

**Gaṅgeśa on Epistemic Luck**  
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**Abstract**

This essay explores a problem for Nyāya epistemologists. It concerns the notion of *pramā*. Roughly speaking, a *pramā* is a conscious mental event of knowledge-acquisition, i.e., a conscious experience or thought in undergoing which an agent learns or comes to know something. Call any event of this sort a *knowledge-event*. The problem is this. On the one hand, many Naiyāyikas accept what I will call the *Nyāya Definition of Knowledge*, the view that a conscious experience or thought is a knowledge-event just in case it is true and non-recollective. On the other hand, they are also committed to what I shall call *Nyāya Infallibilism*, the thesis that every knowledge-event is produced by causes that couldn't have given rise to an error. These two commitments seem to conflict with each other in cases of *epistemic luck*, i.e., cases where an agent arrives a true judgement accidentally or as a matter of luck. While the *Nyāya Definition of Knowledge* seems to predict that these judgements are knowledge-events, *Nyāya Infallibilism* seems to entail that they aren't. In this essay, I show that Gaṅgeśa Upādhyāya, the 14<sup>th</sup> century Naiyāyika, solves this problem by adopting what I call *epistemic localism*, i.e., the view that upstream causal factors play no epistemically significant role in the production of knowledge.

**Keywords:** Gaṅgeśa Upādhyāya, *pramā*, knowledge, infallibilism, epistemic luck, Nyāya

**Introduction**

This essay explores a problem for Nyāya epistemologists. It concerns the notion of *pramā*. Roughly speaking, a *pramā* is a conscious mental event of knowledge-acquisition or learning, i.e., a conscious experience or thought in undergoing which an agent learns or comes to know something. Suppose I see that there is a white picket fence outside my window. In undergoing this perceptual awareness, I learn or come to know that there is a white picket fence outside my window. So, this perceptual awareness is a *pramā*. Similarly, suppose I see that the sky is overcast and, on that basis, consciously infer that it will rain today. In making that inferential judgement, I may learn or come to know that it will rain today. If that is the case, this inferential judgement is a *pramā*. Call any such event of knowledge-acquisition—any *pramā*—a *knowledge-event*.

The problem is this. Many Naiyāyikas accept:

*The Nyāya Definition of Knowledge.* An awareness-event (*jñāna*, i.e., a conscious experience or thought) counts as a knowledge-event if and only if it is a true non-recollective awareness-event (*yathārthānubhava*).<sup>1</sup>

But these Naiyāyikas are also committed to:

*Nyāya Infallibilism.* Any knowledge-event is produced by a causal complex (*kāraṇasāmagrī* or collection of causes) that couldn't give rise to an error.

These two commitments seem to conflict with each other in cases of *epistemic luck*, i.e., cases where an agent undergoes an awareness-event that is true accidentally or as a matter of luck.<sup>2</sup> Consider four cases that we will discuss throughout this paper.

*Mist and Fire.* I look at a hill and see what looks like smoke emerging from it. So, I judge that there is smoke on the hill. I am wrong: all I see is a wisp of mist. I had previously observed (in kitchens, etc.) that smoke is always accompanied by fire. On the basis of those observations, I had judged that, wherever there is smoke, there is fire. Now, I remember that generalization. So, I conclude that there is fire on the hill. My judgement is true: there is fire on the hill.

*Horns and Cows.* From a distance, I see an animal with horns. Earlier, I had observed many cows with horns. On the basis of these observations, I judged that all animals with horns are cows. Now, I recall that generalization. So, I conclude that the animal is a cow. My judgement is true: the animal I see is a cow.

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<sup>1</sup> Here, I translate the term “*jñāna*” as “awareness” or “awareness-event.” The standard translation of “*jñāna*” as “cognition” is problematic. In contemporary philosophy of mind and cognitive science, the expression “cognition” is supposed to apply to mental states whose contents can be used for the purposes of theoretical reasoning, verbal reports, and planning action. But, according to some Indian philosophers (e.g., Yogācāra thinkers), “*jñāna*” can include perceptual states that don't fit this description. So, it's better to use the more neutral terms “awareness” or “awareness-event” instead of “cognition.”

<sup>2</sup> Cases like *Mist and Fire* are treated as accidentally true or fact-conforming by Indian philosophers themselves. See, for example, Śrīharṣa's (12<sup>th</sup> century CE) *Khaṇḍanakhaṇḍakhādyā* (KKh 383.23), Gaṅgeśa's (14<sup>th</sup> century CE) *Tattvacintāmaṇi* (TCMc IV.2 499.2-3) and Vyāsārtha's (15<sup>th</sup>-16<sup>th</sup> centuries CE) *Tarkatāṇḍava* (TT I 151.1-4). In post-Gettier epistemology (i.e., after Gettier's (1963) paper on why knowledge isn't justified true belief), similar cases of epistemic luck have received a lot of attention. The relevant kind of epistemic luck is what Pritchard (2005) calls *veritic luck*. For a partial survey of this literature, see Shope (2017). However, the concerns of this literature are somewhat different from mine. First, this literature is concerned with the notion of knowledge, while I here focus on the Indian notion of a *pramā* or a knowledge-event. These two notions are not the same. States of knowing can involve doxastic states that are purely dispositional, but a knowledge-event can only be an awareness-event, i.e., a conscious mental occurrence. A state of knowing can carry information derived purely from memory, but a knowledge-event must be a non-recollective awareness-event whereby one acquires information instead of retrieving information already in one's possession. Second, in the post-Gettier era, the project of analysing knowledge was driven by the aim of finding anti-luck conditions on knowledge, i.e., conditions that would exclude cases of knowledge-destroying epistemic luck. For exceptions, see Hetherington (1999) and Weatherson (2003). But, as we shall see, the later Naiyāyikas weren't invested in the project of proposing anti-luck conditions on knowledge-events.

*The Mistaken Deceiver.* You think that there is no pot in the next room. You want to deceive me. So, you tell me, “There is a pot in the next room.” Since I have no reason to distrust you, I take your utterance at face value. So, I judge that there is a pot in the next room. My judgement is true: there is a pot in the next room.

*The Parrot.* A parrot is hidden behind a door, and it can randomly string together words to form sentences. I don’t know this. On this occasion, imitating the voice of a friend, the parrot utters the sentence, “There is a pot in the next room.” Since I think that my friend is behind the door and have no reason to distrust her, I take the utterance at face value. So, I judge that there is a pot in the next room. My judgement is true: there is a pot in the next room.

In each case, I undergo a non-recollective awareness-event that is true as a matter of accident or luck.<sup>3</sup> Given the *Nyāya Definition of Knowledge*, it should count as a knowledge-event. But it’s hard to shake off the intuition that the causes of the awareness could easily have led to a mistake. If this intuition is right, then the Naiyāyikas are in trouble. For, if the *Nyāya Definition of Knowledge* is correct, then *Nyāya Infallibilism* is false in these cases. This is what I shall call the *problem of epistemic luck*.

In this essay, I will lay out Gaṅgeśa Upādhyāya’s (14<sup>th</sup> century CE) solution to this problem in *Tattvacintāmaṇi* (TCM). To solve this problem, Gaṅgeśa—as well as his commentators such as Jayadeva Miśra (15<sup>th</sup> century CE)—adopted a more permissive form of *Nyāya Infallibilism*. This form of infallibilism involves what I will call *epistemic localism*, i.e., the thesis that upstream causal factors (e.g, a speaker’s epistemic standing in the case of testimony) don’t play any epistemically significant role in the production of knowledge.<sup>4</sup> By downplaying the epistemic role of such factors, Gaṅgeśa and his commentators were able to treat epistemically lucky inferential and testimonial awareness-events as knowledge-events. This, in turn, allowed them to resolve the tension between the *Nyāya Definition of Knowledge* and *Nyāya Infallibilism*.

Why is this significant? First, my discussion reveals that some modern interpretations of Gaṅgeśa are simply wrong. Mukhopadhyay (1992, p. 285) and Phillips (2012, pp. 84-5) think that Gaṅgeśa does not take the judgements in *The Parrot* and *The Mistaken Deceiver* to be knowledge-events. In what follows, I show that there is little textual support for this claim. Second, if I am right, Gaṅgeśa’s treatment of epistemic luck in TCM reveals a radical shift in the attitudes of Naiyāyikas towards cases like *Mist and Fire*: while earlier Naiyāyikas seem to rule them out from the class of knowledge-events, later Naiyāyikas (from Gaṅgeśa onwards) certainly do not. This forces these later Naiyāyikas to revise their epistemological commitments quite radically.

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<sup>3</sup> For discussions of cases of this sort in relation to TCM, see Matilal (1986, ch. 4), Mukhopadhyay (1992, ch. 9), Saha (1994, pp. 109-112), Saha (2003, ch. 3), Chakrabarti (2006), Phillips (2012, pp. 84-5) and Iwasaki (2020).

<sup>4</sup> I am using the term “epistemic localism” slightly differently from Ganeri (2017a), who uses the word to characterise a kind of “case-based reasoning” that we find in pre-Dignāgīan theories of inference.

This essay has five parts. I will begin by describing the stance of early Naiyāyikas on epistemically lucky awareness-events. As I will show, they accepted a version of *Nyāya Infallibilism* that would prevent them from recognizing such awareness-events as knowledge-events. I will then turn to Gaṅgeśa. I will consider whether his theory of inference and testimony would allow him to treat my judgements in cases like *Mist and Fire*, etc. as knowledge-events. The answer, I will argue, is “Yes.” Next, I will explain how Gaṅgeśa frames the problem of epistemic luck. I will then lay out the two distinct solutions that Gaṅgeśa offers to this problem. The second of these is an instance of the approach that I have called *epistemic localism*. I will go on to show how Gaṅgeśa’s commentator, Jayadeva, extends this approach to cases that Gaṅgeśa doesn’t address.

### **Background: Nyāya Infallibilism**

Most of Gaṅgeśa’s Nyāya predecessors subscribed to an infallibilist conception of epistemic instruments (*pramāṇa*). For these writers, a knowledge-event is a true, non-recollective awareness-event, and an epistemic instrument is an *instrument* or *means* (*kaṛaṇa*) by which any such awareness-event arises. An instrument by which an effect arises is the maximally efficient (*sādhakatama*) cause of that effect. Though there is a disagreement amongst these Naiyāyikas on what maximal efficiency actually consists in, many early Naiyāyikas agree that a maximally efficient cause of an effect is a cause such that, when it occurs, the effect must immediately follow. In this sense, an instrument by which an effect or result (*phala*) arises is excluded from a lack of connection with the result (*phalāyogavyavacchinna*).<sup>5</sup> So, if an epistemic instrument is a maximally efficient cause of a knowledge-event, it must be an event or an entity such that its occurrence is immediately (as a matter of necessity) followed by a knowledge-event. Udayana states this conception of an epistemic instrument succinctly in the fourth chapter (*stavaka*) of *Nyāyakusumāñjali* (NKu).

According to the view of Gotama [i.e., author of the *Nyāya-sūtra*], a knowledge-event is a correct discrimination (*samyakparicchitti*). Moreover, the status of being a knower (*pramāṭṛtā*) consists in possessing that knowledge-event, while the status of

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<sup>5</sup> In his commentary *Nyāyavārttika* (NV) on Vātsyāyana’s (4<sup>th</sup>/5<sup>th</sup> century CE) *Nyāyabhāṣya* (NB), Uddyotakara (6<sup>th</sup> century CE) says that an instrument is the maximally efficient (*sādhakatama*) cause of an effect and takes this maximal efficiency to be a form of excellence (*atīśaya*). He then spells out six different ways in which this notion of maximal efficiency (*sādhakatamatva*) can be understood (NV 6.9-22). Several of these interpretations suggest that an instrument is a cause such that, when it occurs, the effect must immediately follow. In *Nyāyavārttikatātparyāṭīkā* (NVTṬ), his commentator, Vācapastī Mīśra (9<sup>th</sup> century CE), interprets him exactly along these lines (NVTṬ 20.20-22.12). More significantly for our purposes, in his sub-commentary *Nyāyavārttikatātparyāparīśuddhi* (NVTP), Udayana (10<sup>th</sup>/11<sup>th</sup> century CE) points out that the maximal efficiency of an instruments consists in its being excluded from a lack of connection with its result (*phalāyogavyavaccheda*) (NVTP 59.14-15, 59.20-60.2). This view implies that the instrument must be the cause that occurs last in the causal chain that gives rise to the relevant effect. In *Nyāyamañjarī* (NM), Bhaṭṭa Jayanta (9<sup>th</sup> century CE) criticizes this view on the grounds that the entire causal complex underlying an awareness must be treated as its instrument (NM I 32.13-36.12). Moreover, later Naiyāyikas who defined the instrument of an effect as something that produces the effect through the mediation of an operation (*vyāpāra*) also criticized this view; see Bhavānanda Siddhāntavāgīśa’s *Kāraṅcakra* (KC 40.1-7 and 42.9-12) and Matilal (1990, pp. 372-378).

being an epistemic instrument consists in being excluded from a lack of connection with that knowledge-event (*tadayogavyavaccheda*).<sup>6</sup>

For these Nyāya writers, what distinguishes an epistemic instrument from other instruments of awareness is that it never gives rise to an error; in this sense, it doesn't err from its object (*arthāvyābhicārin*).<sup>7</sup> In his sub-commentary on the *Nyāyasūtra* (NS), *Nyāyavārttikatātparyapariśuddhi* (NVTP), Udayana explains the idea as follows:

An epistemic instrument is simply the instrument for a knowledge-event...A knowledge-event is a non-erroneous apprehension (*aviparītopalabdhi*)... Instrumenthood is maximal efficiency (*sādhakatamatva*). However, that is specified simply by a specific event (*kriyā*). Moreover, in this case, that event has the characteristic of being a knowledge-event. Therefore, being an epistemic instrument consists in not erring, which is characterised as the property of producing non-erroneous non-recollective awareness-events.<sup>8</sup>

If Udayana is right in his description of earlier Nyāya, then early Naiyāyikas are committed to *Nyāya Infallibilism*: since *all* knowledge-events must arise from some epistemic instrument and no epistemic instruments could fail to yield true awareness-events, the causal complex that gives rise to a knowledge-event couldn't give rise to an error.

This commitment to infallibilism drove some early Naiyāyikas, such as Bhaṭṭa Jayanta and Udayana, towards a virtue-theoretic conception of knowledge-events.<sup>9</sup> On this

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<sup>6</sup> Verse 4.5 (NKu 475.3-4): *mitiḥ samyak paricchittis tadvatā ca pramātrīṭā | tadayogavyavacchedaḥ pramāṇyaṃ gautame mate* || Earlier, in Verse 4.1, he says (NKu 450.8): “a knowledge-event is a true, non-recollective awareness...” (*yathārthānubhavo mānam*).

<sup>7</sup> While explaining Vātsyāyana's remark that an epistemic instrument possesses an object (*arthavat*), Uddyotakara says (NV 2.21-22): “First of all, an epistemic instrument is a discriminator of an object” (*pramāṇam tāvat arthaparicchadakam* |). Vācaspati Mīśra takes this simply to say that an epistemic instrument doesn't err from its objects (*arthāvyābhicārin*) (NVTṬ 9.12-13). He explains this notion as follows (NVTṬ 4.19-20): “Moreover, this simply is an epistemic instrument's property of not erring from its object: the lack of the disconformity (*avisamvāda*)—relative to a different place and time, or a different state of a person—with regard to the nature and the qualifier of the object as they are presented by that epistemic instrument” (*iyam eva cārthāvyābhicārītā pramāṇasya yaddeśakālanarāvasthāntarāvisamvādo 'rthasvarūpaprakārayos tadupadarśitayoh* |) Similarly, Jayanta says (NM I 31.6-7): “An epistemic instrument is a causal complex (*sāmagrī*), which gives rise to a non-erroneous and doubt-free apprehension of an object, and which may or may not have the nature of an awareness” (*avyābhicārīṇim asandigdham arthopalabdhiṃ vidadhātī bodhābodhasvabhāvā sāmagrī pramāṇam*). Thus, for all these writers, an epistemic instrument doesn't err from its object insofar as it only produces awareness-events that accurately represent their respective objects. For discussions of *Nyāya Infallibilism*, see the exchange between Dasti and Phillips (2010) and Ganeri (2010).

