśeṣaka*) of some instances of *K*, and
- (ii) therefore, can assist the methods of knowing—such as perception and inference—in resolving uncertainty about whether those objects belong to *K*.

In the next section, we shall see how other Nyāya-Vaiśeṣika thinkers react to this view. But, for now, let us take stock. We have seen that Bhāsarvajña rejects the co-extensive property strategy about definitions defended by other Nyāya-Vaiśeṣika thinkers. On his view, the purpose of a definition of a kind *K* is not to lay down a property that is co-extensive with the property of being an instance of *K*. Bhāsarvajña thinks that that would be too demanding a requirement to impose on definitions. For theoretical texts of Nyāya-Vaiśeṣika seldom give us definitions that fulfil this requirement. Rather, for Bhāsarvajña, the whole point of giving a definition is to convey a distinguishing feature of some (but perhaps not all) instances of the relevant kind, which can help us resolve our uncertainty about kind-membership in some contexts.

The Metalinguistic Strategy

Bhāsarvajña’s distinguishing property strategy was not accepted by other Nyāya-Vaiśeṣika thinkers. In fact, the three commentators on Praśastapāda’s *Padārthadharmasaṅgraha*—Vyomaśiva, Śrīdhara, and Udayana—not only endorse the refined co-extensive property strategy, but also offer a different account of why definitions are useful. On this other view,

at least one purpose of a definition is to lay down the meaning (*artha*) or the application-conditions (*pravṛttinimitta*) of a linguistic expression. Call this the *metalinguistic strategy*. In this section, I explain this strategy.

A. Purpose: Removing Metalinguistic Ignorance

In *Vyomavatī*, having initially defended the co-extensive property strategy, Vyomaśiva writes:

Thus, the same sentence—when it is repeated—conveys a further meaning. So, the sentence, “**since it is connected to earthhood,**” is connected up with its being a determination of the meaning of a linguistic expression.⁶⁸

Similarly, Śrīdhara says:

Following the order of enumeration, Praśastapāda has initially stated the dissimilarity of earth: “**Earth [is dissimilar from other entities], since it is connected to earthhood.**” This is for the following reason. If a certain person—despite being aware of earth by its nature—does not apply the expression “earth” to some object due to some confusion (*vyāmoha*), then a unique property [of earth] is being described to such a person for the sake of establishing linguistic usage (*vyavahāra*) without any deviation from a relation of negative pervasion (*viparyayasambandhāvyabhicāreṇa*): “**Earth [is dissimilar from other entities], since it is connected to earthhood.**”⁶⁹

Here, Śrīdhara imagines an agent who is aware of earth by its nature but does not apply the word “earth” to some earthen objects due to some confusion. To remove such confusion, a definition is necessary. On this view, a definition of earth is useful because it lays down the *application-conditions* for the expression “earth,” the conditions for correctly applying the expression “earth.” For both Vyomaśiva and Śrīdhara, then, the point of a definition is to remove metalinguistic ignorance, the ignorance that someone might have about the meaning or use of a linguistic expression.

On Śrīdhara’s view, the agent who is taught the definition of earth is able to make the following inference.

This should be spoken of as “earth,” since it is connected to earthhood. However, that which is not spoken of as “earth” is not connected to earthhood, e.g., water. But it is

⁶⁸ VV 57.25-26: *tathaikaṃ vākyam āvartyamānaṃ bhūyāmsam artham āheti śabdārthanirūpaṇatvenābhisambaddhyate pṛthivītvābhisambandhād iti |*

⁶⁹ NK 84.7-10: *uddeśakrameṇa pṛthivyāḥ prathamāṃ vaidharṃyam āha – pṛthivītvābhisambandhāt pṛthivīti | yo hi pṛthivīm svarūpato jānan nāpi kutaścid vyāmohāt pṛthivīti na vyavaharati taṃ prati viparyayasambandhāvyabhicāreṇa vyavahārasādhanārtham asādharāṇo dharmāḥ kathyate— pṛthivītvābhisambandhāt pṛthivīti |*

not the case that this is not connected to earthhood. So, it should be spoken of as “earth.”⁷⁰

Almost repeating Śrīdhara *verbatim*, Udayana says:

Alternatively, establishing linguistic usage (*vyavahārasiddhi*) is the purpose of a defining characteristic. That is to say: The substance under dispute is spoken of as “earth.” For it is earth. However, that which is not spoken of as “earth” is not earth, e.g., water and so on. But it is not the case that this is not earth. Therefore, it is not the case that it is not spoken of in that manner.⁷¹

We can state the inference as follows.

(3) *The Thesis*. This substance under dispute is spoken of as “earth.”

The Statement of the Reason. For it possesses earthhood.

The Illustration. Whatever is not spoken of as “earth” lacks earthhood, just like water and so on.

The Application. This does not lack earthhood.

The Conclusion. Therefore, this is spoken of as “earth.”

In this inference, all instances of earth are included in the site picked out by “this substance under dispute.” So, the reason in question—earthhood—has to be a negative-only reason. This is because there is no case of positive correlation where the reason and the target property are both present, but which is not included in the site. Thus the underlying relation of pervasion will have to be a negative one: “Whatever is not (or should not be) spoken of as “earth” does not possess earthhood.” This is why Śrīdhara says that this inference can be used to establish linguistic usage “without any deviation from a relation of negative pervasion.”

This suggests the following strategy.

The Metalinguistic Strategy. The purpose of a definition is to lay down a characteristic *C* which:

- (i) constitutes the meaning or the application-conditions for a linguistic expression *E*, and

⁷⁰ NK 84.11-13: *iyam pṛthivī vyavahartavyā pṛthivīvābhisambandhāt yat punaḥ pṛthivī na vyavahriyate, na tat pṛthivīvenābhisambaddham, yathā 'bādīkam, na ceyaṃ pṛthivīvena nābhisambaddhā, tasmāt pṛthivī vyavahartavyeti* |

⁷¹ KirA 29.16-19: *vyavahārasiddhir vā lakṣaṇaprayojanam | tathā hi—vivādādhyāsitaṃ dravyaṃ pṛthivī vyavahriyate, pṛthivīvāt | yat punar pṛthivī na vyavahriyate na sā pṛthivī, yathā abādi | na ceyaṃ na pṛthivī, tasmāt na tathā [na] vyavahriyate* | Here, both the Ahmedabad and Calcutta editions of the text are missing the extra negation that I have added in square brackets. This is necessary to make sense of the text, since the conclusion of the inference is that the substance under dispute is indeed spoken of as “earth.” So, two negations are necessary to cancel each other out.

- (ii) can serve as a negative-only reason in an inference that proves that *E* is correctly applied to (all and only) instances of a certain kind *K*.

Śrīdhara explains why this strategy too can solve the paradox of definitions. Having defended both the co-extensive strategy and the metalinguistic strategy, Śrīdhara writes:

By this, the following [objection] that has been stated by others is also refuted: “If the entities [in the Vaiśeṣika ontological scheme] are well-established, then they should not be defined. If they are not well-established, they should *a fortiori* not (*natarām*) be defined, because it is impossible to do so.” This is because a defining characteristic functions for the sake of conveying a specific kind of linguistic usage with respect to something that has been apprehended by its own nature, and for the sake of the awareness of a specific characteristic of something that is generally well-established.⁷²

Even if a kind *K* that forms the target of a definition is well-known to us, that does not make a definition of *K* completely useless. Such a definition could still serve one of the following two purposes. First, it could help us to learn the specific conditions for correctly using a linguistic expression that picks out instances of *K*. Second, it could help us to become aware of a specific characteristic that distinguishes the instances of *K* from all other kinds of objects. Śrīdhara goes on to explain why this does not lead to any regress.

[The opponent:] If this were the case, then there would be a regress, because, just like the target of a definition, the defining characteristic too should be defined on the basis of something else.

[Reply:] No. For a [further] defining characteristic would be required if there were no awareness [of the relevant defining characteristic], but there is not an absence of awareness with respect to everything. That is to say: knowledgeable people tie (*anubadhnanti*) a cow by means of its head and its foot, but do not further investigate those two [characteristics] on the basis of something else. However, for a person who lacks apprehension with respect to everything, there cannot be any instruction, because that person is ineligible [for such instruction] just like a child or a mute person.⁷³

Once again, the response to the regress worry is the same as earlier: the need for a definition of a kind *K* only arises when an agent lacks awareness either about the specific characteristics of instances of *K*, or about the meaning or application-conditions for the relevant linguistic

⁷² NK 85.7-9: *etenaitad apī pratyuktam, yad uktam aparaiḥ prasiddhās cet, padārthā na lakṣaṇīyāḥ, aprasiddhā natarām aśakyatvāt, svarūpeṇāvagatasyāpi vyavahāra viśeṣapratipādanārthaṃ sāmānyena prasiddhasya viśeṣāvagamārthaṃ ca lakṣaṇasya pravṛtteḥ* |

⁷³ NK 85.10-13: *nanv evaṃ saty anavasthā, lakṣyaval lakṣaṇasyāpy anyato lakṣaṇīyatvād iti cen na, apratītau lakṣaṇasyāpekṣitvāt, sarvatra cāpratītyabhāvāt, tathā hi---śirasā pādena gavāṃ anubadhnanti vidvāṃsaḥ, na punar etāv apy anyataḥ samīkṣante* | *yas tu sarvathaivāpratipanno na taṃ praty upadeśaḥ, tasya bālamūkādivad anadhikārāt* |

expression. But not everyone is unaware of everything. Provided that we can arrive at a definition which involves terms that are well-understood by everyone concerned, an endless search for further definitions will not be warranted. As Śrīdhara tells us, a person who is knowledgeable about cows can easily identify a cow by looking at its head or its feet and can perform practical activities like tying it up on that basis. She does not need to reflect indefinitely on an endless sequence of defining characteristics. Similarly, in a theoretical text, someone who does not understand what distinguishes instances of earth from water and so on, or does not know how to use the word “earth,” can be taught this in light of other knowledge that she already possesses. So, no endless search for definitions is necessary. However, if an agent lacks awareness about everything, then she cannot be helped: if she has no prior knowledge that can be exploited for the purposes of removing her metalinguistic or metaphysical ignorance, she is not eligible for any instruction at all.