<sup>8</sup> NVTP 13.17-20: *pramāṇam hi pramākaraṇam |... sādakatamatvam eva karaṇatvam | tadviśeṣakas tu kriyāviśeṣa eva | sa cātra pramālakṣaṇaḥ | pramā cāvīparītopalabdhiḥ | ato 'viparītānubhavajanakatvalakṣaṇam avyābhicārītvam eva prāmāṇyam ity arthaḥ |*

<sup>9</sup> For Jayanta's defence of this view, see NM I 442.13-444.2, and for Udayana's defence of this view, see NKu 211.1-2. The Vaiśeṣika philosopher, Śrīdhara (10<sup>th</sup> century CE), also defends this view in his *Nyāyakandalī* (NK 519.1-2). It is worth noting a difference between discussions of epistemic virtue in this earlier Indian context and in contemporary epistemology. Contemporary virtue epistemologists treat epistemic or intellectual virtues either as faculties or as traits that promote some intellectual good. Virtue reliabilists, like Sosa (1991), think of intellectual virtues as faculties or qualities that helps the agent maximize her surplus of true beliefs over false ones. In contrast, virtue responsibilists, like Zagzebski (1996), treat intellectual virtues as traits of character that promote intellectual flourishing. However, Naiyāyikas typically treat epistemic virtues as causal factors that are necessary for the production of knowledge-events.

view, if an agent arrives at a knowledge-event, the causal complex that gives rise to her awareness-event must include certain positive factors—called epistemic virtues (*guṇa*)—that guarantee the truth of the resulting awareness.<sup>10</sup> Though these early writers are reticent on which epistemic virtues are necessary for which kinds of knowledge-events, their treatment of individual epistemic instruments strongly suggests that, if an instrument of awareness is to serve as an epistemic instrument, it must possess epistemic virtues that are typically absent from cases of epistemic luck.<sup>11</sup> Let's see why.

Start with inference (*anumāna*). Suppose I see that there is smoke coming out of a hill. I had judged earlier that, whenever there is smoke, there is fire. Now, I remember that. So, I conclude that there is fire on the hill. Any such inference involves three components: a target (*sādhya*), a reason (*hetu*) or an inferential mark (*liṅga*), and a site (*pakṣa*). The target is the thing that is inferred; here, it's fire. The reason or the inferential mark is a property that serves as evidence for the target; here, it's smoke. The site is the place where the presence of the target is inferred; here, it's the hill. For Naiyāyikas beginning with Uddyotakara, the process by which an inferential knowledge-event arises involves three steps.<sup>12</sup> First, the agent becomes aware of the site as possessing the reason. For example, in this case, I simply see that there is smoke on the hill. This is called the awareness of the reason as a property of the site (*pakṣadharmatājñāna*). Then, the agent recalls that there is a relation of pervasion (*vyāpti*) between the reason and the target. In this case, I recall that, wherever there is smoke, there is fire; thus, I recall that fire pervades smoke. This step is called the recollection of pervasion (*vyāptismaraṇa*). Finally, the agent combines these two bits of information in a single judgement: she judges that the site contains a reason that is pervaded by the target. For example, in this case, I may judge that the hill possesses smoke that is pervaded by fire. This is called a subsumptive judgement (*parāmarśa*). This gives rise to the inferential knowledge-event (*anumiti*) that there is fire on the hill.

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<sup>10</sup> This kind of *Virtue Infallibilism* faced some opposition from Mīmāṃsakas. Why? If Vātsyāyana and other Naiyāyikas are right, then the Veda can be an epistemic instrument only if its author is trustworthy (*āpta*) and therefore possesses certain epistemic virtues. But the Bhāṭṭas cannot say this: for them, the Veda is authorless. So, they cannot explain the status of the Veda as an epistemic instrument by appealing to the epistemic virtues of its author. For this reason, they defend the theory of intrinsic knowledgehood (*svataḥ-prāmāṇya*) with respect to production (*utpatti*): on this view, a knowledge-event arises simply from the normal causes that give rise awareness-events of a certain kind (as long as those causes are non-defective); no positive factors such as epistemic virtues are necessary. Bhāṭṭa Kumārila's (7<sup>th</sup> century CE) commentators—Bhāṭṭa Umbeka, Sucaritamīśra and Pārthasārathimīśra—defend different varieties of the theory of intrinsic knowledgehood in their commentaries on Verse 47 in *Ślokavārttika* ad *Mīmāṃsā-sūtra* 1.1.2 (ŚVTṬ 54.1-17, ŚV 45.7-20, ŚVK 90.13-25).

<sup>11</sup> In NKu, Udayana claims that, even though the defects that prevent a piece of testimony from generating knowledge-events may be positive entities (*bhāva*), the mere absence of those defects may not be enough for a knowledge-event to arise. The point is illustrated with the case of inference. Imagine a variant of *Mist and Fire*, where there is no fire on the hill. In such a case, the falsity of my initial judgement that there is smoke on the hill is the epistemic defect that makes my final judgement come out false. Udayana's point (as explained by commentators like Varadarāja and Vardhamāna) is that, even when such defects are absent, unless epistemic virtues, like the correct awareness of the reason as present in the site or as pervaded by the target, are present, an inferential knowledge-event won't arise. See Udayana's *Nyāyakusumāñjali* (NKu 215.1 and 216.1-2), Varadarāja's *Bodhanī* (NKu 216.6-7) and Vardhamāna's *Prakāśa* (NKu 215.12-13 and 216.16).

<sup>12</sup> See NV 41.9-12 and 42.12-21 on NS 1.1.5.

According to these Naiyāyikas, a good or non-defective reason (*saddhetu*) must have five characteristics: (1) it must be present in the site, (2) it must be present at a similar site (*sapakṣa*), i.e., a place where the target is observed to be present, (3) it must be absent from a dissimilar site (*vipakṣa*), i.e., a place where the target is absent, (4) it must be such that the relevant target isn't already proved (by some other epistemic instrument) to be absent from the site, and (5) it must be such that there is no competing (and equally strong) inferential mark that supports the opposite thesis, i.e., that the target is absent from the site. Any inferential mark that fails to satisfy any of these conditions is said to be a pseudo-reason (*hetvābhāsa*).<sup>13</sup> An inferential mark that is absent from the site is unproved (*asiddha* or *sādhyasama*); when it isn't present at any similar site, it is said to be incompatible (*viruddha*); when it is present at a dissimilar site, it is said to be deviating (*savyabhicāra*); when the relevant target is proved to be absent from the site, the inferential mark is rebutted (*bādhita* or *kālātīta*); finally, when there is an equally strong competing inferential mark, the inferential mark is said to be counterbalanced (*satpratipakṣa* or *prakaraṇasama*). Notice that the inferential marks involved in *Cows and Horns* and *Mist and Fire* are pseudo-reasons. In *Mist and Fire*, the smoke is the inferential mark, while the fire is the target. But since the smoke is actually absent from the site, i.e., the hill, the inferential mark ends up being unproved; in particular, later Naiyāyikas call this kind of unproved reason *unproved by nature* (*svarūpāsiddha*), because the inferential mark, by its own nature, isn't proved to be present in the site.<sup>14</sup> In *Cows and Horns*, the horns serve as the inferential mark, while the target is cowhood. Since animals other than cows can have horns, the inferential mark is deviating because it is present at a dissimilar site.

Importantly, early Naiyāyikas, such as Vātsyāyana and his sub-commentators, claimed that a genuine inference—i.e., an episode of reasoning that yields an inferential knowledge-event—must involve an epistemically virtuous inferential mark, i.e., an inferential mark that satisfies (at least some of) the conditions laid out above. In particular, it cannot involve an inferential mark that is either deviating or unproved: an episode of reasoning that involves such a defective inferential mark will merely be a pseudo-inference

<sup>13</sup> These pseudo-reasons are listed in NS 1.2.4 and then explained in NS 1.2.5-9. For later discussions of these pseudo-reasons, see NV 155.15-168.16, NVTṬ 286.4-303.5, and NVTP 314.5-327.5. For an accessible introduction, see Matilal (1990, pp. 42-58).

<sup>14</sup> Other Indian philosophers discussed similar cases. For example, the author of *Nyāyapraveśa* mentions a kind of unproved reason (*asiddhahetu*) that he calls *unproved in virtue of being suspect* (*sandigdhasiddha*) (NP 3.12-14): “A mass of material elements, which is suspected to have the nature of mist, etc. but is stated for the sake of proving fire, is unproved in virtue of being suspect” (*bāṣpādibhāvena saṁdihyamāno bhūtasamghāto 'gnisiddhāv upadiśyamānaḥ saṁdigdhāsiddhaḥ* |). In his classification of pseudo-reasons (which, incidentally, matches the classification given in *Nyāyapraveśa*), the Vaiśeṣika philosopher, Praśastapāda (6<sup>th</sup> century CE), discusses a similar case as an example of a reason that is *unproved as having that nature* (*tadbhāvāsiddha*) (KA 229.7-9): “A reason that is unproved as having that nature is like this. When an awareness of fire is to be brought about by means of the nature (*bhāva*) of smoke, the mist that is put forward [as a reason] is unproved as having the nature of smoke” (*tadbhāvāsiddho yathā dhūmabhāvenāgnyadhigatau kartavyāyām upanyasyamāno vāṣpo dhūmabhāvenāsiddha iti* |). Earlier in the text, Praśastapāda clearly mentions a case like this as a case of error (KA 174.13 and 176.16-17).

(*anumānābhāsa*).<sup>15</sup> This immediately implies that my judgements in *Mist and Fire* and *Cows and Horns* cannot be inferential knowledge-events.

Let us now turn to the case of testimony (*śabda*). According to NS 1.1.7, “Testimony is the teaching of a trustworthy person.” In his commentary, Vātsyāyana explains the notion of trustworthiness as follows:

Certainly, a trustworthy person is a teacher who is directly acquainted with existent objects (*dharma*) and is motivated (*prayukta*) by the desire to convey things as they have been perceived. The direct acquaintance with an object is the attainment (*āpti*) of the object. Since he undertakes action on the basis of that, he is trustworthy (*āpta*).<sup>16</sup>

On Vātsyāyana’s view, a trustworthy person must have three features. First, she must have been directly acquainted with the content that she wishes to communicate. Second, she must have compassion for other beings to whom she is communicating this content; in other words, her utterances must be motivated by a desire to help others. Third, she must want to communicate how things are exactly the way she herself has found them. Note that this notion of trustworthiness is quite strong: it seems to imply that a palaeontologist who has never encountered dinosaurs but has made lots of good inferences about them still cannot be treated as trustworthy with respect to them. While Uddyotakara seems to agree with this characterisation of the trustworthy speaker (NV 257.19-258.2), Vācaspati Mīśra seems to relax, or reinterpret, some of these requirements (perhaps to accommodate a wider class of testimony). For example, instead of taking the requirement of direct acquaintance literally, he interprets this requirement as follows: “A person who is directly acquainted with, i.e., has

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<sup>15</sup> This argument occurs in Vātsyāyana’s commentary on NS 2.1.37 where he entertains a sceptical objection against the status of inference as an epistemic instrument. The sceptic considers three pseudo-inferences: (1) a pseudo-inference of past rain from the fulness of a river (that is caused due to a dam), (2) a pseudo-inference of future rain on the basis of the movement of ants with their eggs (caused by the destruction of their nests), and (3) a pseudo-inference of the presence of a peacock outside on the basis of a noise that resembles the cry of a peacock (but in fact is made by a human being). The inferential marks in (1) and (2) are deviating, while the one in (3) is unproved. The sceptic’s argument is that, since the inferential marks involved in all putative inferences are defective just like these pseudo-reasons, no putative inference can prove anything (NB 80.6-9).

Vātsyāyana’s response simply is that episodes of reasoning which are based on defective inferential marks such as these aren’t genuine inferences (NB 80.12-18 on NS 2.1.38). In all these cases, the inferential mark lacks certain distinguishing characteristics that a genuine reason would have. Vātsyāyana says (NB 80.19-81.2): “This very fault lies with the inferrer, and not with inference, insofar as he seeks to be aware of an object—which is to be inferred by a distinguishing feature of an object—by means of an object that lacks that distinguishing feature” (*so ’yam anumātur aparādho nānumānasya, yo’rthaviśeṣeṇānumeyam artham aviśiṣṭārthadarśanena bubhutsata iti*). This strongly suggests that pseudo-reasons cannot yield inferential knowledge-events. Interestingly, a similar view is found in verses 156-64 of the section called *Nirālambanavāda* in Kumārila’s *Ślokaṅkārttika*. Kumārila argues that, in cases like *Mist and Fire*, one cannot arrive a true inferential judgement (ŚV 182.23-183.6); for some discussion, see Ganeri (2007, ch. 5). We shall return to this view in the next section.

<sup>16</sup> NB 14.4-5 on NS 1.1.7: *sākṣātkaṛaṇam arthasyāptih, tayā pravartata ity āptaḥ | āptaḥ khalu sākṣātkaṛtadarmā yathādr̥ṣṭasyārthasya cikhyāpayiṣayā prayukta upadeṣṭā |* Vātsyāyana fleshes out this notion of the trustworthy person while defending the status of the Veda as an epistemic instrument. In his commentary on NS 2.1.68, he says (NB 96.16-97.7): “Moreover, what does the status of trustworthy persons as epistemic instruments consist in? Being directly acquainted with existent objects (*dharma*), compassion towards living beings, and the desire to convey things as they are” (*kiṃ punar āptānām prāmānyam? sākṣātkaṛtadarmatā bhūṭadayā yathābhūtarthacikhyāpayiṣeti |*).



determined by means of a firm epistemic instrument, the existent objects (*dharmā*), i.e., the entities (*padārthā*) that are useful for the attainment of benefits and the avoidance of harms, is said to be so [i.e., trustworthy].”<sup>17</sup> Thus, on Vācaspati’s view, even a palaeontologist who has never seen dinosaurs could still count as trustworthy with respect to them.

Even if we accept Vācaspati’s weakened conception of trustworthiness, this Nyāya view entails that a piece of testimony can serve as an epistemic instrument only if its speaker possesses at least two virtues: she must have gained by means of an epistemic instrument a correct awareness of the content that her utterance conveys, and she must have the desire to sincerely convey the truth. Both of these virtues are (arguably) missing in cases like *The Mistaken Deceiver* and *The Parrot*. In both cases, the speaker hasn’t determined the content of the utterance to be true by means of any epistemic instrument, and lacks the desire to convey the truth. So, the relevant linguistic utterances cannot be treated as epistemic instruments. Therefore, the resulting judgements cannot be knowledge-events.

The upshot: the early Naiyāyikas’ commitment to *Nyāya Infallibilism* would have prevented them from treating epistemically lucky awareness-events as knowledge-events. This strongly suggests that the notion of knowledge-events that these Naiyāyikas were working with was closer to our contemporary notion of knowledge. According to a simple account of knowledge, a belief (or, more generally, an information-bearing state) has the status of knowledge just in case it is true but not as a matter of luck. On the early Nyāya view, a knowledge-event is simply a conscious non-recollective experience or thought in undergoing which one non-luckily or non-accidentally acquires true information. Thus, it’s plausible to think of knowledge-events as conscious mental events of *learning* or *knowledge-acquisition*. This way of connecting this notion of knowledge-events to the notion of knowledge explains at least two aspects of early Nyāya epistemology. First, it explains why these Naiyāyikas thought that the causes underlying knowledge-events couldn’t give rise to any error. Second, it also explains why they thought that knowledge-events have to be non-recollective: since reliable recollective awareness-events (typically) only help us retrieve information that we had already acquired earlier, we don’t independently acquire any true information through them. Thus, even when they are true (and reliable), they cannot be events of knowledge-acquisition.

What unifies the early Nyāya approach to knowledge-events is a form of *epistemic anti-localism*. According to the early Naiyāyikas, the production of inferential and testimonial knowledge depends on the transmission of knowledge from other causally upstream awareness-events that belong either to the agent herself or to some other agent. For example, in the case of inference, the production of an inferential knowledge-event depends on whether the initial steps of the relevant cognitive process—the agent’s initial awareness of the reason as a property of the site or her awareness of pervasion—are themselves knowledge-events. An inferential judgement can be a knowledge-event only if these initial

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<sup>17</sup> NVTṬ 166.20-22: *sudr̥dhena pramāṇeṇeṇānvadhāritāḥ sākṣātkṛtā dharmāḥ padārthā hitāhitaprāptiparihāraprayojanā yena sa tathoktaḥ* |

awareness-events are. So, the epistemic status of these causally upstream awareness-events matters. Similarly, in the case of testimony, the epistemic virtues of the speaker play an important role: unless the speaker undergoes a knowledge-event regarding the content that she wishes to convey, the resulting testimonial awareness cannot be a knowledge-event. Once again, the production of knowledge in this case depends on the epistemic status of a causally upstream awareness-event. This form of anti-localism explains why these early Nyāya authors wouldn't treat epistemically lucky awareness-events as knowledge-events. As we shall see later, Gaṅgeśa rejects this form of anti-localism.

### Gaṅgeśa on Inference and Epistemic Luck

In *Khaṇḍanakhaṇḍakhādyā* (KKh), Śrīharṣa showed that the early Nyāya theory of knowledge-events doesn't handle cases of epistemic luck well. On the one hand, since Naiyāyikas like Udayana were committed to the *Nyāya Definition of Knowledge*, they couldn't rule out epistemically lucky inferential judgments (like my judgements in *Mist and Fire* and *Cows and Horns*) from the class of knowledge-events. Yet, given their other commitments, these Naiyāyikas also couldn't treat these as knowledge-events. For none of the characteristic epistemic virtues that are supposed to accompany inferential judgements are present in such cases. Here, I won't rehearse Śrīharṣa's arguments.<sup>18</sup> In this section, my aim will be to show that Gaṅgeśa partially concurs with Śrīharṣa: he agrees that, if his own preferred version of *Nyāya Definition of Knowledge* is right, inferential judgements based on pseudo-reasons cannot be excluded from the class of knowledge-events.

In TCM, Gaṅgeśa endorses a version of the *Nyāya Definition of Knowledge*.

A non-recollective awareness of something at a place where it exists is a knowledge-event. Alternatively, it is an awareness that attributes a certain qualifier to something that possesses that qualifier. The awareness of something at a place where it doesn't exist, or an awareness that attributes a qualifier to something that possesses the absence of that qualifier is not a knowledge-event (*apramā*).<sup>19</sup>

We can state this more precisely.

*Gaṅgeśa's Definition of Knowledge.* An awareness-event is a knowledge-event if and only if

- (i) it is a non-recollective awareness, and
- (ii) if it attributes a qualifier (*prakāra*)  $x$  to a qualificand (*viśeṣya*)  $y$  by a relation  $R$  (or presents  $y$  as characterised by  $x$  in virtue of the relation  $R$ ), then  $x$  is related to  $y$  by  $R$ .

<sup>18</sup> Śrīharṣa's arguments can be found at KKh 389.11-390.3; for explanations of Śrīharṣa's view, see Matilal (1986), Ganeri (2017b) and Das (2018).

<sup>19</sup> TCM<sub>c</sub> I 401.3-6: *yatra yad asti tatra tasyānubhavaḥ pramā tadvati tatprakārakānubhavo vā | yatra yan nāsti tatra tasya jñānaṁ tadabhāvavati tatprakāraḥjñānaṁ va apramā* | For discussions of Gaṅgeśa's definition of knowledge, see Bandyopadhyay (1989) and Phillips (1993).

To see how the definition works, consider a case where I see a banana before me as yellow. Here, the banana is the qualificand, while the yellow colour I perceptually attribute to it is the qualifier. My perceptual awareness is a knowledge-event just in case that yellow colour that I perceptually attribute to the banana actually is present in the banana.

Apply this definition to cases like *Mist and Fire* and *Horns and Cows*. In these cases, the relevant agent forms inferential judgements on the basis of pseudo-reasons. Can such an inferential judgement be a knowledge-event? Given Gaṅgeśa's definition of knowledge-events, the answer (we might think) has to be a resounding "Yes." In *Mist and Fire*, for example, if the qualificand of my inferential judgement is the hill and the qualifier is fire, then my judgement indeed is a knowledge-event by Gaṅgeśa's lights. For there is fire on the hill. However, Gaṅgeśa's discussion of these cases reveals that things aren't as straightforward as they appear. Let's see why.

### A. Non-Probativity

A good place to begin will be Gaṅgeśa's general definition of pseudo-reasons in *Anumānakhaṇḍa*. Gaṅgeśa offers three distinct definitions:

In that context, the property of being a pseudo-reason (*hetvābhāsatva*) is (i) the property of being an intentional object of a true awareness that is a counterpositive (*pratiyogin*) of an absence which serves as a cause of an inferential knowledge-event (*anumiti*), or (ii) the object such that an awareness of the inferential mark, which has that object as an intentional object, is an impediment (*pratibandhaka*) to an inferential knowledge-event, or (iii) the property of being that which serves as an impediment to an inferential knowledge-event when it is being apprehended (*jñāyamāna*).<sup>20</sup>

The first definition simply says that, if an agent were to correctly judge that the inferential mark of a putative inference had the property of being a pseudo-reason, she wouldn't be able to arrive at the relevant inferential knowledge-event. In this sense, the absence of such a correct judgement (which has as its intentional object the property of being a pseudo-reason) is a cause of the inferential knowledge-event. The second definition restates that very idea in a slightly different way: it says that, if an agent were aware of an inferential mark as possessing the property of being a pseudo-reason, then that awareness would prevent the relevant inferential knowledge-event from arising. Finally, the third definition says that the property of being a pseudo-reason, when it is being apprehended, itself prevents the relevant inferential knowledge-event from arising. Notice that all of these three definitions gesture at the same idea: namely, that if an agent were to (correctly) judge that a certain putative

<sup>20</sup> TC II.1 763.1-2 and 764.1-2: *tatrānumitikāraṇībhūtābhāvapratiyogiyathārthajñānaviṣayatvaṃ, yadviṣayatvena liṅgajñānasyānumitipratibandhakatvaṃ, jñāyamānaṃ sad anumitipratibandhakaṃ yat tattvaṃ hetvābhāsatvaṃ* | Gaṅgeśa's use of the term "anumiti" is somewhat inconsistent. As we shall see, he sometimes qualifies the expression with adjectives like "yathārtha" or "satya" (both of which roughly mean "true"); in such contexts, he seems to use the term merely to refer to inferential awareness-events (which may or may not be true), and not to inferential knowledge-events. So, whenever he uses such an adjective, I have translated the term as "inferential awareness"; in other cases, I have translated it as "inferential knowledge-event."

inferential mark is in fact a merely apparent or defective reason, then she couldn't arrive at an inferential knowledge-event on the basis of it. In other words, such a judgement serves as a source of defeating evidence, which, in turn, prevents the agent from (rationally) making the inferential judgement that she would have made otherwise. Therefore, a pseudo-reason isn't, by definition, an inferential mark that prevents the agent from arriving at inferential knowledge-events. While this doesn't immediately tell us whether an inferential knowledge-event can be based on a pseudo-reason, it does clear some theoretical space for saying so.

In a later section of *Anumānakhaṇḍa*—named “*asādhakatāsādhakaprakaraṇa*”—Gaṅgeśa takes up this question. Suppose that, in the context of a debate, a participant points out that her opponent's argument relies on a pseudo-reason. This reply counts as a good response (*saduttara*) to that argument. Why is this so? A plausible answer: in pointing out a pseudo-reason, this participant is able to prove that the relevant inferential mark is non-probative (*asādhaka*), i.e., that it doesn't prove the presence of the relevant target. This, in turn, blocks the opponent's argument. What is non-probativity (*asādhakatva*)? Before presenting his preferred proposal, Gaṅgeśa considers, and rules out, a number of proposals about what non-probativity could be. We will focus on a proposal to which Gaṅgeśa devotes the greatest amount of attention: namely, that non-probativity is simply the property of not producing a correct awareness of the site as characterised by the target (*samīcīnasādhyaviśiṣṭapakṣapratyayājanakatva*).

Gaṅgeśa notes a troubling consequence of this proposal. If this view is true, and if we agree that defective reasons are non-probative, then one cannot arrive at a true inferential judgement by reasoning from a pseudo-reason. This would imply that, since the inferential mark in *Mist and Fire* is unproved by nature (*svarūpāsiddha*), I cannot arrive at a true inferential judgement in that situation. But my final judgement is indeed correct in that case! So, the proposal fails. Gaṅgeśa explains this idea as follows:

It [i.e. non-probativity] is also not the property of not producing a correct awareness of the site as characterised by the target. For (i) in cases involving rebutted (*bādhā*), incompatible (*viruddha*) and unproved (*asiddha*) reasons, when the site isn't a locus of the target, a true (*satya*) awareness of the target isn't well-established, and (ii) an inferential awareness of fire (*vahnyumiti*) in a site that contains fire—which arises from an erroneous awareness of mist as smoke—is true (*satya*).<sup>21</sup>

Gaṅgeśa's argument is this. At least, in cases where the site doesn't contain the target, some pseudo-reasons, e.g., rebutted, incompatible or unproved reasons, cannot yield any true awareness of the site as characterised by the target. However, in a case like *Mist and Fire*, where the target is genuinely present in the site, even an inferential mark that is unproved in the site (*svarūpāsiddha*), e.g., the smoke, can give rise to a true inferential awareness.

<sup>21</sup> TCM<sub>C</sub> II.1 989.13-15 and 990.1: *nāpi samīcīnīnasādhyaviśiṣṭapakṣapratyayājanakatvam | bādhaviruddhāsiddheṣu sādhyānadhikaraṇe pakṣe satyasādhyapratītyaprasiddheḥ, vahnimati bāṣpe dhūmabhramāt vahnyanumiteḥ satyatvāc ca |*

Gaṅgeśa considers two distinct strategies for resisting this conclusion.

*Strategy 1.* In *Mist and Fire*, the inferred target (i.e., the fire) isn't present in the site (i.e., the hill). So, the inferential judgement is false.

*Strategy 2.* In *Mist and Fire*, the site (i.e., the hill) or the target (i.e., the fire) appears in the final inferential judgement as connected to the relevant inferential mark (i.e., smoke) in a certain way. But, since the inferential mark is absent from the site, the final judgement is false.

Both these strategies, according to Gaṅgeśa, are unsuccessful.

### B. Strategy 1

Let's begin with *Strategy 1*.

What makes this strategy attractive from a Nyāya standpoint? The Naiyāyikas are realists about intentional objects of awareness: if anything is an intentional object of a conscious thought or experience, it must exist independently of that thought or experience. This compels them to accept a *misplacement theory of error* (*anyathākhyātivāda*). According to this theory, when an agent misperceives an object *o* as characterised by some property *F*, the erroneous awareness ascribes to that object a property, i.e., *F*, which she has earlier veridically perceived elsewhere. So, when I misperceive a mother-of-pearl as silver, my erroneous perceptual awareness ascribes to the mother-of-pearl the property of silverhood that I have encountered elsewhere. Let's now see how this applies to cases like *Mist and Fire*. In *Mist and Fire*, I misperceive the hill as containing smoke. This may be smoke I have seen elsewhere, e.g., in the kitchen. If this is right, one could argue that my final judgement in these cases is false. For, if the smoke that I ascribe to the hill is absent from the hill, then the fire I ascribe to the hill—insofar as it accompanies the smoke I perceptually ascribe to the hill—also cannot be present on the hill. This is precisely the conclusion that defenders of *Strategy 1* support.

Partially following Śrīharṣa's treatment of such cases in *Khaṇḍanakhaṇḍakhādyā*,<sup>22</sup> Gaṅgeśa offers two responses to this strategy.

Moreover, it is not the case that it is simply some other fire that appears in that awareness. For, there is no evidence for this, since that fire may be recognized [later], and such an inferential awareness is possible in a case that involves just one individual [as the target].<sup>23</sup>

According to Gaṅgeśa, there is no good reason for us to think that the inferred target in cases like *Mist and Fire* is in fact missing from the site. In *Mist and Fire*, for example, after

<sup>22</sup> For Śrīharṣa's parallel argument, see KKh 390.3-6.

<sup>23</sup> TCMc II.1 990.2-3: *na cānya eva vahnis tatra bhāsate, mānābhāvāt tadvahneḥ pratyabhijñānāt ekavyaktike tadasambhavāc ca* |

inferentially judging that there is fire on the hill, if I walk up to the fire that is actually present on the hill, I can—at least seemingly—recognize it as the fire that I inferred. If we take this to be a genuine case of recognition, then we must concede that the fire I inferred is indeed the fire that I now see. This argument isn't all that convincing: the opponent could simply deny that this is a genuine case of recognition. But Gaṅgeśa's second response (which is borrowed from Śrīharaśa) is more persuasive: he points out that the proposal in question cannot succeed when it comes to an episode of reasoning which involves just one object as its target. Consider *Horns and Cows*: here, the target is a universal (*sāmānya*), i.e., cowhood.<sup>24</sup> The opponent cannot argue that the cowhood that I ascribe to the animal is distinct from the cowhood that is present in the animal that I see. For there is just one such property!

Despite these problems, the opponent might insist that a version of this strategy could still be made to work. In a case like *Mist and Fire*, I take the fire to be identical to something that pervades the smoke that I saw. Thus, in my final inferential judgement, something that pervades the defective inferential mark (i.e., the smoke) appears as fire. But, if there is really no smoke on the hill, the fire that is present on the hill cannot pervade the defective inferential mark. Similarly, in *Cows and Horns*, I take cowhood to be identical to something that pervades the possession of horns. Thus, in my final inferential judgement, something that pervades the defective inferential mark (i.e., the possession of horns) appears as cowhood. But, if cowhood doesn't really pervade the possession of horns, the cowhood that is present in the animal cannot pervade the defective inferential mark. So, in each case, the inferential judgement will end up being false.

Once again, Gaṅgeśa thinks that this strategy cannot succeed.

[The opponent:] With regard to the defective inferential mark, one is aware of the identity with something that is pervaded by fire. And, thus, with regard to fire, one is also aware of the identity with something that pervades the defective inferential mark. Otherwise, there wouldn't be an awareness of the defective inferential mark as pervaded by fire. In this manner, something that pervades the defective reason appears as fire. So, the inferential awareness of fire is simply untrue.

[Reply:] No. For, in a case where an inferential awareness [of fire] arises due to the superimposition of smoke on to light that is pervaded by fire, there would be the consequence that the inferential awareness doesn't fail to be true despite there being a variety of unprovedness, because there is an identity between what pervades light and what pervades smoke.<sup>25</sup>

Gaṅgeśa is imagining a case like this.

<sup>24</sup> Though Gaṅgeśa doesn't explicitly mention *Cows and Horns* in this context, he mentions a case like this in another context; see the passage in footnote 56. Accordingly, his commentator, Rucidatta, explains his argument by appealing to a case like this (TCM<sub>T</sub> II.2 117.12).

<sup>25</sup> TCM<sub>C</sub> II.1 990.12-18: *atha kūṭalīṅge vahnivyāpyābhedaḥ pratīyate tathā ca vahnau kūṭalīṅgavyāpakābhedo 'pi, anyathā kūṭasyaiva vahnivyāpyatvāpratīteḥ evaṅ ca kūṭalīṅgavyāpako vahnitvena bhāsata iti vahnyanumitir asatyaiveti cet | na vahnivyāpyāloke dhūmāropāt yatrānumitis tatrāsiddhibhede 'satyatvābhāvāpatteḥ ālokavyāpake dhūmavyāpkābhedāt |*

*Light and Fire.* I look at a hill and mistake what is in fact light to be smoke emerging from the hill. In fact, there is no smoke on the hill. Earlier, on numerous occasions, I had noticed, in kitchens, etc., that smoke goes hand in hand with fire. On the basis of those observations, I had judged that wherever there is smoke, there is fire. Now, I remember that. So, I conclude, “There’s fire on the hill.” My judgement is true: there is fire on the hill.

In this case, the inferential mark—i.e., smoke—is defective: it suffers from the fault of being unproved by its own nature (*svarūpāsiddha*), since it is absent from the site. According to the opponent, something that pervades that defective reason appears as fire in my final judgement. But since there is light on the hill, the hill contains fire, and that fire pervades the light present on the hill. Since the fire that pervades the smoke isn’t distinct from the fire that pervades the light, the final inferential judgement (which ascribes to the hill a fire that pervades the smoke) will come out true.

### C. Strategy 2

Let’s move on to *Strategy 2*. According the defenders of this strategy, when I conclude that there is fire on the hill in *Mist and Fire*, the inferential mark somehow appears as an intentional object in my final inferential judgement. For example, the content of my judgement could be expressed in one of the following two ways:

- (1) The hill that contains smoke also contains fire.
- (2) The hill contains the fire that pervades smoke.

Both these judgements are false. (1) is false because the hill doesn’t contain any smoke; (2) is false because the fire that is present on the hill doesn’t accompany (and therefore doesn’t pervade) smoke.