It is worth noticing a similarity between the metalinguistic strategy and the conception of definitions as conceptual analyses. At least on one characterisation of conceptual analysis, a successful conceptual analysis simply lays down either the ordinary meaning or the ordinary application-conditions of a linguistic expression borrowed from natural language.⁷⁴ To my mind, this fits the way in which defenders of the metalinguistic strategy—Vyomaśiva, Śrīdhara and Udayana—think of definitions. For them, authors of theoretical texts like the *Padārthadharmasaṅgraha* are competent users of language who use their own linguistic competence to articulate the application-conditions of expressions like “earth” and so on, so that less knowledgeable people may learn how to use these expressions. In doing so, they not only offer new definitions, but also test the adequacy of those definitions in light of both actual and merely possible counterexamples. In *Vaiśeṣikasūtra* 2.1.1, for example, earth is characterised as that which possesses qualities like colour, flavour, smell, and touch. In *Padārthadharmasaṅgraha*, Praśastapāda does not define earth in terms of these qualities, because composite objects made of earth—which can also properly be called “earth”—do not possess these qualities at the initial moment when they arise. That is why Praśastapāda jettisons the earlier Vaiśeṣika characterisation of earth and defines it in terms of earthhood. Here, Praśastapāda is not only using substantive metaphysical knowledge about whether substances like earth always possess their characteristic qualities, but also his intuitions (as a competent user of language) about how to use the expression “earth.”

Unlike contemporary defenders of conceptual analysis, however, defenders of the metalinguistic strategy would deny that definitions are sentences whose truth we can discover *a priori* without relying in any evidence derived from experience, or that such definitions are *analytic*. Take Praśastapāda’s definition of earth:

(4) For any x , x is an instance of earth if and only if it possesses the universal earthhood.

⁷⁴ For a *locus classicus* of this, see Grice (1989). Grice says that a conceptual analysis of an expression E is a general characterisation of the conditions under which one would correctly apply E . To arrive at such an analysis, the proponent makes use of her own linguistic competence, what Grice calls the agent’s “ability to apply or withhold E in *particular* cases” (p. 174).

At least within Nyāya-Vaiśeṣika epistemology, there is no room for *a priori* knowledge: all our knowledge is derived from perception, inference, analogy, or testimony. So, how do we discover the truth of a sentence like (4)? The defender of the metalinguistic strategy could tell the following story. For her, (4) implicitly conveys that the application-conditions of the expression “earthhood” consist just in earthhood. So, she could argue that we learn the meaning or application-conditions of a linguistic expression like “earth” on the basis of observation, by noticing how other competent users of language use that expression. If we see repeatedly that competent users of language never use the word “earth” to pick out something that lacks earthhood but do use it in all other cases, then we can indeed learn that the expression “earth” cannot be correctly applied to any object that lacks earthhood. Given this, using the disquotational principle that “earth” refers to earth, we can derive the conclusion that all and only instances of earth possess earthhood. So, we do not discover the truth of (4) *a priori*.

Analogously, defenders of the metalinguistic strategy should say that definitions cannot be analytic. Contemporary philosophers—such as Boghossian (1998) and Williamson (2007)—distinguish two notions of *analyticity*: *epistemic* and *metaphysical*. A sentence is epistemically analytic just in case anyone who understands it is justified in taking it to be true. By contrast, a sentence is metaphysically analytic just in case it is true in virtue of its meaning. Here, (4) cannot be epistemically analytic. Even a defender of the metalinguistic strategy will acknowledge that there can be a philosopher (e.g., a Buddhist nominalist about universals) who falsely but justifiably believes that there is no mind-independently existent universal such as earthhood. So, this philosopher may justifiably think that (4) is not true even though they understand what (4) says.

So, consider now whether a sentence (4) can be metaphysically analytic. On one way of glossing this notion, a sentence is metaphysically analytic just in case it is true merely in virtue of linguistic facts about meaning and use of linguistic expressions, not in virtue of extra-linguistic facts. There is a tempting argument—due to Quine (1951) and spelled out by Boghossian (1998)—that implies that a sentence like (4) cannot be metaphysically analytic. As both Quine and Boghossian note, the truth of ordinary sentences like “Godse assassinated Gandhi” depends on both linguistic facts and extralinguistic facts. The sentence “Godse assassinated Gandhi” is made true partly by extralinguistic facts about what happened on that fateful day in 1948 when Gandhi was killed, as well as by linguistic facts about what the word “assassinated” means. If Godse had not shot Gandhi, the sentence would be false. And, if “assassinated” had the same meaning as “shook hands with,” the sentence would be false. The same, Quine and Boghossian argue, is true of *all* sentences: at least *some* of the truthmakers of a sentence must be extralinguistic facts about how the world is. So, no sentence can be metaphysically analytic.

This does not seem convincing to me. Sentences that do not contain non-indexical expressions but are necessarily true do not seem to depend on extralinguistic facts. If the word “water” had picked out something other than H₂O but the meaning of “H₂O” remained the same, the sentence “Water is H₂O” would be false. But, once we hold fixed the linguistic

facts, the actual meaning of the sentence “Water is H₂O” cannot vary. But note that, necessarily, if the sentence “Water is H₂O” has its actual meaning, then it is true. This is because, necessarily, water is H₂O. So, it seems that the truth of this sentence does not *modally depend* on anything other than the linguistic facts: there is no possible world where the linguistic facts are the same, but the sentence is false. In this sense, it is metaphysically analytic; it is what Williamson (2007) calls a *modal-analytic* sentence. The same, one might claim, is true of a sentence like (4). If (4) is intensionally adequate as a definition, then it is necessarily true. So, necessarily, if it has its actual meaning, then it is true. Thus, its truth does not modally depend on anything other than the linguistic facts. Thus, it will be metaphysically analytic in the same way as the sentence, “Water is H₂O.” However, as Williamson (2007, p. 61) points out, a sentence that is metaphysically analytic in this sense will not have the special epistemic properties that have been traditionally associated with analytic truths, e.g., that they are trivial or merely verbal or knowable *a priori*. So, even if the Nyāya-Vaiśeṣika definitions express (or are designed to express) metaphysically analytic truths in this sense, that does not make them substantially different from the general truths that other sciences seek to discover through empirical observation.

Alternatively, we could simply jettison Williamson’s notion of modal-analyticity in our discussion of Nyāya-Vaiśeṣika thinkers, because it is anachronistic to apply this concept in interpreting these earlier thinkers. The Nyāya-Vaiśeṣika thinkers do not explicitly invoke any notion of metaphysical necessity. On a simple interpretation of the Nyāya view about sentential truth, the truth of any sentence is explained by two facts: (i) the linguistic fact that the sentence conveys a certain relation (*samsarga*) amongst the referents of its constituent words and (ii) the extralinguistic fact that this relation obtains in the world. In this respect, a sentence like “Godse assassinated Gandhi” and a definition like (4) are not different. The sentence “Godse assassinated Gandhi” is made true by the linguistic fact that it conveys a relation of assassination between Godse and Gandhi, and by the extralinguistic fact that this relation obtains between them. Similarly, (4) is made true by the linguistic fact that it conveys an invariable connection between the property of being earth and the property of possessing earthhood (since, according to (4), neither can exist without the other), and by the extralinguistic fact that this invariable connection obtains between the two. Thus, on this view, even a definition like (4) will depend on some extralinguistic facts about the world for its truth. So, the Quine-Boghossian argument against metaphysical analyticity would work in this case.

B. The Relationship between Co-Extensive Property Strategy and the Metalinguistic Strategy

For defenders of the metalinguistic strategy, this strategy is *not* a competitor of the co-extensive property strategy: they are compatible. The same definition for a kind *K* can not only lay down a property that belongs to all and only instances of *K*, but may (in doing so) lay down the meaning or the application-conditions for a certain linguistic expression. Similarly, a definition for a kind *K*, which explicitly conveys the meaning or application-conditions of an expression, may provide metalinguistic knowledge that, in turn, will allow us to distinguish instances of *K* from other objects.