Gaṅgeśa thinks that this strategy is hopeless.<sup>26</sup> First of all, he thinks that there is no evidence for thinking that the reason actually appears as an intentional object in the final inferential judgement. Second, he invokes a case like this.

*Darkness.* I can’t tell whether darkness is a positive entity (*bhāva*) like a material object or its size or colour, or a negative entity (*abhāva*), e.g., a mere absence of light. I have noticed that both positive and negative entities are knowable (*prameya*). So, despite being uncertain about whether darkness is a positive or a negative entity, I

<sup>26</sup> TCM<sub>C</sub> II.1 990.4-8: “That inference also isn’t an error in virtue of having the inferential mark as its intentional object. For, there is no evidence (*māna*) that there is an awareness of the inferential mark in an inferential awareness (*anumiti*). Moreover, in the case of a true inferential awareness that takes the form, ‘Is it positive or negative? In both cases, it is knowable,’ if there were an awareness of knowability with respect to something that possesses positivity and negativity, the inferential awareness would be untrue.” (*na ca sānumitir liṅgaviṣayatvena bhramaḥ | anumitau liṅgabhāne mānābhāvāt | bhāvo ’bhāvo vobhayathā ’pi prameyam iti satyānumitau bhāvatvābhāvatvavati prameyatvajñāne ekatra taylor abhāvād asatyānumitiḥ syāt |*)

reason like this, “Is it a positive entity or a negative entity? In both cases, it’s knowable.” Thus, I reason from both those properties—positivity (*bhāvatva*) and negativity (*abhāvatva*)—to the conclusion that darkness is knowable.

On one way of reconstructing the reasoning, it involves a conjunctive inferential mark which combines these two mutually incompatible properties. If this were true, then the inferential mark would be unproved by nature (*svarūpāsiddha*). For nothing is both a positive entity and an absence. But the inferential judgement that darkness is knowable is undeniably true. But, if the opponent were to say that the inferential mark appears as an intentional object of this judgement, she would be forced to say that this judgement is false. That is the problem.

In response, the opponent might argue that the inferential mark in this case isn’t a conjunction of both positivity and negativity, but in fact is disjunctive, i.e., the property of being positive or negative (*bhāvābhāvānyataratva*). In reply, Gaṅgeśa makes two points. First, he notes that an inference like this could be made even by someone who isn’t aware of any pervasion between this disjunctive property and knowability. Moreover, he says that including “either...or...” (*anyataratva*) into the specification of the inferential mark is an unnecessary qualification (*vyarthaviśeṣaṇa*), presumably because it would not rule anything out from the scope of the inferential mark (since everything is either positive or negative).<sup>27</sup> The opponent also cannot claim that, in this case, the inferential judgement is true because it has the content, “Darkness, which is characterised by some property (either positivity or negativity) that is pervaded by knowability, is knowable.” For, the analogous judgement in *Mist and Fire*, “The hill, which is characterised by some property that is pervaded by fire, contains fire,” is also true.<sup>28</sup>

In response to all these problems, the opponent might simply point out that there are good reasons for thinking that, in any case of reasoning, the inferential mark does appear as an intentional object of the final inferential judgement.

[The opponent:] The inferential mark is an intentional object of the inferential awareness, (i) because as a matter of rule, it is the intentional object of the awareness of the reason as a property of the site, (ii) because it is the intentional object of [the awareness of] pervasion, and (iii) because, as a matter of rule, it is the intentional object of the awareness of the qualifier [i.e., the target] which causes the inferential

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<sup>26</sup> TCM<sub>C</sub> II.1 990.4-8: “It is also not the case that the property of being either of those [i.e., positivity or negativity] (*anyataratva*) is the inferential mark, because the inferential awareness arises in someone who is unaware of the pervasion pertaining to that inferential mark, and it is also an unnecessary qualifier” (*na cānyataratvaṃ liṅgaṃ, tadvyāptim aviduṣo ’py anumīter vyarthaviśeṣaṇatvāc ca* |). See Mathuranātha’s and Rucidatta’s commentaries on this point (TCM<sub>C</sub> II.1 990.19; TCM<sub>T</sub> II.2 178.12-13). This point is surprisingly underexplained in all the extant commentaries of the passage. That is why I am forced to reconstruct Gaṅgeśa’s rationale for saying this on my own.

<sup>28</sup> TCM<sub>C</sub> II.1 990.9-12: “[The opponent:] In that case [i.e., *Darkness*], being pervaded by the target is the rule (*tantra*). And there is no rebutting defeat (*bādha*) in that respect. [Reply:] If this is right, then, in the case of an inferential awareness that arises from a defective inferential mark (*kūṭaliṅga*), the site’s possessing something that is pervaded by fire is the rule. Moreover, in that case [i.e., *Mist and Fire*], there is indeed something that is pervaded by fire” (*atha sādhyavyāpyatvam eva tatra tantraṃ tatra ca bādho nāstīti cet | tarhi kūṭaliṅgakānumitau vahnivyāpyavattvam eva tantraṃ vahnivyāpyaṅ ca kiñcit tatrāsty eva* |



awareness, just like hillhood and like the target. Moreover, [in a case where] a causal complex for the awareness of some other qualifier is present with respect to something that has been apprehended as possessing a qualifier, there is—in that very case—an awareness of the qualification of a qualified object (*viśiṣṭavaiśiṣṭyajñāna*) [by this other qualifier]. So, with respect to that very thing [i.e., the hill] which is qualified by smoke, there is an inferential awareness of being qualified by fire.<sup>29</sup>

There are two arguments here. The first argument is relatively simple. Since the inferential mark appears in every essential step of the inference (the awareness of the site as possessing it, the recollective awareness of pervasion, and the subsumptive judgement), it must also appear in the final inferential judgement. In this respect, it should be on the same footing as the delimitor of sitehood (*pakṣatāvachchedaka*, i.e., the property that specifies which object plays the role of the site in the inference). In *Mist and Fire*, the delimitor of sitehood is hillhood (*parvatatva*). It appears as a qualifier of the hill not only in the initial awareness of the hill as possessing smoke and in the subsumptive judgement, but also in the final inferential judgement. The same is true of the target, i.e., fire. The target appears in the recollection of pervasion as well as in the subsumptive judgement. But it also appears in the final inferential judgement. Given that these two components of the inference appear as intentional objects in the final inferential judgement, why shouldn't the same be true of the inferential mark?

The second argument is different. When some object *o* is apprehended as qualified by some property *F* and the causal conditions for a further awareness of *o* as qualified by some other property *G* are present, then *G* should appear in the resulting awareness as the qualifier of an *o* that is already qualified by *F*. This is what Gaṅgeśa calls the awareness of the qualification of a qualified object. So, in *Mist and Fire*, if I am already aware of the hill as qualified by smoke, then, even when I infer the presence of fire on the hill, the fire should appear in my inferential judgement as a qualifier of a hill that is already qualified by smoke. If that happens, my inferential judgement will be false.

In response to these two arguments, Gaṅgeśa gives one final (and I think decisive) response. He appeals to a variant of *Mist and Fire*:

*Mist and Fire Redux*. I look at a hill and see what looks like smoke emerging from it. What I see is a wisp of mist. But there is smoke elsewhere on the hill. On the basis of what I see, I judge that there is smoke on the hill. Since I remember that fire always accompanies smoke, I judge, “There’s fire on the hill.” My judgement is true: there is in fact fire on the hill.<sup>30</sup>

<sup>29</sup> TCMc II.1 990.18 and 991.1-5: *atha līṅgam anumitiviśayo niyamataḥ pakṣadharmatājñānaviśayatvāt vyāptiviśayatvāt niyamenānumitihetuviśeṣaṇadhīviśayatvāc ca parvatatvavat sādhyavac ca | kiñcaikaviśeṣaṇavattvenā jñāte [yatra] viśeṣaṇāntaradhīsāmagrī tatraiva viśiṣṭavaiśiṣṭyajñānam iti dhūmaviśiṣṭa eva vahnivaiśiṣṭyānumitir iti |*

<sup>30</sup> For Śrīharṣa’s version of the case, see KKh 389.11-16.

In this case, the inferential mark, i.e., smoke, is defective, but not altogether absent from the site.<sup>31</sup> Thus, even if the inferential mark were to appear as an intentional object (i.e., as a qualifier of the hill) in my final inferential judgement, my final judgement wouldn't be false. Gaṅgeśa explains the idea as follows.

Let this be true in the first place. Even then, when smoke is present by chance (*daivāt*) in that hill, how can the inferential awareness be untrue even with respect to that part? Therefore, the fire that is brought about by wet fuel is a pervader of smoke, not any other fire. Moreover, it is not the case that, since some other fire pervades smoke in virtue of firehood, that other fire is also a pervader of smoke. For smoke is present even in the absence of that other fire. In this manner, the following is also refuted: “Due to an erroneous awareness of smoke with respect to mist, a fire that pervades smoke appears [in the inferential awareness], and that doesn't exist in that case. So, that inferential awareness is not true.” For, when the smoke is present by chance, it is true.<sup>32</sup>

The point is this. Even if the smoke appears as an intentional object in the final inferential judgement, the judgement could be entirely true when there is in fact smoke as a matter of luck on the hill. The opponent cannot reject this conclusion by arguing that the kind of fire I infer isn't the same kind of fire that is present on the hill. For, given that smoke is only produced due to the combustion of wet fuel, the only kind of fire that pervades smoke is the fire that is produced from wet fuel. In *Mist and Fire Redux*, since I take the fire that I infer to be a pervader of smoke and there is in fact smoke on the hill, the inferred fire isn't distinct in kind from the fire that is present on the hill. So, the inferential awareness comes out true, and the opponent's strategy fails.<sup>33</sup>

<sup>31</sup> For discussion of whether inferential marks of this sort can be treated as unproved (*asiddha*), see Saha (2003, ch. 4).

<sup>32</sup> TCM<sub>C</sub> II.1 991.1 and 992.1-6: *astu tāvad evaṃ, tathā 'pi daivāt tatra dhūmasattve katham tadamśe 'py asatyatā | ata eva ārdrendhanaprabhavo vahnir dhūmavyāpako nānyah | na ca vahnitvena vyāpakatvād anyo 'pi tathā, tena vinā 'pi dhūmasattvāt | evaṃ bāṣpe dhūmabhramāt dhūmavyāpako vahnir bhāṣate sa ca tatra nasty eveti na sānumitih satyete nirastam | daivād dhūma-sattve satyatvād iti |*

<sup>33</sup> Gaṅgeśa's own commentators don't agree with him here. For example, Rucidatta points out that, even if the smoke is present by chance in the hill, it cannot appear as an intentional object of the final inferential judgement. He writes (TCM<sub>T</sub> II.2 181.9-12): “This is to be considered here. Even when smoke is present by chance on that hill, it is not an intentional object of the inferential awareness, because there is no subsumptive judgement that portrays it as pervaded by fire, and it is accepted that the awareness of an inferential mark [in the final inferential judgement] takes place in virtue of its being presented (*upanīta*) by the subsumptive judgement. For, otherwise, it couldn't be included amongst good reasons (*saddhetu*). And, thus, [in *Mist and Fire*], since mist, under the guise of smoke (*dhūmatvena*), becomes the intentional object of the subsumptive judgement, only the mist which is presented by that subsumptive judgement becomes the intentional object of the inferential awareness under the guise of smoke. Otherwise, the subsumptive judgement in that case wouldn't also be erroneous. So, how can the inferential awareness be true with respect to that part [which concerns the inferential mark]?” (*atredaṃ cintyam|daivāt tatra dhūmasattve 'pi sa nānumitiviṣayah| tasya vahnivyāpyatvenāparāmarśāt tadupanītatvena liṅgabhānābhyupagamāt| anyathā tasya saddhetutvenāsaṃgrāhyatvāt| tathā ca bāṣpasya dhūmatvatvena parāmarśaviṣayatvāt tadupanītasyaiva dhūmatvenānumitiviṣayatvam| anyathā parāmarśo 'pi tatra bhrānto na syāt iti tadamśe katham anumiteḥ satyatvam iti*) The Tirupati edition contains two typographical errors here: it prints “*śintyam*” instead of “*cintyam*” and “*matvena*” instead of the first occurrence of “*dhūmatvena*.” I have corrected those. Rucidatta goes on to suggest that the inferential mark must appear in the final inferential judgement as a delimitor of sitehood (*pakṣatāvachchedaka*, i.e., a property that specifies which object plays the role of the site) (TCM<sub>T</sub> II.2 182.10). If the misperceived smoke appears in the final

I think these passages reveal a significant aspect of Gaṅgeśa’s approach to cases like *Mist and Fire*. Gaṅgeśa seems to concede that, if the *Nyāya Definition of Knowledge* is right, episodes of reasoning that involve apparent or defective reasons can yield true (*satya*) awareness-events. In fact, in this very section, when Gaṅgeśa states his own considered view (*siddhānta*), he accepts all the objections that he himself put forward as part of the *prima facie* position (*pūrvapakṣa*). That is why he doesn’t take a non-probative inferential mark to be something that doesn’t produce any correct awareness about the target. Rather, he defines non-probativity as follows:

We reply. Non-probativity is the property of not producing any awareness of the target in a state where there is an awareness of itself [i.e., of non-probativity].<sup>34</sup>

The idea is simple. As we already know from Gaṅgeśa’s definition of pseudo-reasons, if one were to judge that an inferential mark is an apparent or defective reason, one wouldn’t (rationally) judge—on the basis of the reason—that the target was indeed present in the site. That is precisely what makes such inferential marks non-probative. In the same way, therefore, the non-probativity of an inferential mark (like the misperceived smoke in *Mist and Fire*) doesn’t by itself prevent a true inferential awareness from arising. However, if an agent were to recognize that the reason in question is non-probative, she (if rational) wouldn’t infer the target on the basis of it. Thus, this account leaves open the possibility that the inferential judgements that arise in cases like *Mist and Fire* can indeed be knowledge-events.

## Testimony and Epistemic Luck

Gaṅgeśa’s stance on cases like *The Parrot* and *The Mistaken Deceiver* is much less clear. On the one hand, Gaṅgeśa’s own definition of knowledge-events seems to straightforwardly predict that these are knowledge-events: in *The Parrot* and *The Mistaken Deceiver*, my judgements ascribe to the next room a pot that it actually contains. How can they fail to be knowledge-events?<sup>35</sup> On the other hand, Gaṅgeśa’s own definition of testimony as an epistemic instrument doesn’t seem compatible with this verdict: “The epistemic instrument

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inferential judgement as a delimitor of sitehood, that judgement will be false. While this solution seems to work in *Mist and Fire*, it doesn’t work in cases like *Horns and Cows* which involve deviating (but not unproved) inferential marks. For example, in *Horns and Cows*, I correctly take the animal to have horns. So, even if the horns appear in the final awareness-event as delimiters of sitehood, the final inferential judgement will remain true.

<sup>34</sup> TCMc II.1 992.6-7: *ucyate | svajñānadaśāyāṃ pakṣe sādhyapratyayājanakatvam asādhakatvam |*

<sup>35</sup> Here’s an additional piece of evidence. In his commentary *Prakāśa* on *Nyāyakusumāñjali*, Gaṅgeśa’s son, Vardhamāna (14<sup>th</sup> century CE), takes cases like *The Mistaken Deceiver* to show that the presence of epistemic defects (*doṣa*), e.g., the desire to deceive, etc., amongst the causes of a testimonial awareness needn’t prevent such an awareness from being a knowledge-event (*Prakāśa* in NKu 216.18-19): “Since the property of being an epistemic instrument is observed to be present in the utterance of a mistaken deceiver in virtue of its conformity to reality despite the presence of the speaker’s defects, a defect is also not conducive (*prayojaka*) to the absence of that property of being an epistemic instrument (*aprāmāṇya*)” (*vaktrdoṣe saty api bhrāntavipralambhakovākye samvādāt prāmāṇyadarśanād doṣo ’pi na aprāmāṇya-prayojakah |*) This remark seems to clearly concede that, in cases like *The Parrot* and *The Mistaken Deceiver*, my judgement that there is a pot in the next room is a knowledge-event.

that is testimony is produced by a true awareness (*tattvajñāna*) about the content (*artha*) which serves as a cause of the utterance (*prayoga*).<sup>36</sup> On a natural interpretation, this says that a linguistic utterance has the status of an epistemic instrument just in case it is produced by a true awareness of its own content. In cases like *The Parrot* and *The Mistaken Deceiver*, the linguistic utterances that produce my judgements aren't produced by the speaker's true awareness of its content. Therefore, Gaṅgeśa's definition of testimony as an epistemic instrument seems to imply that these judgements aren't produced by epistemic instruments, and therefore aren't knowledge-events. In this section, my aim is to resolve this apparent inconsistency.

We shall focus here on a section called “*śabaprāmāṇyavādaḥ*” in *Śabdakhaṇḍa* of TCM. At the beginning of that section, Gaṅgeśa's Vaiśeṣika opponent casts doubt on the status of testimony as an independent epistemic instrument. According to this opponent, in cases where an agent comes to know something on the basis of testimony, her knowledge-event is in fact based on an inference. Why? For both Gaṅgeśa and his Vaiśeṣika opponent, the content of an utterance (*vākya*) is simply a semantic relation (*samsarga*) amongst the referents of different subsentential expressions (*pada*) that are part of the utterance. The Vaiśeṣika thinks that, on hearing a linguistic utterance, a hearer can correctly infer which semantic relation the speaker intends to convey simply on the basis of certain properties of the utterance. What is the structure of that inference? The Vaiśeṣika explains:

Even then, testimony is not a distinct epistemic instrument. For the semantic relation amongst the referents of subsentential expressions is proved simply on the basis of an inference: namely, “Subsentential expressions like “Bring the cow with the stick”, or subsentential expressions in the Veda, are preceded by an awareness of a semantic relation which (i) is an intentional object of [the speaker's] intention (*tātparyaviśaya*) and (ii) holds amongst the recollected referents of those subsentential expressions. For they are a group of subsentential expressions that have syntactic dependency and so on, just like [the subsentential expressions occurring in] ‘Bring the pot.’”<sup>37</sup>

Let's unpack this. Now, consider a situation where a speaker utters the sentence, “Bring the cow with the stick!” On Gaṅgeśa's view, such a command can be true or false: it means that the act of bringing a cow can be achieved by means of effort and is a means to some desired outcome, but doesn't bring about any pain which exceeds the pain that is necessary for bringing about that outcome.<sup>38</sup> When a hearer is exposed to a command like this, how does

<sup>36</sup> TCMc IV.1 1.4-5: *prayogahetubhūtārthatattvajñānajanyaḥ śabdaḥ pramāṇam* | In my translation, I am taking “*artha*” to mean content of the utterance, rather than any arbitrary object.

<sup>37</sup> TCMc IV.1 22.1, 23.1, 25.1-2, and 29.1: *tathā 'pi śabdo na pramāṇāntaram padārthasamsargasyānumānād eva siddheḥ | tathā hi gām abhyāja daṇḍeneti padāni vaidikapadāni vā tātparyaviśayasamāritapadārthasamsargajñānapūrvakāni ākāṅkṣādimatpadakadambatvāt ghaṭam ānayetivat |*

<sup>38</sup> It might be surprising to see Gaṅgeśa accept the view that commands like, “Bring the cow!” (*gām abhyāja*) or injunctions like, “One should worship a *stūpa*” (*caityaṃ vandeta*) can be assessed for truth or falsity. According to Gaṅgeśa, utterances of this sort can motivate an agent to act in virtue of involving verbal endings that exhort the agent to act, e.g., the imperative suffix (*loṭ*) and optative suffix (*liṅ*). In the section of TCM called “*vidhivāda*,” he argues that what motivates the agent to undertake an action in such cases is her awareness of the action as (i) accomplishable by means of effort (*kṛtisādhyā*), and (ii) as a means to a desired outcome

she become aware of its content? The Vaiśeṣika would tell the following story. This string of linguistic expressions satisfies three conditions: (i) syntactic dependency (*ākāṅkṣā*), i.e., the dependency of the expressions in virtue of which they together convey a content, (ii) contiguity (*āsatti*), i.e., the temporal proximity amongst the utterances of the expressions, and (iii) semantic fitness (*yogyatā*), i.e., the absence of rebutting knowledge-events (*bādhakapramā*) that show that the content of the utterance is false. When the hearer correctly judges that a string of linguistic expressions satisfies these conditions, she may infer (on that basis) that the relevant expressions were in fact produced by the relevant speaker’s awareness of a content which (i) the speaker wants to communicate, and (b) which consists in a semantic relation amongst the referents of the relevant expressions. On the basis of this inference, the hearer may understand, and judge as true, the content of the relevant utterance. In this inference, the site consists in the subsentential expressions that are uttered. The target is being preceded by the speaker’s awareness of a semantic relation which she intends to convey and which holds amongst referents of those expressions. The reason is the property of being a group of subsentential expressions that satisfy conditions like syntactic dependency, and so on.

Soon, however, Gaṅgeśa considers a Nyāya objection to this account: namely, that the reason in question deviates from the target, i.e., is present at a place where the target is absent.

[A Naiyāyika:] In the case of a deceiver’s utterance, there is a deviation. For, in that case, there is no awareness of a semantic relation on the basis of the observation of some specific characteristic. One shouldn’t say, “Since it is not possible for anyone to construct an utterance without an awareness of a semantic relation, it is possible for that [deceiver] to have a suppositional awareness of a semantic relation (*āhāryam tasya saṃsargajñānam*).” For, first of all, it is possible for one to construct utterances—just like a parrot—simply on the basis of one’s awareness of subsentential expressions, and the same is the rule even in other cases.<sup>39</sup>

The point is this. Suppose you want to deceive me. You know that there is no pot in the next room, but you tell me that there is one. Even though the subsentential expressions that you utter satisfy all three conditions mentioned above, the target won’t be present here: since you don’t judge (on the basis of any specific piece of evidence) that there is a pot in the next room, your utterance isn’t preceded by your judgement that the relevant content is true (i.e.,

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(*iṣṭasādhana*) and (iii) as not giving rise to pain which exceeds the pain that invariably accompanies the relevant desired outcome (*iṣṭotpattināntarīyakaduḥkhādhikaduḥkhajanaka*). For discussion, see TCMc IV.2 144.2-4 and 174.5-186.1. On the basis of this claim, he concludes the exhortative verbal endings like the imperative or the optative suffix should refer to all three of these properties. Thus, an utterance like “One should worship a *stūpa*” or “Bring the cow!” would just mean that the relevant act (of worshipping a *stūpa* or bringing the cow) is accomplishable by means of effort, is a means to a desired outcome, and doesn’t bring about pain that exceeds the necessary amount of pain. If the act in question doesn’t have one of these characteristics, then the utterance can be false. If it has all of them, the utterance will be true.

<sup>39</sup> TCMc IV.1 45.1-2, 46.1-2, and 47.1: *nanu pratārakavākye vyabhicāraḥ viśeṣadarśanena tatra saṃsargajñānābhāvāt | na ca saṃsargam apratītya vākyaracanā na sambhavatīty āhāryam tasya saṃsargajñānam sambhavatīti vācyam | tāvat padajñānād eva śukasyeva vākyaracanopapatteḥ | anyatrāpi tasyaiva tantratvād iti cet |*

that the semantic relation amongst the referents of the subsentential expressions holds). So, the reason deviates from the target. Now, the Vaiśeṣika might offer the following response: since it's not possible for anyone to construct an utterance without grasping its content, even the deceiver must undergo some sort of suppositional awareness about the content of her utterance before she utters the relevant sentence. But this response fails: just as a parrot can string together expressions without understanding the content of the relevant utterance, so also can the deceiver construct utterances without grasping or reflecting on the content of her utterances.

The Vaiśeṣika replies to this objection as follows.

No, because even that deceiver has an awareness of the semantic relation, since he utters the utterance with the intention (*āśaya*), “This utterance will convey to this person the semantic relation amongst the referents of subsentential expressions.” Moreover, [the Nyāya objection fails] because there is an absence of semantic fitness. Therefore, in the case of utterances that don't conform to reality and are uttered in the manner of a parrot, there is no deviation. Rather, the awareness of a semantic relation, which arises from testimony, takes place due to an error regarding semantic fitness.<sup>40</sup>

The passage contains two arguments. First of all, the Naiyāyika opponent is simply wrong in thinking that, in the case of the deceiver, the speaker lacks an awareness of the content of her utterance. For, the deceiver utters the relevant expressions precisely because she wishes to convey a certain content to the hearer, and she couldn't have that desire without undergoing an awareness regarding that content. So, even if the reason is present in this case, the target isn't absent. Thus, the charge of deviation is avoided. However, this reply isn't robust. Consider a case where a parrot mechanically utters a false utterance, and an agent undergoes an awareness on the basis of it. In such a case, the kind of intention that underlies the deceiver's utterance is missing. So, the problem of deviation will remain intact.

That is possibly why the Vaiśeṣika offers a second argument: when an utterance is false, one of the three conditions mentioned above—namely, semantic fitness—is absent. According to Gaṅgeśa, semantic fitness is the absence of rebutting knowledge-events (*bādhakapramāviraha*), i.e., roughly, knowledge-events that show that the relevant content is false.<sup>41</sup> If the content of an utterance is false, there always are rebutting knowledge-events—

<sup>40</sup> TCM<sub>C</sub> IV.1 47.1-4 and 48.1: *na, etad vākyam etasya padārthasamsargaṃ bodhayiṣyatīty āśayena vākyaprayogāt tasyāpi samsargajñānāt yogyatāviraḥ ca | ata eva visambādivākye śukavad uccarite na vyabhicāraḥ | śabdāt samsargapratyayas tu yogyatābhramāt |*

<sup>41</sup> TCM<sub>C</sub> IV.1 262.2-3 and 263.1: “We reply: semantic fitness is the absence of rebutting knowledge-events. And that is an absence—which resides in the semantic relation with a referent of a subsentential expression—of being the qualificand in a knowledge-event regarding the counterpositiveness of an absence that resides in one referent of a subsentential expression” (*ucyate bādhakapramāviraho yogyatā, sā cetarapadārthasamsarge 'parapadārthaniṣṭhātyantābhāvapratiyogitvapramāviśesyatvābhāvaḥ |*) This is somewhat complicated. But the meaning is relatively simple. Consider a sentence like, “He sprinkles it with fire” (*vahninā siñcati*). The relevant subsentential expressions lack semantic fitness, because there is a rebutting knowledge-event that shows that sprinkling isn't the kind of act that can be performed by means of fire. In this case, the referent of “with fire” is the instrumenthood that resides in fire (*vahniniṣṭhakaraṇatā*). Normally, the

e.g., knowledge-events belonging to Īśvara, an omniscient God-like being—which show that the relevant content is false. Thus, in this case, the expressions uttered by the deceiver lack semantic fitness. So, since the reason is absent in this case, the problem of deviation doesn't arise. Similarly, in cases where a parrot or a child mechanically utters a false utterance, the reason put forward in the Vaiśeṣika inference doesn't deviate from the target, because, in those cases too, semantic fitness is absent. However, in such cases, the hearer may still come to understand what the utterance means, because she mistakenly thinks that the expressions are semantically fit.

This, however, paves the way for a different worry for the Vaiśeṣika. With reference to cases like *The Mistaken Deceiver* and *The Parrot*, the Naiyāyika opponent says:

There is a deviation in the case of a parrot's or someone else's fact-conforming utterance (*samvādivākya*), and in the case of a mistaken deceiver's utterance, which aren't accompanied by any awareness of a semantic relation. Moreover, how can there be a knowledge-event regarding a semantic relation, given that an inference about the awareness of the speaker is impossible?<sup>42</sup>

The problem is basically the same as before. In these cases, there is no absence of semantic fitness, since the content of the utterance is true and thus there is no rebutting defeater that shows that it is false. So, the hearer can correctly judge that the relevant expressions satisfy the three conditions mentioned above. Therefore, the reason can be present in the site, i.e., the relevant expressions. But the target is absent. In the parrot example, this is obvious: the parrot simply has no awareness as of there being a pot in the next room, so it couldn't have uttered the relevant expressions on the basis of its awareness of the content of the relevant utterance. Moreover, in a version of the deceiver example where the deceiver is mistaken, if the deceiver doesn't utter the relevant sentence on the basis of any awareness of its content (but merely on the basis of her awareness regarding the relevant expressions), the utterance won't be preceded by any awareness of that content. Thus, in both cases, despite the presence of the reason, the target will be absent. So, the problem of deviation cannot be avoided.

The Naiyāyika opponent's second remark raises a different problem. The Naiyāyika presupposes that, in *The Mistaken Deceiver* and *The Parrot*, since the parrot's or the deceiver's utterance conforms to reality, the hearer's judgement is indeed a knowledge-event. But that isn't something that the Vaiśeṣika can easily accommodate. For the conclusion of the Vaiśeṣika inference could be false in such cases: given that neither the mistaken deceiver nor

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semantic relation with this kind of instrumenthood would reside in the referent of a verb by a relation of determinanhood (*nirūpakatva*), since the referent of the verb, i.e., an action, determines which object plays the role of an instrument in relation to it. But, we know, the referent of the verb “sprinkles”—sprinkling (*seka*)—isn't the kind of act that can be performed by means of fire. Therefore, the relevant semantic relation is known to be absent from the referent of that verb. Thus, the semantic relation with the referent of “with fire” is the qualificand of a knowledge-event where it appears as the counterpositive of an absence that resides in the referent of “sprinkle.” So, semantic fitness is absent. For this explanation, see Mathurānātha's *Rahasya* (TCM<sub>c</sub> IV.1 263.4-7).

<sup>42</sup> TCM<sub>c</sub> IV.1 48.2 and 49.1-2: *atha saṃsargajñānaṃ vinā śukasyānyasya vā samvādivākya bhrāntapratāravākya ca vyabhicāraḥ kathaṃ vā tatra saṃsargapramā vaktṛjñānānumānāsambhavād iti cet |*

the parrot may undergo an awareness of the content of the utterance, the hearer's inferential judgement that the speaker undergoes such an awareness can't be true. So, testimonial knowledge-events cannot be reduced to inferential knowledge-events.

The Vaiśeṣika's response to these problems is somewhat cryptic:

No. Moreover, it has been said [in “*prāmāṇyavāde utpattivādaḥ*”] that, if that awareness [which arises from the parrot's or the mistaken deceiver's utterance] were a knowledge-event regarding a semantic relation, the utterance would be comparable to the Veda.<sup>43</sup>

Mathurānātha explains the point as follows:

**“It would be comparable to the Veda.”** The meaning is that, just as, in the case of the Veda, the target is present due to its being preceded by a knowledge-event of Īśvara, so also is true in the relevant case.<sup>44</sup>

We can unpack the thought as follows. If my judgements in *The Parrot* and *The Mistaken Deceiver* are knowledge-events, then the Vaiśeṣika would happily say that these utterances are similar to the Veda. In the case of the Veda, the Vaiśeṣika's inference yields a correct conclusion precisely because Īśvara, the omnipotent and omniscient God-like being, has composed the Veda with the intention of communicating its content to us. Similarly, even when the parrot or the mistaken deceiver utters a sentence, Īśvara serves as the agent of the relevant utterance. For he is a cause of every effect. So, we may argue that the relevant utterance is in fact caused by Īśvara's true awareness of the relevant content. Thus, the conclusion of the Vaiśeṣika's inference will come out true.

Ultimately, Gaṅgeśa rejects the Vaiśeṣika's reduction of testimony to inference. But the Vaiśeṣika's response also contains a hint of a solution to the problem that we started out with. Recall that, for Gaṅgeśa, a piece of testimony can only serve as an epistemic instrument if it is caused by a true awareness of its content. Since, in *The Parrot* or *The Mistaken Deceiver*, the speaker needn't have any true awareness of the content of the relevant utterance, the relevant utterances cannot straightforwardly be treated as epistemic instruments. But the Vaiśeṣika's response shows us a way out. Following the Vaiśeṣika, we could argue that, in all these cases, the relevant utterance is caused by Īśvara's true awareness of its content. Thus, the utterance can indeed end up having the status of an epistemic instrument.<sup>45</sup> As we shall later see, Gaṅgeśa himself will endorse this solution in the section of TCM called “*prāmāṇyavāde utpattivādaḥ*.”

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<sup>43</sup> TCM<sub>C</sub> IV.1 49.3: *na| yadi tac ca saṃsargapramā tadā vedatulyatety uktam |*

<sup>44</sup> *Rahasya* in TCM<sub>C</sub> IV.1 49.3: *vede yathā īśvarīyasaṃsargapramāpūrvakatvam ādāya sādhyasattvam, tathā prakṛte 'pītyarthah|*

<sup>45</sup> There are other portions of *Śabdakhaṇḍa* where Gaṅgeśa considers a view according to *The Parrot* and *The Mistaken Deceiver* (at TCM<sub>C</sub> IV.1 98.1-2 and 99.1-3, and then again at TCM<sub>C</sub> IV.1 106.1 and 107.1). However, in such cases, the view doesn't belong to a Naiyāyika, but rather to a Prābhākara, and don't add any new arguments to the discussion.