This point is supported by the discussion of *Nyāyasūtra* 1.1.15 in the sub-commentaries of Uddyotakara, Vācaspati and Udayana. This *sūtra* defines understanding (*buddhi*) by telling us that the word “*buddhi*” is synonymous with “*upalabdhi*” (which can be rendered as “apprehension”) and “*jñāna*” (which we are translating here as “awareness”): “Understanding, ‘apprehension,’ and ‘awareness,’ do not have different meanings.”⁷⁵ Uddyotakara, a defender of the co-extensive property strategy, tells us how such a definition could be useful.

That entity which is referred to by means of these synonymous expressions is understanding. How can synonymous expressions be defining characteristics? Because they are a reason for distinguishing [one entity from another]. For every defining characteristic distinguishes one entity from another. And, by means of these synonymous expressions, no other entity is referred to. So, in virtue of their uniqueness, they are defining characteristics.⁷⁶

Uddyotakara’s point is simple: synonyms can be used in definitions because they can help us understand what distinguishes objects of a certain kind from objects of other kinds. His commentator Vācaspati sharpens the objection and then goes on to explain why Uddyotakara’s response makes sense.

He asks: “**How...?**” The reason is that a defining characteristic—in virtue of not deviating [from its target]—distinguishes it from objects of similar and dissimilar kinds. But where indeed is it not possible for synonymous expressions—whose application (*pravṛtti*) is dependent merely on linguistic conventions—to be [applied]? Therefore, these are not defining characteristics. This is the sense. The reply: “**Because they are a reason for distinguishing [one entity from another].**”

[The opponent:] Since a deviation is possible, their status of being distinguishing features is untenable.

[Reply:] So, he has said: “**And, by means of these...**” This is because a linguistic convention can be of two kinds: universal, e.g., [the convention that] the expression “cow” refers to something that is bovine in kind, or parochial, e.g., [the convention that] the expression “Caitra” refers to a particular person. Of those [two kinds of convention], a universal convention can bring about an awareness of distinctness.

⁷⁵ NS 1.1.15: *buddhir upalabdhir jñānam iti anarthāntaram* |

⁷⁶ NV 75.5-7: *etaiḥ paryāśabdair yo ’bhidhīyate padārthaḥ, sā buddhir iti | paryāśabdāḥ katham lakṣaṇam? vyavacchedahetuvāt | sarvaṃ hi lakṣaṇam itaretarapadārthavyavacchedakam | etaiś ca paryāśabdair nānyaḥ padārtho ’bhidhīyata ity asādhāraṇatvāt lakṣaṇam* |

Precisely with the intention of conveying that, he has said: “**And, by means of these...**”⁷⁷

According to Vācaspati, the worry is that the application-conditions of linguistic expressions are arbitrary insofar as they depend solely on linguistic conventions. So, even though an expression like “understanding” or “apprehension” or “awareness” might be used to pick out a certain kind of mental state by one speaker in a certain context, it may just as well be used by another speaker for picking out a different kind of object altogether in another context. But this is precisely what we do not want from defining characteristics. A defining characteristic does not deviate from its target: if *C* is a defining characteristic of a kind *K*, then it is present in all and only instances of *K*. But, since a linguistic expression—which picks out instances of *K* in one context—could be used to refer to objects of a different kind in a different context, it cannot be treated as the defining characteristic of the instances of *K*.

How does Uddyotakara solve this problem? Vācaspati helpfully makes a distinction between universal (*sarvajanīna*) and parochial (*prādeśika*) linguistic conventions. Roughly speaking, a linguistic convention is universal just in case it is context-invariant, i.e., it doesn’t vary across speakers belonging to the same linguistic community. By contrast, a linguistic convention is universal just in case it is context-sensitive, i.e., it can vary across speakers belonging to the same linguistic community. In Sanskrit, the expression “*gauḥ*” (translated as “a cow”) always refers to a cow. So, the linguistic convention that determines the reference of this common noun is context-invariant. But a proper name “*Caitra*” may refer in some contexts to a particular person, and in other contexts to another. So, the relevant linguistic convention is parochial. Vācaspati’s claim that, if the linguistic convention governing the reference of an expression is universal, then that expression can indeed be used in a definition (belonging to the same language). For it can robustly help a speaker of that language to distinguish objects of the relevant kind from objects of other kinds. Udayana explains Vācaspati’s idea as follows:

Therefore, this is the meaning: in virtue of being connected to the single application-condition which belongs to these linguistic expressions that are being used, understanding is distinct from other entities...⁷⁸

The idea is this. The *sūtra*, according to Udayana, conveys that the words “understanding,” “apprehension,” and “awareness” have the same application-conditions. Since a linguistically

⁷⁷ NVTṬ 195.13-19: *prcchati—katham iti | samānāsamānajātīyavyavacchedakaṃ hi lakṣaṇam avyabhicāritayā | paryāyaśabdāśca saṃketamātrādhīnapravṛttayaḥ kva nāma na saṃbhavanti? tasmāt naitte lakṣaṇam iti bhāvaḥ | uttaram—vyavacchedeti | nanu vyabhicārasaṃbhavena vyavacchedakatvam ayuktam ity ata āha—etaiś ceti | saṃketo hi dvedhā, sarvajanīno yathā gauriti gojātīyasya vācakaḥ, prādeśikaś ca yathā caitra iti puruṣabhedasya | tatra sarvajanīnaḥ śaknoti vyavacchedabuddhiṃ bhāvayitum, tadvivakṣayaivoktam—etaiś ceti*

⁷⁸ NVTP 256.6-7: *tenāyam arthaḥ | eteṣāṃ śabdānāṃ vyavahriyamānānāṃ yad ekaṃ pravṛttinimittam tadyogād itarebhyo buddhir bhidyata iti |*

competent agent who understands the meaning or application-conditions of these other words knows what these application-conditions are, she can use those application-conditions to inferentially learn that understanding is distinct from other entities. So, in this case, the metalinguistic knowledge that the agent possesses about the meaning or the application-conditions of these other expressions can be exploited by her to gain knowledge about the application-conditions of the word “understanding.” This, in turn, will allow this agent to learn that instances of understanding are distinct from other kinds of objects.

This shows that there is no tension between the co-extensive property strategy and the metalinguistic strategy. At least in cases of this sort, the application-conditions of an expression can in fact coincide with the property that distinguishes the instances of a kind from objects of other kinds. So, the same definition that is successful by lights of the metalinguistic strategy may also succeed by the standards of the co-extensive property strategy. Why is this significant?

To my mind, this suggests that, for Nyāya-Vaiśeṣika thinkers, there can be no strict distinction between *real* and *nominal definitions*. The distinction between these two kinds of definitions can be fleshed out as follows. The target of a nominal definition is a word like “earth” or “understanding”: a nominal definition purports to give us the meaning of the word, or the conditions under which it can be applied or withheld. By contrast, the target of a real definition need not be a linguistic item; it could be a kind like earth or understanding. The aim of a real definition is to specify the nature of its target: that is why writers such Fine (1994) and Rosen (2017) claim that the aim of a real definition of a kind *K* is to specify either the *essence* that unifies instances of *K*, or to explain what it is in virtue of which something is an instance of *K*.⁷⁹

At first glance, it seems that the Nyāya-Vaiśeṣika thinkers are sensitive to this distinction between real and nominal definitions. Defenders of the meta-linguistic strategy say that the purpose of a definition is to capture the meaning or application-conditions of a linguistic expression. So, a definition that serves this purpose could just be a nominal definition. According to at least some defenders of the co-extensive property strategy (like Vātsyāyana), the purpose of a definition of a kind *K* is to lay down a defining characteristic that distinguishes the *nature* of instances of *K* by ruling out objects of all other kinds. A definition that fits this criterion could be a real definition. However, these thinkers cannot accept any strict dichotomy between real and nominal definitions. For thinkers like Udayana who accept both the refined co-extensive property strategy and the metalinguistic strategy, a definition of a kind *K* in terms of a property *C* may not only give us the application-conditions of the word “earth” or “understanding” but may also capture the very nature or essence that unifies all instances of earth or understanding and distinguishes them from objects of all other kinds. Thus, by removing metalinguistic ignorance, such a definition could also remove metaphysical ignorance about the nature of a kind. So, the same definition could function both as a nominal definition and as a real definition.

⁷⁹ See, for different notion of real definition, Robinson (1954, ch. 6).

C. Against Bhāsarvajña

Let us close this section with a comparison amongst the three strategies for solving the paradox of definitions. Udayana argues that both the refined co-extensive property strategy and the metalinguistic strategy have some advantages over Bhāsarvajña's distinguishing property strategy.

If Bhāsarvajña is right, a defining characteristic of a kind *K* can be either under- or overextended. So, it need not play the role of a negative-only reason in an inference that either proves that all instances of *K* are distinct from other entities, or that a certain linguistic expression can be correctly applied to all instances of *K*. Udayana takes this to be a defect of Bhāsarvajña's proposal.

Still, that which the *Bhūṣaṇa* has said, "The expressions 'defining characteristic,' 'sign,' and 'mark,' are synonyms," is false. For, when either distinctness or usage is to be established, there is no place for a positive reason. This is because a knowledgeable person (*vyutpanna*) would engage in activities simply on his own, and a non-knowledgeable person would have no familiarity with a similar site.⁸⁰

Following Vardhamāna, we can explain Udayana's thought as follows.⁸¹ If defining characteristics are just marks or signs that could be either underextended or overextended, then they will not be suitable for removing certain kinds of ignorance, e.g., for the purposes of demonstrating the distinction between different kinds and characterising the range of objects that a particular linguistic expression can be correctly applied to.

Udayana distinguishes between two kinds of agents: knowledgeable and non-knowledgeable. The distinction can be cashed out in two ways. First, the knowledgeable agent could be someone who can distinguish all instances of a certain kind *K* from all objects of other kinds *K*₁, *K*₂, *K*₃, ..., and so on; but the non-knowledgeable agent cannot. Alternatively, the knowledgeable agent could be linguistically competent, such that they know exactly which objects a certain linguistic expression *E* can be correctly applied to; but the non-knowledgeable agent lacks such linguistic competence. In either case, the knowledgeable agent stands in no need of definitions; she can perform mental, linguistic, and physical activities pertaining to relevant kind *K* or the relevant expression *E* without further help.

⁸⁰ Kir_A 30.7-9: *yat punar āha bhūṣaṇo 'lakṣaṇam cihnam liṅgam iti paryāyā' iti, tad asat; vyāvṛttau sādhye anvayino 'navakāśāt | vyutpannasya svayam eva vyavahārāt | avyutpannasya sapakṣaparicayābhāvāt |*

⁸¹ KirP 197.12-15: "Even though there is a contradiction because, in virtue of [Udayana's own statement] beginning with "Then, let this be....," a positive correlation [between the defining characteristic and the target property] has been admitted on the basis of the example of a pot in the case where something other than a pot is made the site, nevertheless there is no room for a positive reason when all things delimited by earthhood have been made the site. This is the import." (*yady apy āstām tāvad ityādinā ghaṭānyapakṣikaraṇe ghaṭadrṣṭāntenānvayo svīkṛta eveti virodhas tathā 'pi pṛthivītvāvacchinnayāvātpakṣikaraṇe nānvayino 'vakāśa iti bhāvah |*) The reference is to an earlier passage which I haven't discussed so far. But I address this passage (quoted in fn. 92), and the problem that Vardhamāna is referring to, in the appendix to this essay.

However, to remove the metaphysical or metalinguistic ignorance of the non-knowledgeable agent, it may be necessary to inform her of a defining characteristic. Using such a defining characteristic, the agent should be able to run an inference like (1) or (3). But, as we already know, in inferences like (1) and (3), there is no available similar site (*sapakṣa*), i.e., a place other than the site where the target property of the relevant inference is present. So, if this agent is to make the relevant inference on the basis of a defining characteristic, the defining characteristic has to be a negative-only reason. If the defining characteristic is pervaded by the target property of such an inference, it cannot be either underextended or overextended: it must either be present in all and only instances of *K*, or must be present in all and only objects to which the expression *E* can be correctly applied. So, even though Bhāsarvajña may not be wrong in thinking that an underextended or overextended property can be useful for resolving certain kinds of uncertainty, such a property cannot remove metaphysical and metalinguistic ignorance of certain kinds.

We might worry that Udayana’s criticism does not satisfactorily address the challenge presented by Bhāsarvajña against the co-extensive property strategy. One of Bhāsarvajña’s reasons for rejecting that strategy was that certain definitions presented in authoritative theoretical texts like the *Nyāyasūtra* and *Vaiśeṣikasūtra* appear to be underextended. But Udayana is unperturbed by this consideration.

[The opponent:] In that case, why is the sentence “A substance is what possesses motion” taught amongst the definitions of substance?

[Reply:] For the sake of conveying that this is a unique property of substances alone, like the property of being a substrate cause and like the property of possessing qualities. However, it is not being conveyed as a defining characteristic, making any substance the site [of the inference], since such a defining characteristic will be partially unestablished in the context of establishing the distinctness [of substances from other entities]. And, even if only spatially limited substances were used as the site, the defining characteristic would remain unique [to the site]. Therefore, the import is simply that, if there is a disagreement regarding the status of wind and the inner sense as substances in virtue of their imperceptibility, the partial lack of establishment [of the actual defining characteristic of substances, i.e., substancehood] should be avoided by establishing it by means of the property of possessing motion.⁸²

Udayana is offering an interpretation of *Vaiśeṣikasūtra* 1.1.14: “The defining characteristic (*lakṣaṇa*) of a substance is that it possesses motion; it possesses qualities; it is the substrate cause (*samavāyikāraṇa*) [for other substances, qualities, and motions].” On Udayana’s view,

⁸² Kir_A 30.9-15: *kathaṃ tarhi śāstre 'kriyāvad dravyam' iti dravyalakṣaṇeṣu paṭhyate? dravyasyaivāyam asādhāraṇo dharmah samavāyikāraṇatvavad guṇavattvavac ceti pratipādanārtham, na tu lakṣaṇatvena dravyamātram pakṣikṛtya, vyāvṛttisādhane bhāgāsiddhatvāt | mūrtadravyamātrapakṣikāraṇe 'py asādhāraṇatvāt | tasmād vāyumanasor apratyakṣatvena dravyatvavipratipattau ca kriyāvattvena tat prasādhya bhāgāsiddhiḥ pariharaṇīyeti tasya tātparyam |*

this does not convey any genuine defining characteristic at all. Rather, it only indicates that the property of possessing motion, etc. should be treated as unique properties of substances, properties that do not belong to entities of any other kind. For Udayana, since these properties do not belong to all substances, these properties are ill-suited to perform the work that a defining characteristic of a substance is required to do: namely, to prove that all substances are distinct from entities of other kinds, or that all entities of a certain kind should be called “substance.” If they were used as a reason in an inference that has all substances as its site, the reason in question would be partially absent from the site. For the property of possessing motion is absent from substances like ether, space, and time that are present everywhere. So, there would be a fault of the reason’s being partially unestablished in the site (*bhāgāsiddhi*). In reply, Bhāsarvajña could argue that this fault can be avoided by restricting the site: for example, we could make the inference, “All spatially limited substances are distinct from entities other than substances, since they possess motion,” or the inference, “These entities (i.e., spatially limited substances) should be called ‘substance,’ since they possess motion.” But, even then, the reason would be uniquely present in the site. Once again, since there would be no place other than the site where both the reason and the target property are present, there would be no case of positive correlation. So, the reason in question will retain its negative-only character.

Thus, according to Udayana, the *sūtra* in question should be interpreted in a looser manner. In the final analysis, the defining characteristic of all substances is not their possession of motion or qualities, or their being substrate causes, but rather their substancehood. So, we can make inferences of the form, “These entities (i.e., earth, water, fire, wind, and so on) are distinct from entities of other kinds, since they possess substancehood,” or “These entities (i.e., earth, water, fire, wind and so on) should be spoken of as ‘substance,’ since they possess substancehood.” But we may be uncertain about whether imperceptible things that are part of the site—like wind or the inner sense—possess the reason, i.e., substancehood. If they did not, then the reason would be missing from some substances and therefore would be partially unestablished in the site. To resolve this uncertainty, we can infer that wind and the inner sense are substances, by relying on the fact that they possess motion. After all, we know that wind blows from one place to another, and the inner sense moves around from one sense to the next as we direct our attention at objects of those different senses. This, in turn, would help us to prove that all substances are distinct from entities of other kinds, or that they are correctly called “substance,” on the basis of the fact that they possess substancehood.

The lesson, then, is that, even though the apparent definitions given in texts like the *Vaiśeṣikasūtra* are extensionally inadequate, that does not mean that we should relax the requirement of extensional adequacy for definitions. This is because extensionally inadequate definitions cannot perform certain roles—of removing certain forms of metaphysical and metalinguistic ignorance—that we ordinarily expect them to perform in theoretical texts. So, Udayana’s suggestion is that we reinterpret these texts so that they are no longer taken to provide proper definitions, but rather only tools for settling certain kinds of questions or disputes.

Even though Udayana does not adopt Bhāsarvajña's conception of definitions, he agrees with Bhāsarvajña that defining characteristics can serve as methods of knowing. On Udayana's view, a defining characteristic is a negative-only reason that helps us prove that entities of a certain kind are distinct from entities of other kinds, or that entities of a certain kind should be spoken of using a certain linguistic expression. So, in an extended sense, it serves as a method of knowing by which these facts can be proved.

However, consider those who have said, "A method of knowing alone and not a defining characteristic establishes everything. And, if a defining characteristic were [always] required, there would be a regress." Those people follow the principle, "I blame [this wine] and drink [it]" (*nindāmi ca pivāmi ceti nyāyah*)⁸³ This is because whatever method of knowing is put forward as something that establishes a specific object or establishes a specific use of a linguistic expression by avoiding overextension and underextension, is nothing other than a defining characteristic.⁸⁴

However, this proposal is subject to the same worry about repetition that Bhāsarvajña's proposal is subject to. A defining characteristic can only establish facts about the world or linguistic usage that are already well-known to ordinary people. So, theoretical texts that lay down such defining characteristics are merely repeating bits of knowledge that are already available from other sources. Like Bhāsarvajña, Udayana thinks that such repetition is in fact valuable:

[The opponent:] That [act of putting forward a method of knowing] is repetition.