The lesson is this. If my arguments in this section and the last are sound, then Gaṅgeśa’s conception of inference and testimony as epistemic instruments don’t exclude epistemically lucky awareness-events from the class of knowledge-events. This aspect of Gaṅgeśa’s view creates trouble for him. For it cannot easily be reconciled with his commitment to *Nyāya Infallibilism*. This is precisely the problem that we shall now turn to.

### The Problem of Epistemic Luck

Following his Nyāya predecessors like Udayana, Gaṅgeśa accepts a specific version of *Nyāya Infallibilism* in the section of TCM called “*prāmāṇyavāde utpattivādaḥ*.”<sup>46</sup>

*Virtue Infallibilism*. For any kind K of knowledge-event, there is a kind E of epistemic virtue associated with that kind K, such that, if any awareness belongs to that kind K, then it is produced by an instance of E.

What does this say? For each kind of knowledge-event—perceptual, inferential, analogical, or testimonial—there is a proprietary epistemic virtue that produces knowledge-events of that sort. According to Gaṅgeśa, there is no uniform epistemic virtue that serves as the cause of all knowledge-events.

We reply. There is no uniform epistemic virtue for every knowledge-event. Rather, with respect each specific [kind of] knowledge-event, the contact of the sense-faculty with many parts of the object and true awareness-events regarding the reason, similarity and the content of an utterance simply serve as epistemic virtues individually depending on the circumstances (*yathāyatha*), because there are positive and negative correlations [between each kind of knowledge-event and each of these virtues].<sup>47</sup>

As Gaṅgeśa goes on to explain, each specific kind of knowledge-event has a corresponding epistemic virtue that gives rise to it. In the case of perceptual knowledge-events, it is observation of specific characteristics, which—in the case of composite material objects—may be mediated by the contact of the relevant sense-faculty with a sufficiently large number of parts of the relevant object.<sup>48</sup> In the case of inferential knowledge-events, the epistemic virtue is a true subsumptive judgement, i.e., a correct awareness of the site as characterised by something that is pervaded by the target. Finally, in the case of testimonial knowledge-

<sup>46</sup> For a translation of this section, see Phillips and Tatacharya (2009, pp. 141-209).

<sup>47</sup> TCM I 327.2-7: *ucyate | prāmāmātre ca nānugato guṇaḥ kintu tattatpramāyām bhūyo ’vayavendriya-sannikarṣayathārthalingasādr̥ṣyavākyaṛthajñānānām yathāyathaṃ pratyekam eva guṇatvaṃ anvayavyatirekāt |*

<sup>48</sup> TCM I 327.8-9: “Just as bile, etc. and error about the inferential mark, etc. serve as defects with respect to specific awareness-events that aren’t knowledge-events, so also does the observation of a specific characteristic serve as an epistemic virtue with respect to perceptual knowledge-events, since it regularly accompanies them” (*tattadaprāmāyām pittādilingabhramādīnām doṣatvavat pratyakṣe viśeṣadarśanam api guṇaḥ tadanuvīdhānāt*).

events (including those produced by the Veda), the epistemic virtue is the (speaker's) true awareness about the content of the relevant utterance.<sup>49</sup>

Gaṅgeśa's commitment to *Virtue Infallibilism* creates trouble for him. On the one hand, none of the epistemic virtues on the list given above are (or have to be) present in cases like *Mist and Fire*, *Horns and Cows*, *The Mistaken Deceiver*, and *The Parrot*. In *Mist and Fire* and *Horns and Cows*, my subsumptive judgement is certainly false, because the reason is either absent from the site or not pervaded by the target. In *The Mistaken Deceiver* and *The Parrot*, the basis of the speaker's utterance needn't be her true awareness of the content of the relevant utterance. Thus, if (following Gaṅgeśa's *Definition of Knowledge*) we treat my judgements in these cases as knowledge-events, Gaṅgeśa's version of *Virtue Infallibilism* will be really difficult to defend. This is simply an instance of a more general tension between *The Nyāya Definition of Knowledge* and *Nyāya Infallibilism*. Here, we will see how this problem is framed by Gaṅgeśa himself.

Let's begin with a standard objection, offered by Bhāṭṭa Mīmāṃsakas, against *Virtue Infallibilism*. According to earlier Naiyāyikas like Bhāṭṭa Jayanta, Vācaspati Miśra and Udayana, the Veda has the status of an epistemic instrument precisely because its author is Īśvara, who possesses a correct awareness of the contents of the Vedic utterances. The Mīmāṃsaka disputes this:

Since there is a rebutting defeater for this view in the case of Veda, e.g., the fact that no author of the Veda is recollected, etc., therefore, even in ordinary practice, an utterance serves as the cause of a knowledge-event simply in virtue of its defectlessness. However, in the case of Veda, the defectlessness is determined solely on the basis of its permanence even though a speaker is absent.<sup>50</sup>

The thought is this. In the case of Veda, no author is recollected. This, according to the Bhāṭṭa Mīmāṃsaka, suggests that the Veda has no author.<sup>51</sup> So, in order to explain the status of the Veda as an epistemic instrument, we cannot appeal to its author's correct awareness of its contents. We can only appeal to the Veda's lack of epistemic defects (i.e., epistemic defects that normally give rise to misleading testimony). Similarly, the Mīmāṃsaka claims, ordinary testimony also serves as an epistemic instrument because it is defectless. So, *Virtue Infallibilism* is false.

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<sup>49</sup> TCM<sub>C</sub> I 341.1-4: "Moreover, since an inferential knowledge-event, etc. doesn't arise from the mere absence of defects such as errors pertaining to the inferential mark, similarity, and the content of a linguistic utterance, epistemic virtues such as a true subsumptive judgement are proved. In this manner, since a knowledge-event is produced by epistemic virtues, a knowledge-event is produced even in the case of the Veda by an epistemic virtue, namely a true awareness regarding the contents of [Vedic] utterances. So, Īśvara is proved as the bearer of that epistemic virtue." (*api ca liṅgasādṛṣyavākyaṛthabhramadoṣābhāvamātrān nānumityadir iti satyaparāmarśādiguṇasiddhiḥ | evaṃ pramāyā guṇajanyatvena vede 'pi pramā vākyaṛthayathārthajñānaguṇajanyeti tadāśrayeśvarasiddhiḥ*)

<sup>50</sup> TCM<sub>C</sub> I 344.5-7: *vede kartrasmaraṇāder bādhakāt loke 'pi nirdoṣatvenaiva pramāhetutvam, vede tu nityatvenaiva vaktur abhāve 'pi nirdoṣatvam avadhāryata iti cet*

<sup>51</sup> See v. 368ab in the section called "vākyaādhikaraṇa" in Kumāriḷa's *Ślokavārttika* (ŚV 668.19).

Gaṅgeśa's response here is significant:

No, because the rebutting defeater will be [later] refuted extensively, and because that defectlessness is absent from (i) the utterance of a mistaken deceiver and (ii) the defect-induced utterance, "There is a cloth," that is made when the sentence, "There is a pot," is to be uttered, both of which are epistemic instruments insofar as they conform to the facts (*saṃvādāt*). Moreover, if that Mīmāṃsaka view is right, an utterance, "One should worship a *stūpa*," and an utterance of a parrot, etc.—which are brought about by chance—would also be epistemic instruments. For the defects of the speaker are absent in those cases and they are similar to the Veda in virtue of being independent of any epistemic instrument.<sup>52</sup>

The passage contains two distinct arguments. First, Gaṅgeśa thinks that the Mīmāṃsaka is simply wrong in thinking that the Veda has no author; later, he will offer arguments against this position in *Śabdakhaṇḍa*.<sup>53</sup> On the one hand, if the Mīmāṃsaka is right, in a case like *The Mistaken Deceiver* or in a case where a true utterance is uttered instead of another false utterance due to some defect, the relevant utterance wouldn't serve as an epistemic instrument due to the presence of epistemic defects. This is important: the fact that Gaṅgeśa takes this to be a problem for the Mīmāṃsaka clearly suggests that he takes these accidentally true awareness-events to be knowledge-events. Second, it's obvious that a false utterance of a sincere Buddhist, e.g., "One should worship a *stūpa*", or a false utterance of a parrot or a child, cannot be an epistemic instrument. But, if the Mīmāṃsaka is right in thinking that any defectless linguistic utterance can be an epistemic instrument, even such a false utterance should generate knowledge-events on the Mīmāṃsaka's view. For such an utterance isn't accompanied by any of the typical epistemic defects, e.g., the desire to deceive, etc., which give rise to misleading testimony.

However, the Mīmāṃsaka notices that the Naiyāyika, who is committed to *Virtue Infallibilism*, also faces a similar problem.

Even for you, how can the utterance of a parrot, etc. or of a mistaken deceiver be an epistemic instrument? For it is not produced by any epistemic virtue. Moreover, it is not the case that, since it is not produced by any epistemic virtue and doesn't have as its intentional object what is intended [by the speaker], it is not an epistemic instrument. For, due to the conformity of the utterance to the facts, there is a rebutting defeat with respect to the target of this inference.<sup>54</sup>

As Gaṅgeśa and his predecessors acknowledge, the epistemic virtue that typically explains the status of a linguistic utterance as an epistemic instrument is the speaker's correct awareness regarding the content of her utterance. This, presumably, is not (or needn't be)

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<sup>52</sup> TCMc I 345.1-6: *na | bādḥākasya bahuśo nirākariṣyamāṇatvāt bhrāntapratāarakavākye ghaṭo 'stīti vācye paṭo 'stīti doṣajanyavākye ca saṃvādāt pramāṇe tadabhāvāt | kiṃ ca daivavaśasampannam caityam vandetety ādikam śukabālādivākyam apy evam pramaṇam syāt, vakṛdoṣābhāvāt pramāṇāpekṣatvena vedatulyatvāt |*

<sup>53</sup> See the discussion in the section called "tātparyavādah" in *Śabdakhaṇḍa* of TCM (TCMc IV.1, pp. 339ff).

<sup>54</sup> TCMc I 345.6-7 and 346.1-2: *nanu tavāpi śukādibhrāntapratāarakavākyam katham pramaṇam guṇājanyatvāt | na ca guṇājanyatvāt vakṛtātparyāviṣayatvāc ca tad apramāṇam | saṃvādena sādhye bādḥāt |*

present in cases like *The Mistaken Deceiver* and *The Parrot*. So, if Gaṅgeśa and his predecessors accept *Virtue Infallibilism*, they cannot accept the utterances in these cases as epistemic instruments. Given that these utterances aren't produced by epistemic virtues of the speaker (or given that their contents don't reflect the speaker's intention), why can't Gaṅgeśa and his Nyāya comrades simply accept the conclusion that these utterances aren't epistemic instruments? As Gaṅgeśa's opponent points out, these utterances conform to reality. So, the resulting awareness-events must be knowledge-events. This, in turn, rebuts any argument that seeks to show that the relevant utterances aren't epistemic instruments. That's bad news for *Virtue Infallibilism*.

However, a Naiyāyika could resist this conclusion in a different way. For example, she could claim that, at least according to a certain conception of semantic fitness, in cases like *The Mistaken Deceiver*, the linguistic utterance lacks semantic fitness. Suppose we define semantic fitness not as the absence of rebutting defeaters for the content of an utterance, but rather as the absence of rebutting defeaters for the utterance-content *that the speaker is aware of*. Since the mistaken deceiver doesn't take the content of her utterance to be true (and, in that sense, lacks awareness of it) and utters the relevant utterance on the basis of an erroneous awareness about how things are in the world, semantic fitness is absent in this case. The Mīmāṃsaka's response goes like this.

However, there is a view that says: "In the case of an utterance of a mistaken deceiver, there is simply no semantic fitness. For semantic fitness is the absence of rebutting defeat for an utterance-content that the speaker is aware of, and an intentional object of error is rebutted." That is wrong. For, since the [deceiver's] error with respect to something that contains a pot, "There is no pot," has a different intentional object from the utterance, it is not a cause of that utterance. Moreover, for reasons of parsimony, semantic fitness is the absence of rebutting defeat for the content of an utterance. And, in that case, the content of the utterance is unrebutted.<sup>55</sup>

The Mīmāṃsaka's reply has two parts. In *The Mistaken Deceiver*, when the deceiver says, "There's a pot in the next room," she incorrectly thinks that there is no pot in the next room. However, her error plays no (direct) causal role in generating her utterance. What explains her utterance is her desire to communicate a certain content to the hearer (which might in turn be explained by her error and her desire to deceive the hearer). So, even if she makes the mistake, why should that prevent an awareness-event based on the utterance from being a knowledge-event? Second, according to the Mīmāṃsaka, there is a simpler (and therefore preferable) notion of semantic fitness—namely, the absence of rebutting defeat for the content of the utterance—which allows us to show that, in this case, the deceiver's utterance is semantically fit (given that its content cannot be rebutted).

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<sup>55</sup> TCM<sub>C</sub>I 346.2-4 and 347.1-2: *yat tu bhrāntapratāarakavākye yogyataiva nāsti | vaktrjñātavākyārthābādho hi yogyatā | bhramaviṣayaś ca bādhitā iti | tan na| ghaṭavati ghaṭo nāstīti bhinnaviṣayatayā bhramasyāhetutvāt | kiṃ ca vākyārthābādho yogyatā lāghāvāt| vākyārthaś ca tatrābādhitā eva |*

A Naiyāyika who doesn't treat the utterance of a parrot as an epistemic instrument might raise a different problem: namely, that, when a hearer is exposed to the utterance of a parrot, she simply doesn't judge the content of the utterance to be true, but merely undergoes an awareness that takes the form, "This person [or animal] says this." Since the hearer doesn't judge the content of the utterance to be true, the relevant awareness can't be regarded as a testimonial knowledge-event. Once again, the Mīmāṃsaka dismisses this worry quite quickly.

It is also not to be said, "An awareness of the content [of the utterance] simply doesn't take place on the basis of the utterance of a parrot, a child, and so on. Rather, there is an awareness of the following sort, 'This being says this.'" This is because one cannot deny the existence of a non-recollective awareness when the causal complex for the awareness of a semantic relation—e.g., syntactic dependency, etc.—is present, and because the resulting awareness is a true non-recollective awareness in virtue of conforming to the facts.<sup>56</sup>

The point is simple: given that all the causes necessary for testimonial awareness are present in this case, a testimonial awareness (which has as its content the content of the utterance) cannot fail to arise. And that awareness-event—insofar as it conforms to reality—must also be true. Thus, it will end up being a knowledge-event.

At last, the Mīmāṃsaka opponent extends this objection to cases like *Mist and Fire*. As Gaṅgeśa himself says earlier, a true subsumptive judgement is the epistemic virtue that invariably precedes all inferential knowledge-events. However, in *Mist and Fire*, given that there is no smoke on the hill, the subsumptive judgement that the hill possesses smoke that is pervaded by fire cannot be true. So, given the absence of this epistemic virtue, the resulting awareness cannot be a knowledge-event. But, according to Gaṅgeśa's own definition of knowledge-events, this is a knowledge-event.

If this were so, the inferential awareness of fire in a place that indeed contains fire—based on an erroneous awareness of smoke—wouldn't be a knowledge-event. For it wouldn't be produced by a true awareness about the inferential mark. And it is not the case that some other fire is simply the intentional object in that case. For the fire is recognized, and, in the case of an inference involving just one individual like cowhood, that [i.e., some other individual] is absent. Moreover, there is no superimposition of an identity with something else. For, even though the inferential awareness may be an error—due to a superimposition of an identity—with respect to the part that involves the superimposition (*upadhāna*) of the inferential mark, it would be a knowledge-event with respect to the part that concerns the target.<sup>57</sup>

<sup>56</sup> TCM<sub>C</sub> I 347.3-4 and 348.1-2: *na ca śukabālādivākyād arthabodha eva na bhavati, kiṃ tv evaṃ ayaṃ vadatīti evaṃ prakārā pratītiṃ iti vācyam | ākāṅkṣāder anvayabodhasāmagryāḥ sattve 'nubhavānapalāpāt | samvādena yathārthatvānubhavāc ca |*

<sup>57</sup> TCM<sub>C</sub> I 348.2-5 and 349.1-2: *evaṃ dhūmabhramād vahnimaty eva vahnyanumitir na pramā syāt yathārthalingajñānānjanyatvāt | na ca vahniantaram eva tatra viśayaḥ pratyabhijñānāt gotvādyekavyaktike tadabhāvāc ca | nāpi tatrānyatādātmyāropāḥ, saṃsargāropād liṅgopadhānāṃśe bhramatve 'pi sādhyāṃśe pramātvād iti |*

As we have already seen from Gaṅgeśa’s own discussion of such cases, a Naiyāyika cannot escape the conclusion that inferential judgements that arise in cases like *Mist and Fire* are knowledge-events. As the Bhāṭṭa points out, one cannot argue that the inferred fire is in fact distinct from the fire that is actually present on the hill, because one can perceptually recognize the fire on the hill as the fire that one inferred earlier, and the same strategy of response isn’t available in a case like *Horns and Cows*. The Naiyāyika also cannot argue that, in a case like *Horns and Cows*, the agent’s mistake lies in taking cowhood to be identical to some other property. For, even then, insofar as the agent correctly takes the target, i.e., cowhood, to be present in the animal, the awareness at least will be true (and therefore a knowledge-event) in relation to the part that concerns the target.