[Reply:] Even for us, it is repetition indeed. For, in this text, nothing out of the ordinary is being said. And there is no regress, since the establishment [of distinctness or linguistic usage] is possible just as in the case of the defining characteristics of diseases, etc. in medicine and the like, or as in the case of the defining characteristics of linguistic expressions, etc. in grammar. This is because, even in those cases, one gains knowledge by means of defining characteristics, by relying on usage based on relations [between the relevant defining characteristics and the targets of the definitions] (*sambandhavyavahāram āśritya*).⁸⁵

⁸³ In his commentary *Rahasya*, Mathurānātha Tarkavāgīśa (16th century CE) explains this principle by quoting the larger verse that it is part of (KirR 123.16-18): "My father has been killed by a trifling amount (*kiñcitkayā*) [of wine]; nevertheless, I blame this [wine] that has killed my kin and drink it" (*hataḥ kiñcitkayā pitā | tathāpy enām svagotragnīm nindāmi ca pivāmi ca ||*)

⁸⁴ KirA 30.14-16: *ye tu pramāṇam eva sarvasya vyavasthāpakam na tu lakṣaṇam, tadapekṣāyām anavasthām āhuh; teṣām nindāmi ca pivāmi ceti nyāyah | yato 'vyāptyatīvvyāptiparihāreṇa tattadarthavyavasthāpakam tattadyavahāravāvasthāpakam ca pramāṇam upādadate tad eva lakṣaṇam |*

⁸⁵ KirA 30.16-19: *anuvādaḥ sa iti cet, asmākam apy anuvāda eva | na hy alaukikam iha kiñcid ucyate | na cānavasthā, vaidyakādau rogādīlakṣaṇavad vyākaraṇādau śabdādīlakṣaṇavac ca vyavasthopapatteḥ | tatrāpi hi sambandhavyavahāram āśritya lakṣaṇair api vyutpaṭṭiḥ |* According to a variant reported by the Ahmedabad edition of the text, "*sambandhavyavahāram*" should be read as "*sammugdhavyavahāram*" (KirA 30, fn. 8). In his commentary, Mathurānātha makes two helpful comments (KirP 123.30-124.4). First, he notes that the

Udayana grants that, in giving definitions, a theoretical text of philosophy may only be conveying knowledge that is available to us from other sources. But the definitions are still useful because they remove confusion. Udayana offers two examples: grammar and medicine. In his grammar, Pāṇini (2nd century BCE) defines a nominal base (*prātipadika*) as a meaningful expression that is distinct from a verbal root (*dhātu*) and an affix (*pratyaya*).⁸⁶ What this definition conveys will be known to any user of Sanskrit who may not have formally learnt its grammar from a textbook but knows how the language works. But it is useful for the beginner who does not know what the word “nominal base” in the context of Sanskrit grammar means, or does not understand the distinction between these linguistic items. Similarly, a text of medicine may give us defining characteristics of different kinds of disease. A medically untrained person, who has not studied any textbook of medicine but has observed many cases of fever (*jvara*), may be able to reliably diagnose fever on the basis of its symptoms across a wide range of cases. This suggests that such a person has an implicit grasp of the defining characteristics of fever. Yet, it could still be useful for an author of a medical textbook to restate the independently well-known defining characteristics of fever, because that can help an inexperienced person gain the same knowledge that is available to others. In either case, Udayana assures us, there is no risk of a regress here. The typical addressee of a theoretical text—even though they may be confused about some subject-matter—will not be completely ignorant about how the world works, or how words are used. So, by exploiting whatever worldly knowledge or linguistic competence that the confused person possesses, a theoretical text can in principle resolve the relevant confusion. So, definitions will remain just as useful in the context of philosophy as they are in medicine or grammar.

Conclusion

The three solutions to the paradox of definitions fit into a unified understanding of definitions that is already implicit in the work of early Nyāya thinkers like Vātsyāyana and Uddyotakara. For the early Nyāya thinkers, definitions are epistemic tools: they lay down defining characteristics that help us distinguish instances of a certain kind from objects of other similar and dissimilar kinds. In response to the paradox of definitions, later Nyāya-Vaiśeṣika thinkers refine, or revise, this idea in three ways.

Friends of the refined co-extensive property strategy think that defining characteristics remove metaphysical ignorance. They help us to prove that all instances of a certain kind are distinct from objects of other kinds. Bhāsarvajña, the sole defender of the distinguishing property strategy, disagrees. On his view, defining characteristics need not distinguish *all* instances of a certain kind from objects of other kinds. Rather, they are useful insofar as they

definitions in grammar that Udayana mentions are the definitions of grammatical categories like nominal bases (*prātipadika*). Second, he glosses “*sambandhavyavahāram āśritya*” as “with the help of awareness of the usage of the expression ‘fever’ and so on, pertaining to a qualificand of the relevant properties”

(*prakṛtadharmaviśeṣyakajvarādivyavahārajñānasahakāreṇa*).

⁸⁶ PS 1.2.45: *arthavad adhātur apratyayaḥ prātipadikam* |

remove our uncertainty about kind-membership, i.e., about whether an object belongs to a certain kind, in some contexts. Finally, according to the metalinguistic strategy, defining characteristics remove metalinguistic ignorance. They constitute the ordinary meaning or application-conditions of a linguistic expression borrowed from natural language.

Where does this leave us with Matilal's hypothesis? On that hypothesis, a Nyāya-Vaiśeṣika theorist like Udayana is not engaged in the project of giving stipulative definitions or conceptual analyses, but rather in a project of "conceptual engineering," which involves replacing our ordinary concepts with closely related but distinct concepts that are better suited to serve our theoretical and practical purposes. What our discussion of the method of definitions shows is that this characterisation will not be acceptable to Nyāya-Vaiśeṣika thinkers like Vyomaśiva, Śrīdhara and Udayana.

First, our discussion has revealed that, for these Nyāya-Vaiśeṣika thinkers, a definition need not serve any single purpose: the same definition may not only provide metaphysical knowledge about the distinction between theoretically significant kinds, but may also provide metalinguistic knowledge about the ordinary meaning or application-conditions of expressions borrowed from natural language. So, it is implausible to think that Nyāya-Vaiśeṣika definitions uniformly promote the aim of conceptual engineering.

Second, it is mysterious why Matilal thinks that these philosophers are not engaged in conceptual analysis. As we have seen, defenders of the metalinguistic strategy unequivocally think that at least one purpose of Vaiśeṣika definitions of ontological categories is to characterise the ordinary meaning or application-conditions of natural language expressions like "substance" and "earth." Of course, in offering such definitions, these thinkers might make use of the Vaiśeṣika ontological scheme. But that is true of pretty much any case of conceptual analysis: for example, someone who wants to analyse the concept of knowledge in terms of modal conditions like safety or sensitivity will make use of the theoretical framework of possible worlds; similarly, someone who wishes to analyse the notion of rational belief in terms of subjective probabilities will make use of the framework of probability theory. But that does not mean that such characterisations of knowledge or rational belief do not seek to capture the way in which these concepts are ordinarily used.

Third, if Matilal were right, then the Vaiśeṣika definitions of ontological categories like substance and earth would *not* lay down the ordinary meaning or application-conditions of the relevant expressions. But, then, these definitions would not be suitable for removing any metalinguistic ignorance that a confused person might have about what these expressions mean, or about how to use these expressions in ordinary language. But this, as we know, is precisely what some definitions of these ontological categories are supposed to do. Thus, Matilal's characterisation of the method of definitions—though perhaps insightful—would not be acceptable by lights of Nyāya-Vaiśeṣika thinkers themselves.

Appendix: On Treating Defining Characteristics as Negative-Only Reasons

The aim of this appendix is to survey some of the technical problems that Udayana raises for the view that defining characteristics are negative-only reasons. We have considered two kinds of inferences where defining characteristics play this role.

(A) *The Thesis*. Earth is distinct from water and so on.

The Statement of the Reason. For it possesses earthhood.

The Illustration. Whatever is not distinct from water and so on lacks earthhood, e.g., water.

The Application. Earth does not lack earthhood.

The Conclusion. Therefore, it is distinct from other entities.

(B) *The Thesis*. This substance under dispute is spoken of as “earth.”

The Statement of the Reason. For it possesses earthhood.

The Illustration. Whatever is not spoken of as “earth” lacks earthhood, just like water and so on.

The Application. This does not lack earthhood.

The Conclusion. Therefore, this is spoken of as “earth.”

Udayana considers several objections against (A).

The first is that the site of the inference suffers from the problem of *having a qualifier that is not well-established (aprasiddhaviśeṣanātā)*.

Even then, the site has a qualifier that is not well-established, because the distinctness [of earth] from other entities is not well-established anywhere; or, if it were established, it would be futile to establish it.”⁸⁷

For any inference, the target property—which qualifies or characterises the site—must be a property that is well-known to the inferring subject. Otherwise, the inferring subject would be inferring a property that she does not have clear understanding of. As a result, the site would suffer from the fault of having a qualifier that is not well-established (*aprasiddhaviśeṣanātā*). For (A), the worry is that, if the subject does not know that earth is distinct from other entities such as water and so on, she will not be sufficiently familiar with the target property. So, the site will have a qualifier that is not well-established in inferences like (A). But, if the property is well-established, then the agent already knows that earth is distinct from other entities. So, making an inference like (A) would be pointless.

Udayana responds to this worry as follows:

[Reply:] No, because the distinctness from other entities is established by perception indeed in case of objects like a pot. However, this distinctness is not established with

⁸⁷ Kir_A 29.4-5: *tathā 'py aprasiddhaviśeṣanaḥ pakṣaḥ, itaravyavacchedasya kvacid apy aprasiddheḥ, siddhau vā sādhanavaiyarthyaṭ* |

respect to things that bear the mark of earthhood (*pr̥thivītvanimittākrānte*)—ranging from the atoms [of earth] up to the globe of the earth—by means of a relation of pervasion which involves the exclusion of [other more] specific delimitations (*vyāptyā vyavacchedabhedavyāvṛtṭyā*). So, that it is being established is not a problem.⁸⁸

Udayana’s point is this. The target property of this inference is not unestablished: when we look at familiar objects made of earth, e.g., a pot or a cloth, we are already perceptually aware of their distinctness from other entities such as water and so on. On the basis of these observations, we can learn certain kinds of generalizations: e.g., that all pots are distinct from entities other than earth, or that all cloths are distinct from entities other than earth. These generalizations capture relations of pervasion between (a) properties like pothood and clothhood (which are more specific than earthhood) and (b) the property of being distinct from water and so on. However, we cannot know on the basis of perception (or such generalizations alone) that *all* instances of earth—including imperceptible atoms or the entire planet earth—are distinct from other kinds of entities. Thus, to establish that these too are distinct from water and so on, we need a further inference. This inference will have to depend on our knowledge of a relation of pervasion between earthhood and the property of being distinct from water and so on. Unlike the other relations of pervasion that we may have already learnt about, this relation of pervasion involves the property of earthhood rather than the more specific properties like pothood and clothhood. That is why Udayana describes it as “a relation of pervasion which involves the exclusion of [other more] specific delimitations.”⁸⁹

The second problem is related but a bit more serious: it is the *problem of available cases of positive correlation*.⁹⁰ If Udayana is right, then we can indeed observe cases of

⁸⁸ Kir_A 29.5-7: *na; itaravyāvṛtṭer ghaṭādāv eva pratyakṣasiddhatvāt | kintv āparamāṇor ā ca bhūgolakāt pr̥thivītvanimittākrānte vyāptyā vyavacchedabhedavyāvṛtṭyā vyāvṛtṭir na siddheti sādhyata iti na doṣaḥ |* In the Calcutta edition of the text, “*vyavacchedabhedavyāvṛtṭyā*” is printed as “*avacchedabhedavyāvṛtṭyā*”; see Kir_C 191.4. This fits the later occurrence of the same phrase in the opponent’s objection: see Kir_A 29.9-11 which is translated in fn. 53. Accordingly, I translate “*vyavaccheda*” as “delimitation” in my translation, rather than as “exclusion” or “distinction.”

⁸⁹ In his commentary *Prakāśa*, Vardhamāna Upādhyāya (14th century CE) explains the phrase precisely in this way (Kir_A 29.20-21): “**Exclusion of specific delimitations**” is an explanation of just the expression ‘**by means of a relation of pervasion.**’ A specific delimitation is [a property such as] pothood, clothhood and so on. The meaning of ‘exclusion’ is something that is characterised by the exclusion, i.e., the absence, of that [specific delimitation].” (*vyāptyety asya vyākhyānam avacchedeti | avacchedabhedāḥ ghaṭatvapaṭatvādih | tasya vyāvṛtṭyā virahitattvena lakṣitā vyāvṛtṭir ity arthaḥ |*) The parallel text in the Calcutta edition (Kir_P 193.9-11) seems wrong to me.

⁹⁰ Before the opponent raises this worry, he makes a different point that is not dialectically effective. Even if we perceive pots and cloths as distinct from water and so on, the property of being distinct from water and so on is not well-established for us as a property of all instances of earth. So, would that also not raise the problem of the site’s having an unestablished qualifier? Udayana expresses the worry as follows (Kir_A 29.9-11): “If this is so, then the distinctness [from water and so on] is not established for any object that bears the mark of earthhood by means of a relation of pervasion which involves the exclusion of [other more] specific delimitations. So, once again, the problem of the site’s having a qualifier that is not well-established will follow” (*evam tarhi pr̥thivītvanimittākrānte vyāptyā ’vacchedabhedavyāvṛtṭyā vyāvṛtṭiḥ kvacin na siddhā, iti punar apy aprasiddhaviśeṣaṇatvaṃ samāyātam |*) As Udayana notes, this is a bad objection: in order to make an inference,

positive correlation between earthhood and the property of being distinct from water and so on. In objects like the pot and the cloth, we encounter both the reason, i.e., earthhood, and the target property, i.e., distinctness from water and so on. Since such cases of positive correlation can be observed, what is the point of making an inference that involves a negative-only reason?⁹¹ For example, one could make a different inference:

(C) *The Thesis*. Imperceptible objects like atoms, the globe of earth, etc. are distinct from water, and so on.

The Statement of the Reason. For they possess earthhood.

The Illustration. Whatever possesses earthhood is distinct from water and so on, just like a pot.

The Application. Imperceptible objects like atoms, the globe of earth, etc. possess earthhood.

The Conclusion. Therefore, imperceptible objects like atoms or the globe of earth, etc. are distinct from water and so on.

The relevant reason, in this context, would function as a positive-and-negative reason. This is because the site—which is only restricted to imperceptible earthen objects—does not include the observed cases of positive correlation. As a result, the inferring subject could learn about the relation of pervasion on the basis of observed cases of positive correlation such as the pot or the cloth. Udayana’s response to this worry is brusque:

Then, let this be friendly advice. Still, the defining characteristic of a negative-only reason [or, the defining characteristic as a negative-only reason] is faultless.⁹²

Here, Udayana seems to concede that a defining characteristic could function as a positive-and-negative reason for making in an inference like (C), but he does not explain why we still need to construe defining characteristics as negative-only reasons anymore.

Later, Udayana argues that an inference like (B) not only avoids the problem of the site’s being unestablished, but also the two problems for (A) we have discussed in this

the target property does not have to be well-established for us as a property of the site, since that would make the very act of proving the target property futile. He says (Kir_A 29.11-13): “No; for only a novel qualifier that is connected to the site should be established even when [the site] is characterised by the presence [of the target property] everywhere. This is because a property that is well-established is present in the property-bearer, but it is not the case that a property is established only insofar as it is well-established to be present in the relevant property-bearer; for, if that were the case, due to the establishment [of the property in the property-bearer], establishing it would be futile.” (*na; pakṣasambandhino viśeṣaṇasya sarvatrānvayany api apūrvasya sādhyatvāt | prasiddho hi dharmo dharminam anveti na tu dharmyanvitatayaiva prasiddhaḥ sādhyata iti | tathā sati siddheḥ sādhanavaiyarthiyād iti*)

⁹¹ Kir_A 29.13-15: “Even then, if the distinctness from other entities is established by perception in the case of a pot, etc., then it should be established in the case of atoms and the like merely on the basis of a positive correlation on the strength of those examples [i.e., the pot, the cloth, and so on]. Why is the negative correlation [alone] given a place of honour by way of including the pot, etc. also in the site?” (*tathāpi ghaṭādau ced itaravyāvṛttiḥ pratyakṣasiddhā tatas taddr̥ṣṭāntabalenānvayād eva paramānvādausādhyatām kiṃ ghaṭādikam api pakṣe niḥśipyā vyatireka ādriyata iti cet...*)

⁹² Kir_A 29.15-16: *āstām tāvad ayaṃ suhr̥dupadeśaḥ, kevalavyatirekilakṣaṇam tāvan nirvyudham* |

appendix so far: the site’s having an unestablished qualifier and the availability of cases of positive correlation. First, the site of (B) is a substance that the inferring subject is already familiar with; it is an entity which—as Śrīdhara puts it—“is apprehended by its own nature” by the subject. So, the site of the inference is well-established. Thus, the inference does not suffer from the problem of having an unestablished site. Second, even a person who is confused about which objects the expression “earth” applies to is aware of the property of being called “earth.” So, the inference does not suffer from the problem of having an unestablished target property.⁹³ Third, even if that confused person is familiar with *some* earthen objects that are correctly spoken of as “earth”, e.g., a pot made of clay, it still makes sense for her to prove that *any object of the relevant kind* is correctly spoken of as “earth.” This is because she may not have antecedently observed linguistically competent members of her linguistic community applying the word “earth” correctly to imperceptible objects such as earth atoms or the entire planet earth. So, the inference is not futile. But this inference can only be based on a negative-only reason, because the site of the inference includes all the cases of positive correlation that the agent might have observed.⁹⁴

However, we might wonder whether we have to cast the relevant inference as an inference that involves a negative-only reason. Udayana is sensitive to this worry: he considers an objection from an opponent who wants to resist the idea that a defining characteristic should be treated as a negative-only reason. The opponent points out that there is a different way of reconstructing the inference.

Whatever conforms to the presence and the absence of whatever [else] has that [other thing] as its cause, just as the pot and so on have clay as their cause. And the use of the expression “earth” conforms to the presence and absence of earthhood.⁹⁵

The opponent wants to say that we can make a different inference in this case:

(D) *The Thesis.* Any correct use of the expression “earth” has earthhood as its cause.