The general thrust of the Mīmāṃsaka’s objection is this. If we accept *Virtue Infallibilism*, then all inferential and testimonial knowledge-events must be caused by some epistemic virtue. But, in cases like *Mist and Fire*, *The Parrot* and *The Mistaken Deceiver*, no such virtues seem to be present. Yet, given the *Nyāya Definition of Knowledge*, it’s difficult to avoid the conclusion that these are knowledge-events. So, there is a tension between *Virtue Infallibilism* and the *Nyāya Definition of Knowledge*.

### **Gaṅgeśa’s First Solution: Appealing to Divine Awareness**

Gaṅgeśa offers two distinct solutions to this problem.

The first of these isn’t original: Gaṅgeśa attributes the first solution to “those who know the tradition” (*sampradāyavit*), i.e., presumably other Naiyāyikas. It involves an appeal to Īśvara’s awareness as a cause of both inferential and testimonial knowledge-events.

We reply. In the case of the mistaken deceiver’s utterance and the utterance of a parrot, etc., since the utterances must be uttered by a trustworthy person (*āpta*) insofar as they are pieces of testimony that are epistemic instruments, the cause of those utterances is simply Īśvara’s true awareness regarding the content of the utterance just as in the case of the Veda. For he is the agent of every effect. Moreover, even someone who claims that defectlessness makes a piece of testimony an epistemic instrument must admit that the utterance of a parrot, etc. is comparable to the Veda.

[The opponent:] In that case, pseudo-testimony (*śabdābhāsa*) would completely disappear, since it would also have Īśvara as its speaker.

[Reply:] No. Since the content of such an utterance is false, it is not an intentional object of the awareness of Īśvara.<sup>58</sup>

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<sup>58</sup> TCMc I 349.2-7: *ucyate | bhrāntapratāarakavākye śukādivākye ca pramāṇaśabdatvena āptoktatvāt vedavad īśvarasyāpi yathārthavākyārthajñānaṃ janakam, tasya kāryamātre karṭṛtvāt | śukādivākyasya ca vedatulyatā doṣābhāvavādinā’pi vācyā | nanv evaṃ śabdābhāsocchedaḥ, tasyāpīśvaravakṛkatvād iti cet—na | tadvakārthasyāsattvena bhagavajjñānāgocaravāt |*

In framing her objection to Gaṅgeśa's *Virtue Infallibilism*, the Mīmāṃsaka opponent was assuming that, in *The Parrot* and *The Mistaken Deceiver*, even when my testimonial judgements are true, the utterances cannot be caused by the speaker's true awareness about the contents of those utterances. So, if the opponent is right, the kind of epistemic virtue that normally explains the truth of testimonial awareness-events are missing in these cases. Gaṅgeśa wants to deny precisely this. He starts from the simple observation that both the utterances of the parrot, etc. and utterances of the mistaken deceiver are epistemic instruments insofar as they produce knowledge-events. Now, according to the Naiyāyikas, any piece of testimony that is an epistemic instrument must be produced by a trustworthy speaker. Who is the trustworthy speaker in the case of these utterances? It can't be the deceiver or the parrot. It has to be Īśvara, given that he is implicated in every effect as an agent. So, these utterances too are produced by Īśvara's true awareness of the relevant contents. Thus, the epistemic virtue which, for Gaṅgeśa, explains the status of testimony as an epistemic instrument—namely, the speaker's true awareness of the content of an utterance—will be present even in these cases. This, however, doesn't mean that there cannot be any misleading testimony—what Gaṅgeśa calls pseudo-testimony—that produces erroneous testimonial awareness-events. For, in cases of misleading testimony, Īśvara's awareness of the relevant content isn't present, since He cannot undergo any false awareness. That explains why, in such cases, a knowledge-event cannot arise.

This story can be easily extended to cases like *Mist and Fire*. How?

In this manner, even in the case of a knowledge-event produced by a pseudo-reason, the cause is simply Īśvara's awareness of the hill as possessing something pervaded by fire. This is what people who know the tradition say.<sup>59</sup>

Recall *Mist and Fire*. In that scenario, my inferential judgement that there is fire on the hill is true but my subsumptive judgement that the hill contains smoke that is pervaded by fire is false. For there is no smoke on the hill. This, in turn, implies that the proprietary epistemic virtue that explains inferential knowledge-events goes missing in this case. Gaṅgeśa thinks this is wrong. Since Īśvara causes every effect, his awareness of the hill as containing something that is pervaded by fire can serve as the true subsumptive judgement that causes my inferential judgement. Thus, even in *Mist and Fire*, my inferential judgement can be caused by an epistemic virtue.

This treatment of cases like *Mist and Fire* seems to have been popular amongst Naiyāyikas of this period. For example, in his refutation of Śrīharṣa, *Khaṇḍanoddhāra*, Vācaspati Miśra II (14<sup>th</sup> century CE) appeals to an explanation like this.<sup>60</sup> One of Gaṅgeśa's

<sup>59</sup> TCMc I 350.1-2: *evaṃ līṅgābhāsajanyapramāyām api vahnivyāpyavattvajñānam īśvarasyaiva janakam iti sampradāyavidāḥ |*

<sup>60</sup> Vācaspati Miśra II discusses this case in the context of an objection to the later Nyāya view that an instrument (*karana*) is a cause of an effect that gives rise to that effect through the meditation of an operation (*vyāpāra*) that it produces. Ordinarily, in the case of inferential awareness-events, this role would be played by the recollective awareness of pervasion, which gives rise to an inferential judgement through the meditation of a subsumptive

early commentators, Jayadeva Miśra (15<sup>th</sup> century CE), offers some insight into the motivation for this solution.

Rather, a knowledge-event [in these cases] is the virtue, and that has a knowledge-event as its result. Moreover, it is not the case that a suppositional superimposition that accidentally conforms to reality is of that sort. If this were the case, then it would follow that a distinct epistemic instrument [other than the four recognized ones] exists, since—without having a uniform and non-overextended property as its delimiter—something cannot have the status of being an epistemic instrument.<sup>61</sup>

Let's flesh out this thought more carefully. On one way of reading Jayadeva, this solution is inspired by a certain general principle about epistemically indirect awareness-events (e.g., inferential, analogical, or testimonial knowledge-events): namely, that an epistemic virtue that gives rise to an epistemically indirect knowledge-event must itself be a knowledge-event. In *The Mistaken Deceiver*, even though a deceiver's utterance may be based on an accidentally true suppositional awareness about the content of her utterance, her suppositional awareness isn't a knowledge-event. So, it cannot play the role of an epistemic virtue in relation to my testimonial awareness-event.

Why is that plausible? Jayadeva offers an argument. If the Naiyāyika were to treat a suppositional awareness as an epistemic virtue, she would have to revise her account of testimony. She would have to say that a linguistic utterance can serve as an epistemic instrument insofar as it is based on either (i) the speaker's knowledge of its content, or (ii) the speaker's true suppositional awareness of its content. This would imply that there is no uniform or non-disjunctive (*anugata*) property which is shared by all linguistic utterances that serve as epistemic instruments. Why is this bad? Each epistemic instrument, according to Jayadeva, is delimited by a uniform property that doesn't extend to other epistemic instruments. If this principle is right, then we shouldn't treat the linguistic utterances that are based on suppositional awareness-events as instances of the same epistemic instrument as the linguistic utterances that are based on the speaker's knowledge-events. So, we will be

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judgement that it produces. But if the epistemic virtue that explains inferential knowledge-events is Īśvara's subsumptive judgement, it becomes hard to explain how that could be produced by a recollection of pervasion. For Īśvara's mental states are all permanent. Vācaspati poses and then solves the problem in the following manner (KU 58.3-7): “[The opponent:] First of all, you have said that, in a case where there is an inferential awareness (*anumiti*) that has the status of being a knowledge-event but is produced by a pseudo-reason, its knowledgehood (*pramāṇya*) is produced by an epistemic virtue in virtue of an inference (*anumāna*) that has the nature of Īśvara's subsumptive judgement. In that case, that subsumptive judgement simply cannot be an operation, since it is permanent. [Reply:] True. Since Īśvara's awareness is the cause of the universe, it serves as a cause in this case too. That is precisely why the inferential awareness is a knowledge-event owing to his virtue insofar as he is agent of the inferential awareness. However, even in that scenario, the instrument is the recollection of pervasion which belongs solely to the person who makes the inference and which produces the subsumptive judgement” (*nanu liṅgābhāsajanyā yatra pramābhūtānumitis tatra tatpramāṇyam īśvaratrīyaliṅgaparāmarśarūpānumānāt guṇajanyam iti tāvad āttha tatra hi sa vyāpārabhūto na bhavati nityatvād it cet | satyam | jagatkāraṇatvāt tad atrāpi kāraṇam tata eva cānumānakartus tasya guṇād anumitih pramā | karaṇas tu tatrāpi anumitibhāja eva trīyaparāmarśajanā vyāptismṛtir iti |*)

<sup>61</sup> *Āloka* in TCMA 167.11-13: *vastutas tu pramāṇ guṇaḥ | sā ca pramāphalam | na cāhāryāropaḥ kākātālīyasamvādas tathā | tathā sati prāmāṇāntarāpatter anugatānatiprasaktadharmāvacchedakaṃ vinā pramāṇatvāsambhavāt |*



compelled to posit some new epistemic instruments over and above the four traditional ones. To avoid these two problems, it is better to say that testimonial knowledge-events must ultimately be based on Īśvara's knowledge.

This solution seems somewhat *ad hoc*. The Naiyāyika is forced to recognize Īśvara's true awareness as an epistemic virtue, because she doesn't have any other way of explaining how an accidentally true awareness could be a knowledge-event.<sup>62</sup> Arguably, this is why Gaṅgeśa distances himself from this proposal. In the next section, I will lay out his own solution to the problem of epistemic luck.

### Gaṅgeśa's Second Solution: Epistemic Localism

Gaṅgeśa's second solution to the problem of epistemic luck focuses solely on the case of testimony. Against his Nyāya predecessors, he argues that the production of testimonial knowledge-events doesn't depend on the epistemic virtues of the source of a linguistic utterance (e.g., its speaker), but rather on properties of linguistic utterance and its recipient (i.e., the hearer). This strategy is an instance of epistemic localism: by reducing epistemic virtues to local properties of a linguistic utterance and its recipient, it downplays the epistemic significance of upstream causal factors in the production of knowledge-events.

Gaṅgeśa explains his solution to the problem of epistemic luck in the following passage.

Here, we say the following. In ordinary practice, the true awareness of the speaker doesn't serve as an epistemic virtue with respect to testimonial knowledge-events. Rather, semantic fitness, etc., or a true awareness about those conditions, does. For that is parsimonious, and these conditions are necessary for testimonial knowledge-events. There is no true awareness of semantic fitness in the case of a non-fact-conforming utterance (*vākye viśaṃvādinī*) that is produced by error, carelessness or the desire to deceive. For the content of the utterance is rebutted. The same is true of a non-fact-conforming utterance that is made, due to physical indexicality (*karaṇāpātava*), regarding something else when something else is to be stated. However, when the utterance conforms to the facts, it is indeed an epistemic instrument.<sup>63</sup>

Gaṅgeśa's argument is that, in the case of ordinary speech, the speaker's true awareness of the content of an utterance doesn't serve as an epistemic virtue. Rather, semantic fitness, etc., or the hearer's true awareness regarding these factors, plays this role. Why does that matter? Two kinds of cases need to be considered. In a scenario where a parrot or child utters a false sentence, the utterance doesn't conform to the facts. So, there is a rebutting defeater

<sup>62</sup> Jayadeva's commentary strongly suggests this reading of Gaṅgeśa's attitude towards this solution. See TCMA 167.16-20.

<sup>63</sup> TCMc I 350.3-7 and 351.1: *atra brumaḥ | śābdapramāyām loke vaktryathārthajñānaṃ na guṇaḥ, kiṃ tu yogyatādikam yathārthatajñānaṃ vā | lāghavād āvaśkyatvāc ca | bhramapramādavipralipsādijanye vākye viśaṃvādinī na yathārthayogyatājñānaṃ, vākyārthasya bādhitatvāt | evaṃ karaṇāpātāvād anyasmin vaktavye anyābhidhāne viśaṃvādinī, saṃvādinī tu pramāṇam eva |*

(*bādhaka*) for that content (i.e., a piece of evidence that would decisively show that the content is false). But, as we already know, semantic fitness involves the absence of knowledge about such defeaters. Things are different in cases like *The Parrot* and *The Mistaken Deceiver*. In such cases, the content of the relevant utterance conforms to the facts. Hence, there is no such rebutting defeater. As a result, semantic fitness, or a true awareness regarding it, may indeed be present. So, these utterances can serve as epistemic instruments.<sup>64</sup>

This second solution to the problem of epistemic luck runs into an objection. Gaṅgeśa claims elsewhere in *Śabdakhaṇḍa* that “the status of testimony as an epistemic instrument is dependent on [the underlying] intention (*tātparya*).”<sup>65</sup> According to Gaṅgeśa, the intention underlying an utterance is its having a certain aim (*tatprayojanakatva*), which could be either an awareness that the speaker wants the hearer to undergo, or an action that the speaker wishes the hearer to perform.<sup>66</sup> So, what does it mean for the status of testimony as an epistemic instrument to be dependent on the underlying intention? According to the commentator, Mathurānātha, this means that whether a piece of testimony produces a non-recollective awareness depends on the hearer’s awareness of the speaker’s intention. Gaṅgeśa’s second solution contradicts this principle. According to this solution, a correct, or incorrect, awareness of the speaker’s intention (*tātparya*) isn’t a necessary condition for any testimonial knowledge-event. But this means that an agent can undergo a testimonial knowledge-event even when she misconstrues the intention underlying an utterance or simply has no clue about what it is. Mathurānātha offers a concrete example of this, which we can spell out as follows.<sup>67</sup>

*Hari*. You are an avowed atheist. Your friend, who believes in the many Hindu gods, wants to dispel what she takes to be your illusion. So, in order to convey the idea that

<sup>64</sup> At the end of the passage, Gaṅgeśa says (TCM<sub>C</sub>I 351.1-2): “In some cases, there is simply no awareness of semantic fitness” (*yogyatādijñānam eva kvacīn nāsti*). Here, Mathurānātha explains that this remark addresses an objection against the proposal that semantic fitness itself is the epistemic virtue when it comes to testimonial knowledge-events. In some cases, even though the linguistic expressions that are uttered may be semantically fit, a testimonial knowledge-event may not arise. For example, if I have misleading evidence for thinking that you are a liar, then, even when you utter a true sentence, I might not be able to rationally judge that what you say cannot be rebutted. So, I won’t take your utterance to be semantically fit. As a result, I won’t judge the content of your utterance to be true, and therefore won’t undergo a testimonial knowledge-event. In such cases, a general cause of testimonial awareness—namely, an awareness of semantic fitness (unaccompanied by any doubt about semantic fitness)—is missing. See *Rahasya* in TCM<sub>C</sub>I 350.18-21: “[The opponent:] If semantic fitness is the virtue, then, in some cases, semantic fitness exists in itself [without giving rise to any testimonial knowledge-event]. But why does a testimonial knowledge-event not arise [in such a case]? [Reply:] So, he has said: ‘In some cases, ...’ And, thus, the effect is absent [in such cases] simply due to the absence of a general cause of testimonial awareness, i.e., an awareness of semantic fitness” (*atha yogyatā ced guṇaḥ tadā kvacit svarūpasatī yogyatā vartate śābdapramā katham na jāyate ity ata aha ‘kvacīd’ iti, tathā ca śābdabodhasāmānyakāraṇayogyatājñānābhāvād eva kāryābhāva iti bhāvah*).