The Reason. For it conforms to the presence and the absence of earthhood (i.e., it takes place only when earthhood is present, but is absent when earthhood is absent).

The Illustration. Whatever conforms to the presence and absence of something else (in this way) has the latter as its cause, e.g., a clay pot that has clay as its cause.

The Application. Any correct use of the expression “earth” conforms to the presence and absence of earthhood.

⁹³ Kir_A 29.19-30.1: “Even in this case, since the intentional object of linguistic usage is established by its own nature, there is no problem of the site’s being unestablished. For a confused person, since linguistic usage of the expression “earth” is established, there is no problem of [the site’s] having an unestablished qualifier.” (*atrāpi vyavahāraviśayasya svarūpataḥ siddher nāśrayāsiddhiḥ | pṛthivīvyavahārasya saṃmugdhasya siddher nāprasiddhaviśeṣaṇatvam* |)

⁹⁴ Kir_A 30.1-3: “As for the site, since anything that possesses a particular mark (*nimittaviśeṣavataḥ*) is being established [to be something that is correctly spoken of as “earth”], establishing this is not futile. And if all earth is made into the site, then the reason cannot be a positive one.” (*pakṣe nimittaviśeṣavataḥ sādhyatvān na sādhanavaijāthyam, sarvapṛthivīpakṣīkaraṇena ca nānvayitvam* |)

⁹⁵ Kir_A 30.3-5: *yad yasyānvayavyatirekāv anuvidhatte tat taddhetukam, yathā ghaṭādi mṛdādihetukam, anuvidhatte ca pṛthivīvyavahāraḥ pṛthivītvasyānvayavyatirekau iti cet* |

The Conclusion. Therefore, it has earthhood as its cause.

This inference can remove any confusion that a linguistically incompetent agent might have about how to use the word “earthhood.” Yet, the inference—according to the opponent—is based on a positive-and-negative reason. The crucial premise of this argument is the following: if the presence of x is always preceded by the presence of y and that the absence of y is always followed by the absence of x , then y is a cause of x . For example, we observe that the arising of a pot is always preceded by the presence of clay; similarly, we also see that a clay pot never arises when there is no clay around. So, we can conclude that clay is the cause of a clay pot. Similarly, we observe that any correct application of the word “earth” only takes place when the object picked out by the word possesses earthhood, but if it does not possess earthhood, then the word cannot be correctly applied to it. So, we can learn on the basis of such positive and negative correlations that earthhood is the condition for correctly applying the word “earth.”

Udayana’s response to this objection involves two points.

No. For, if it is to be established that the application of the expression “earth” has earthhood as its condition (*nimitta*), then there is no positive correlation. This positive correlation—merely in virtue of being spoken of using variables (*kevalam sarvanāmnā vyavahāramātreṇa*)—is disingenuous (*vakraḥ*). And, this is not distinct from a negative correlation because there is [only] a difference in the speaker’s intention.⁹⁶

The first claim is that, even while stating (D), the opponent is not relying on any case of positive correlation between the reason and the target property. This is presumably because the reason in this inference is the property of conforming to the presence and the absence of earthhood (*pr̥thivītvānvayavyatirekānuvidhāna*) and the target property is having earthhood as a causal condition (*pr̥thivītvanimittakatva*). So, a case of positive correlation would have to be some object that both (a) conforms to the prior presence and the prior absence of earthhood and (b) has earthhood as its causal condition. But the example that is used to motivate the relation of pervasion is the clay pot. This is something from which the reason and the target property are both absent. So, this is not a case of positive correlation.

Moreover, in (D), the relevant relation of pervasion is a bit too general: whatever conforms to the presence and the absence of something else has the latter as its cause. To check whether this relation of pervasion holds in the specific case of the reason and the target property of (D), we need to check if there are observed cases of positive correlation between the two. But Udayana’s (implicit) claim is that the only cases of positive correlation that we will find will be cases where an agent applies the word “earth” to an object o insofar as she undergoes an awareness of o as earth on the basis of its earthhood. But those are precisely the

⁹⁶ Kir_A 30.4-5: *na, pr̥thivītvanimittakatve pr̥thivīvyavahārasya sādhye anvayābhāvāt | kevalam sarvanāmnā vyavahāramātreṇa vakro ’yam anvayaḥ, sa ca vyatirekān na bhidhyate, vivakṣābhedaṭ |*

cases that are part of the site. Thus, there is no similar site (*sapakṣa*) (i.e., a place other than the site where the target property is present) that could confirm the relevant relation of pervasion. So, this relation of pervasion can only be confirmed by cases of negative correlation. This, in turn, will make the reason negative-only.

The second claim is that it is disingenuous of the opponent to state the relation of pervasion using variables like “whatever”, “that,” and so on.⁹⁷ Even though a relation of pervasion looks like a relation of positive pervasion when stated in this way, it need not actually be distinct from a relation of negative pervasion, i.e., a relation of pervasion that is apprehended on the basis of cases of negative correlation. This is because the variables could be interpreted in multiple ways depending on the speaker’s intention. For example, if the speaker’s intention were to pick out absences instead of positive entities by those variables, the relevant relation would end up being a relation of negative pervasion. In the final analysis, on Udayana’s view, there is no deep difference between relations of positive pervasion and relations of negative pervasion. For any two properties *X* and *Y*, *X* pervades *Y* just in case *Y* does not occur at a place where the absence of *X* occurs. This relation of pervasion can be expressed both positively and negatively: we can state it positively by saying, “Wherever *Y* occurs, *X* occurs,” or we can state it negatively by saying, “Wherever *X* does not occur, *Y* does not occur.”⁹⁸ What matters, however, is how we ascertain this relation of pervasion. We can either learn about this relation by observing cases of *both* positive and negative correlations, or by observing cases *solely* of positive correlations, or by observing cases *solely* of negative correlations. Udayana’s claim is that, in inferences like (B) and (D), the relation of pervasion can only be known on the basis of negative correlations between the reason and the target property.

Later Naiyāyikas like Gaṅgeśa Upādhyāya (14th century CE) clearly found Udayana’s response to the first problem for (A)— the site’s having qualifier that is not well-

⁹⁷ Compare Vardhamāna’s explanation of this point (Kirc 197.9-10): “The reason is that whatness (*yattva*) or thatness (*tattva*) is not uniform, so the statement of a positive correlation by means of variables depending on the apprehension of a negative pervasion is what is meant by ‘disingenuity.’” (*na hi yattvaṃ tattvaṃ vā ’nugatam iti vyatirekavyāptigrahaṃ upajīvyā sarvanāmnā ’nvayābhīdhānam eva vakratvārthaḥ*)

⁹⁸ See, for example, Udayana’s remarks on postulation (*arthāpatti*) negative-only inferences (i.e., inferences based on negative-only reasons) in *Nyāyakusumāñjali* (NKu 425.3-6 and 426.1-2): “[The Bhāṭṭa opponent:] A negative-only inference that is accepted by others [i.e., the Naiyāyikas] is an instance of postulation, because there is no positive correlation. [Reply:] We do not forbid the use of the term ‘postulation’ in such a specific manner with regard to an inference. [The opponent:] Why is the word ‘inference’ used in that case? [Reply:] Because it arises from an inferential mark that is invariably related [to the target property]. For the property of not occurring without the target property is common to a negative-only reason just as it is to a positive reason. And the ascertainment of that property takes place either through positive and negative correlations, or by one of the two [i.e., by either solely positive or solely negative correlations]. Therefore, it is reasonable that the word ‘postulation’ is a synonym of ‘inference’, or a term that describes a species of that inference, just like ‘*pūrvavat*’ and so on.” (*kevalavyatireky anumānaṃ parābhīmatam arthāpattiḥ; anvayābhāvād iti cet—evam etāvātā viśeṣānumāne ’rthāpattivyavahāraṃ na vārayāmaḥ | tatrānumānavyavahāraḥ kuta iti cet—avinābhūtaḥ samutpannatvāt | sādhyadharmeṇa vinā hy abhavanam anvayina iva vyatirekiṇo ’py aviśiṣṭam, tanniścayaś cānvayavyatirekābhyām anyatareṇa veti | tasmād arthāpattir ity anumānasya paryāyo ’yam, tadviśeṣavacanāṃ vā pūrvavadādivad iti yuktam |*) For a translation and some discussion of this passage, see Das (2020b).

established—unsatisfactory. So, they sought to solve the problem in two different ways.⁹⁹ In his first solution, Gaṅgeśa grants that the target property in an inference like (A)—the distinctness from other entities such as water and so on—is in fact not well-established. But he notes that it can be understood as a collection of *thirteen* distinctness-properties: namely, distinctness from water, the distinctness from fire, distinctness from wind, and so on. Each of these distinctness-properties can be known independently in other objects. For example, in samples of water, we can perceive the distinctness from fire, the distinctness from wind, and so on, but not the distinctness from water. Similarly, in samples of fire, we may observe the distinctness from water, the distinctness from wind, but not the distinctness from fire. By using “the method of a sieve” (*cālanīnyāya*), we can collect together all these different distinctness properties, and treat them jointly as the target property of our inference. This obviates the need to accept the claim that we can independently perceive the distinctness from entities other than earth in earthen objects like pots, etc.

The other solution that Gaṅgeśa proposes is a bit more conservative. This solution, too, begins with the concession that the target property in inference (A) may not be something that we are independently familiar with. But he reconstructs the inference differently. On this view, we can learn by observation that a certain relation of pervasion holds between the thirteen other kinds of entities, such as water, etc., and the absence of earthhood: “Whatever is either water, or fire, or wind, etc. lacks earthhood.” If we know that the absence of earthhood pervades water, etc. in this way, we can use earthhood—which, according to Gaṅgeśa, is in fact nothing but the *absence of the absence of earthhood*—to infer that earth is distinct from water, etc. because it possesses earthhood. If a property *X* pervades a property *Y*, then the absence of *X* must necessarily be accompanied by the absence

⁹⁹ In his commentary *Prakāśa*, Vardhamāna mentions both these responses, by partially quoting Gaṅgeśa’s *Tattvacintāmaṇi* (KirP 194.7-16): “However, my father [Gaṅgeśa] has said, ‘The mutual absences of the thirteen [other kinds of entities] such as water and so on—which are well-established—are established in earth. For this very reason, even though there is an awareness of the mutual absence of water and so on taken together, the mutual absences of the thirteen [other kinds of entities] are to be established by means of a negative-only [reason]. So, [the reason does not have] the status of being positive, or of being uncommon (*nānvayitvāsādhāraṇye*). However, in fact, in the case of a negative-only [reason] that has an absence as its target property, a target property that is not itself well-established is established. The absence of the absence that is pervaded by the absence of the reason is established in the site by means of a reason that takes the form of the absence of the absence of the pervader. For, when the site is apprehended as possessing the absence of the pervader, the absence of the pervaded entity must necessarily be present [in it]. That is to say: the absence of earthhood is apprehended as the pervader of water and so on. So, by means of earthhood that has the nature of the absence of that absence, the mutual absence [of water and so on]—which is not well-established [in earth]—is established, since the awareness of the counterpositive has already taken place.’” (*asmaṭpitrcaraṇās tu jalādīnām trayodaśānyonyobhāvās trayodaśasu prasiddhāḥ pṛthivyām sādhyate | ata evākāśe militajalādipratyogikānyonyābhāvapratītāv api vyatirekiṇā trayodaśānyonyābhāvāḥ sādhyā iti [nānvayitvāsādhāraṇye] vastutas tv abhāvasādhyake vyatirekiṇy aprasiddham eva sādhyam siddhyati | yasyābhāvasya hetvabhāvo vyāpako grhītas tasyābhāvāḥ pakṣe vyāpakābhāvābhāvarūpeṇa sādhanena sidhyati | vyāpakābhāvavattayā jñāte vyāpyābhāvaśyambhāvāt | tathā hi jalādīvyāpakāḥ pṛthivītvābhāvo jñāta iti tadbhāvābhāvātmakatvena pṛthivītvābhāvānyonyābhāvo ‘prasiddha eva siddhyati | pratiyogijñānasya vṛttatvād ity āhuḥ |*) What Vardhamāna quotes here is in fact of an amalgam of two passages in the section on negative-only inference in *Tattvacintāmaṇi*, see TCMc 618.4-8 and 641.8-10 and 641.1-2. Following Gaṅgeśa’s text, I have corrected the edition of Vardhamāna’s *Prakāśa* from “*nānvayitvāt sādharāṇye*” to “*nānvayitvāsādhāraṇye*”, since the point is that the relevant relation of pervasion in this case is not known on the basis of positive correlations, and the reason does not suffer from the fault of uncommonness (*asādhāraṇya*), i.e., the fault of being present only in the site (without the target property) and not elsewhere.

of *Y*. Since anything that is identical to an entity other than earth (like water and so on) lacks earthhood, the absence of the absence of earthhood—i.e., earthhood—must be invariably accompanied by the property of being distinct from water and so on. Thus, we can still use earthhood to infer that earth is distinct from entities of other kinds.¹⁰⁰

Conflict of Interest Statement

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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- Kir_C Udayana's *Kiraṇāvalī* in *Kiraṇāvalī*. Edited by Sivachandra Sarvabhauma. Calcutta: Asiatic Society, 1911.
- Kir_P Vardhamāna's *Prakāśa* in *Kiraṇāvalī*. Edited by Sivachandra Sarvabhauma. Calcutta: Asiatic Society, 1911.
- NA Siddhasena Divākara's *Nyāyāvatāra* in *Jaina Epistemology in Historical and Comparative Perspective: Critical Edition and English Translation of Logical-epistemological Treatises: Nyāyāvatāra, Nyāyāvatāravivṛti and Nyāyāvatāraṭippana with Introduction and Notes*. Edited by Piotr Balcerowicz. Stuttgart: Steiner, 2001.
- NS Gautama's *Nyāyasūtra* in *Gautamīyanyāyadarśana with Bhāṣya of Vātsyāyana*. Edited by Anantalal Thakur. New Delhi: Indian Council of Philosophical Research, 1997.
- NBh Vātsyāyana's *Nyāyabhāṣya* in *Gautamīyanyāyadarśana with Bhāṣya of Vātsyāyana*. Edited by Anantalal Thakur. New Delhi: Indian Council of Philosophical Research, 1997.
- NBhū Bhāsarvajña's *Nyāyabhūṣaṇa Śrīmadācāryabhāsarvajñapraṇītasya Nyāyasārasya Svopajñam Vyākhyānam Nyāyabhūṣaṇam*. Edited by Svāmī Yogīndrānanda. Varanasi: Śaḍdarśana Prakāśana Pratiṣṭhāna.

¹⁰⁰ Gaṅgeśa's argument here depends on the principle that, for any positive entity *X* (i.e., an entity belonging to any Vaiśeṣika ontological category other than absence), the absence of the absence of *X* is *X*. This principle became controversial amongst later Nyāya thinkers such as Raghunātha Śīromaṇi (15th century CE). For discussion of this principle in relation to negative-only reasons, see Das (2020a).

- NK Śrīdhara's *Nyāyakandalī* in *Nyāyakandalī Being a Commentary On Prasastapādabhāṣya, With Three Sub-commentaries*. Edited by Jitendra S. Jetly and Vasant G. Parikh. Baroda: Oriental Institute, 1991.
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- NM I Jayanta Bhaṭṭa's *Nyāyamañjarī* in *Nyāyamañjarī: Sampādakagrathitanyāyasaurabhākhyāṭippaṇīsamanvitā*. Vol. I. Edited by K. S. Varadacharya. Mysore: Oriental Research Institute, 1969.
- NV Uddyotakara's *Nyāyavārttika* in *Nyāyabhāṣyavārttika of Bhāravdāja Uddyotakara*. Edited by Anantalal Thakur. New Delhi: Indian Council of Philosophical Research, 1997.
- NVTṬ Vācaspati Miśra's *Nyāyavārttikatātparyāṭikā* in *Nyāyavārttikatātparyāṭikā of Vācaspatimiśra*. Edited by Anantalal Thakur. New Delhi: Indian Council of Philosophical Research, 1996.
- NVTP Udayana's *Nyāyavārttikatātparyapariśuddhi* in *Nyāyavārttikatātparyapariśuddhi of Udayanācārya*. Edited by Anantalal Thakur. New Delhi: Indian Council of Philosophical Research, 1996.
- PS Pāṇini's *Aṣṭādhyāyī* in *Kāṣikā: A Commentary on Pāṇini's Grammar by Vāmana and Jayāditya*. Edited by Aryendra Sharma. Hyderabad : Osmania University, Sanskrit Academy, 1969-1985. URL = < http://gretel.sub.uni-goettingen.de/gretel/1_sanskr/6_sastra/1_gram/paniniiu.htm >
- PDS Prasastapāda's *Padārthadharmasaṅgraha* in *Prasastapādabhāṣyam: With the Commentary Kiraṇāvalī of Udayanācārya*. Edited by Jitendra S. Jetly. Baroda: Oriental Institute, 1971.
- TCM_C Gaṅgeśa Upādhyāya's *Tattvacintāmaṇi* in *The Tattvacintāmaṇi of Gaṅgeśa Upādhyāya; Anumityādibādhānta Anumānakhaṇḍā with the Commentary 'Rahasya' by Mathurānātha Tarkavāgīśa*, Volume II Part I. Edited by Kāmākhyānātha Tarkavāgīśa. Calcutta: Asiatic Society, 1897. Reprinted in Delhi: Chaukhamba Sanskrit Pratishthan, 1990.
- VS_B Kaṇāda's *Vaiśeṣikasūtra Vaiśeṣikasūtra of Kaṇāda with the Commentary of Candrānanda*. Critically edited by Muṇi Śrī Jambuvijayaji. Baroda: Oriental Institute, 1961.

VSV Candrānanda's *Vṛtti* on the *Vaiśeṣikasūtra* in *Candrānanda's commentary on the Vaiśeṣika-Sūtra*. Edited by Ferenc Ruzsa. Critical edition of all MSS [available at: <https://elte.academia.edu/FerencRuzsa> (17 April 2019)].

VV Vyomaśiva's *Vyomavatī* in *Vyomavatī*. Edited by Gaurīnātha Śāstrī. Varanasi: Sampurnanand Sanskrit Vishvavidyalaya, 1983.

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