<sup>65</sup> TCM<sub>C</sub> IV.1 319.2: *tātparyadhīnam śabdaprāmānyam* | Mathurānātha glosses the statement as follows (TCM<sub>C</sub> IV.1 319.5-7): “The implied meaning of ‘...is dependent on intention’ is that **the status of testimony as an epistemic instrument**, i.e., as a producer of non-recollective awareness-events, **is dependent on intention**, i.e., is also dependent on the awareness of intention; the awareness of intention also assists testimony” (*tātparyadhīnam iti tātparyadhīnam tātparyājñānāsyaapy adhīnam śabdaprāmānyam śabdasyānubhavajanakatvam, tātparyasya jñānam api śabdasya sahakārīti phalitārthaḥ*)

<sup>66</sup> TCM<sub>C</sub> IV.1 325.5-6.

<sup>67</sup> See *Rahasya* in TCM<sub>C</sub>I 351.11-13.

Viṣṇu exists, she says, “Hari exists” (*harir asti*). But you misconstrue her intention., since “*hari*” also stands for lions. So, you come to judge that a lion exists. That, of course, is true.

According to Gaṅgeśa’s second solution, since you have a correct awareness of semantic fitness, etc., your judgement can indeed be a knowledge-event, and therefore the relevant utterance should be treated as an epistemic instrument. But this contradicts the view that an awareness of the speaker’s intention is necessary for testimonial knowledge-events.

Gaṅgeśa addresses this objection as follows.

[The opponent:] If this is so, then, in the presence of a true awareness of semantic fitness, etc., even a fact-conforming awareness regarding some other semantic referent (*śakya*), which arises from a polysemous expression that is meant to convey something else, would be a knowledge-event, either when there is an error with respect to the [underlying] intention or without that error. So, even in that case, that utterance would be an epistemic instrument.

[Reply:] No. For this is accepted. Moreover, since that utterance doesn’t produce a knowledge-event with respect to the intentional object of the [underlying] intention, it is not an epistemic instrument with respect to that object. In this manner, even in the case of the Veda, only a true awareness of semantic fitness is the epistemic virtue. So, Īśvara isn’t proved on the basis of the fact that Veda-based knowledge-events are produced by epistemic virtues.<sup>68</sup>

Gaṅgeśa’s response is subtle. First, he thinks that this result—namely, that a true judgement that is based on a misunderstanding about the speaker’s intention can be a knowledge-event—is acceptable. However, he acknowledges also that there is a sense in which the utterance in question isn’t an epistemic instrument. Since it fails to produce a knowledge-event with respect to the content that the speaker in fact intends to convey, it cannot be treated as an epistemic instrument with respect to that content.

In effect, Gaṅgeśa rejects an argument for Īśvara that earlier Naiyāyikas like Udayana put forward.<sup>69</sup> The argument goes like this. The Veda gives rise to testimonial knowledge-events. In the case of all testimonial knowledge-events, the epistemic virtue is (a) the speaker’s true awareness of the content of the utterance and (b) her desire to convey that content to the hearer (i.e., the intention). So, the author of the Veda too must be someone who has a true awareness of the content of the Veda and has the desire to convey that content to the hearer. But such an agent cannot be someone like us, since we don’t have any independent access to the truths that the Veda communicates. So, the author of the Veda must

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<sup>68</sup> TCMc I 351.8-10 and 352.1-5: *nanv evaṃ nānārthād anyaparāt tātparyabhrame taṃ vinaiva vā yathārthayogyatādijñāne sati samvādy aparāśakyajñānam api prameti tatrāpi tad vākyam pramāṇam syād iti cet | na | iṣṭatvāt | tātparyaviśaye ca tad vākyam na tadā pramājanakam iti na pramāṇam | evaṃ vede pi yathārthayogyatājñānam eva guṇa iti na vaidikapramāyāyāḥ guṇajanyatveneśvarasiddhiḥ |*

<sup>69</sup> A similar, but not exactly the same, argument from intention (*tātparya*) is put forward in Udayana’s commentary on verse 5.6 in *Nyāyakusumāñjali* (NKu 521.13-18).

be Īśvara. Gaṅgeśa thinks that this argument is unsound. For the epistemic virtue in the case of testimonial knowledge-events is neither the speaker’s awareness of the content of the utterance nor the intention underlying the utterance. It is simply the hearer’s true awareness regarding semantic fitness, etc. So, any attempt to prove the existence of Īśvara by appealing to the epistemic virtues underlying testimonial knowledge-events must fail.

What are Gaṅgeśa’s reasons for rejecting the view that the speaker’s true awareness of the content of her utterance (or her intention) is an epistemic virtue? Gaṅgeśa states these reasons more carefully in response to a Naiyāyika opponent who holds that view.

[The opponent:] Let this be true. In the case of the Veda, the speaker’s true awareness of the content of the utterance is also an epistemic virtue. For, in ordinary practice, that kind of awareness is a cause of any testimony that serves as an epistemic instrument. That is why you infer the speaker’s awareness in ordinary practice. And, in the same way, the Veda is composed by an autonomous person who possesses a true awareness that has as its intentional object the contents of the relevant Vedic utterances. For it is a piece of testimony that is an epistemic instrument, just like the utterance, “Bring the cow.” So, Īśvara is proved.

[Reply:] Don’t say this. The status of being a piece of testimony that serves as an epistemic instrument is possible even without being preceded by any true awareness of the content of the utterance, due to the presence of necessary conditions such as semantic fitness and so on, or due to a true awareness regarding those conditions. This has been explained. So, this condition [namely, the speaker’s true awareness regarding the content of her utterance] isn’t conducive (*prayojaka*) [to the status of testimony as an epistemic instrument].

[The opponent:] Even then, in ordinary practice, an utterance that is an epistemic instrument is thought to be caused by an awareness of the content of that utterance. So, how can that utterance occur without that awareness?

[Reply:] No. For an utterance is made for the sake of practical undertakings, etc. on the basis of the awareness, “From such subsentential expressions, he will become aware of the content of the utterance,” with the aim of producing an awareness of the content of the utterance in a person to be motivated (*prayojya*). Thus, the speaker’s initial awareness of the content of the utterance is causally superfluous (*anyathāsiddha*). In fact, it doesn’t cause the application of the string of subsentential expressions. For, just as in the case of a parrot, that collection of subsentential expressions are produced (*upapatteḥ*) simply by the causes of the individual subsentential expressions.<sup>70</sup>

<sup>70</sup> TCMc I 352.5-9 and 353.1-2: *syād etat | vede vakṛtyarthajñānam api guṇaḥ loke pramāṇasabdam prati tādrśasya jñānasya hetuvāt | ata eva tava loke vakṛtjñānānumānam | evaṃ ca vedo vākṛtyarthagocarayarthajñānavatsvatantrapuruṣapranītaḥ pramāṇasabdatvāt gām ānayedī vākṛtyavād itīśvarasiddhiḥ | tathāpi loke vākṛtyarthajñānam pramāṇavākṛtye kāraṇam grhītam iti tena vinā katham tad iti cet—na | pravṛtyādyartham hi prayojyasya vākṛtyarthajñānam uddīśyaitīdrśapadebhyo vākṛtyartham jñāsyatīti buddhyā vākṛtyaprayoga ity anyathāsiddham pratham vaktur vākṛtyarthajñānam, na tu tādrśapadāvalīprayoge tasya hetuvam | tādrśapadasamūhasya pratyekapadahetor eva śukādivadupapatteḥ |*

Gaṅgeśa denies that the status of any linguistic utterance as an epistemic instrument depends on the speaker's true awareness of its content. The last paragraph explains why. Suppose a farmer tells her farmhand, "Bring the cow." The farmhand immediately judges that she is supposed to bring the cow, and complies with the command. In this case, according to Gaṅgeśa, the speaker utters the sentence with the explicit aim of motivating the farmhand to act. But the utterance isn't produced directly by the speaker's true awareness of the content of the utterance, but rather by her awareness, "From such subsentential expressions, the farmhand will become aware of the content of the utterance." So, under Gaṅgeśa's account, it is simply an awareness regarding the relevant subsentential expressions, which causes the speaker to utter those expressions. Therefore, her own awareness of the content is causally superfluous (*anyathāsiddha*) with respect to the utterance: even if she didn't have the relevant awareness, she could still make the utterance on the basis of a similar awareness regarding the individual subsentential expressions. Cases like *The Parrot* can be explained in exactly the same way: the parrot obviously has no clue about the content of the sentence it utters, but it utters the relevant expressions on the basis of some awareness about each of them. If this is right, then a speaker's true awareness of the content of her utterance cannot be regarded as a cause of her utterance. Hence, it cannot be treated as an epistemic virtue that causes the resulting knowledge-event.

Note that this argument (which is only intended to show that the speaker's true awareness of the content of her utterance isn't an epistemic virtue) generalizes to the case of intention. For, in the parrot case, the parrot might have no desire to convey any particular content to the hearer; it might only utter the relevant expressions out of a desire to simply utter those expressions. Since such a desire cannot explain the truth of the resulting testimonial awareness, it cannot be treated as an epistemic virtue.

Suppose this is right. Even then, couldn't Gaṅgeśa's Naiyāyika opponent still argue that the Veda functions as an epistemic instrument with respect to a content that its speaker intends to convey? And, if that is right, wouldn't that be enough to show that Īśvara exists? The opponent states her argument as follows.

The Veda is an epistemic instrument with respect to the intentional object of [the underlying] intention (*tātparyā*). And the intention [underlying the Veda] is its being uttered due to a desire to produce the awareness of that intentional object. Moreover, without the Veda, people like us can't undergo any awareness about the imperceptible content of the Veda, in virtue of which people like us could utter the Veda out of a desire to produce an awareness of that content. Furthermore, it is not the case that such an awareness arises from the Veda itself. For this would lead to mutual dependence (*anyonyāśraya*). Therefore, that Veda—which is uttered out of a desire to produce an awareness of a certain content by someone who perceives the entire content of Veda—is an epistemic instrument with respect to that content. So, such a desire is simply the epistemic virtue. Any knowledge-event regarding the content of

the Veda is produced by that. Thus, an autonomous being, who is the greatest of all persons, is proved to be the locus of that virtue.<sup>71</sup>

The argument starts out from the assumption that the Veda serves as an epistemic instrument with respect to some content that its speaker intends to convey. Who is this speaker? It cannot be a person like us. First, independently of the Veda, people like us aren't aware of the imperceptible truths about *dharma* that the Veda conveys. Second, the speaker who composes the Veda couldn't become aware of the content of the Veda by means of the Veda itself, since that would lead to a problem of mutual dependence: the existence of the Veda would depend on that person's awareness of its content, and the person's awareness of its content would depend on the existence of the Veda. So, the speaker of the Veda must be someone who (unlike us) has direct epistemic access to its content and who utters the Veda with the desire to produce in us an awareness of that content. This agent is none other than Īśvara. And his desire, according to the opponent, is the epistemic virtue that explains the status of the Veda as an epistemic instrument.

Gaṅgeśa's response is cautious. On the one hand, he doesn't want to say that the testimonial knowledge-events that arise from the Veda are as arbitrary, or as unconstrained by the speaker's intention, as the knowledge-events that arise from the parrot's utterances. On the other hand, he stands by his previous argument, namely that the status of the Veda as an epistemic instrument cannot help us prove the existence of Īśvara. That is why he now argues that, though the testimonial knowledge that arises from the Veda is indeed constrained by the intention of some speaker, this speaker needn't necessarily be Īśvara.

[Reply:] Don't say this. Since a preceptor (*adhyāpaka*)—who is aware of the contents of Vedic utterances with the help of all the auxiliary disciplines (*aṅga*) like Mīmāṃsā, etc.—utters the Veda out of a desire to produce an awareness regarding those specific contents, someone who is truly aware of the content of the Veda indeed has an intention to convey those specific contents. Thus, having become aware of this intention (*tatparatva*), i.e., the Veda's being uttered by such earlier preceptors out of a desire to produce an awareness regarding those specific contents, future generations (*uttarottareṣām*) become aware of the content of the Veda. Thus, there is a beginningless sequence of intentions. What is the point of Īśvara?

[The opponent:] In that case, since a preceptor who doesn't know the content of the Veda doesn't utter the Veda out of a desire to produce an awareness of those specific contents, the Veda [when uttered by such a preceptor] isn't an epistemic instrument due to the absence of intention. Neither is there an ascertainment of the content of Veda on the basis of that.

[Reply:] No. In the beginningless cycle of rebirth, that Veda has been uttered with the desire to produce the awareness of those specific contents at some time by someone

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<sup>71</sup> TCMc I 353.3-8 and 354.1: *atha tātparyaviṣaye vedāḥ pramāṇaṃ tātparyaṅ ca tatpratīticchayoccāraṇaṃ, na cāsmadāder vedaṃ vinātīndriyavedārthagocarajñānaṃ, yena tatpratīticchayoccāraṇaṃ bhavet | na ca vedād eva tat, anyonyāśrayāt | ataḥ sakalavedārthadarśinā yasya vedasya yadarthapratīticchayoccāraṇaṃ kṛtaṃ sa tatra pramāṇaṃ iti tādr̥śecchaiva guṇas tajjanyā vedārthaprameti tadāśrayasvatantrapuruṣadhaureyasiddhir iti*

who is aware of the content of the Veda on the basis of Mīmāṃsā, etc. The intention [underlying the Veda] obtains simply to that extent.<sup>72</sup>

According to Gaṅgeśa, some utterances that are epistemic instruments don't have that status in virtue of producing knowledge-events with respect to the contents that their speakers intend to communicate. Rather, they have that status in virtue of producing true awareness-events about contents that their speaker didn't intend to communicate. For they are uttered either by a speaker who intends to communicate some other content (e.g., a person who uses a polysemous expression but is misunderstood), or by a speaker who has no such intention (e.g., a parrot or a babbling child). In such cases, the speaker's intention plays no role in explaining the status of the relevant utterance as an epistemic instrument. However, the Veda isn't like this: it serves as an epistemic instrument insofar as it produces awareness-events about certain fixed contents that it is intended to convey. But the agent to whom that intention belongs isn't Īśvara; it is just a preceptor who has understood the contents of Vedic utterances by means of exegetical tools like Mīmāṃsā, etc.

For our purposes, the important question is this. When the Veda produces knowledge-events about contents that it is intended to communicate, does a true awareness of the speaker's intention play any role in generating the relevant knowledge-event? Gaṅgeśa's response to the objection raised in the passage quoted above suggests that the answer is "No." Suppose my teacher doesn't quite understand the Veda, but I am able to grasp its intended content (perhaps because I am better at Vedic exegesis than my teacher). In that case, even though my teacher may utter the Veda to convey some other content, my awareness of the true content of the Veda—which may be based on a misconstrual of my teacher's intention—would still count as a knowledge-event. Thus, even though I won't be getting my teacher's intention right, I would still gain an awareness of the intended content of the Veda in a looser sense, i.e., in the sense that, at some point in the beginningless cycle of rebirth, someone who correctly understood the Veda uttered the Veda precisely with the intention of communicating that content. Even in this case, therefore, grasping the immediate speaker's intention isn't necessary for a knowledge-event to arise. The hearer's true awareness of semantic fitness, etc. should suffice.

This view is an instance of epistemic localism. For Gaṅgeśa, testimonial knowledge-events are produced not due to the transmission of knowledge from a trustworthy speaker, but rather due to the truth-conducive properties of an utterance (its semantic fitness, etc.) and the hearer's true awareness of those truth-conducive properties. Therefore, the epistemically significant factors which explain testimonial knowledge-events are local to the utterance and the hearer and don't belong to the source of the utterance.

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<sup>72</sup> TCM I 354.1-6 and 355.1-6: *maivam, mīmāṃsādisakalāṅgasācivvyād vedavākyārthajñānavatā 'dhyāpakena tattadarthapratītiicchayā vedasyoccāraṇam iti vedārthayathārthavidas tattadarthe tātparyam asty eva | evaṃ pūvapurvatādṛśādhyāpakena tattadarthapratītiicchayoccāritatvam tatparatvam avagamyottarottareṣāṃ vedārthapratyaya ity anādis tātparyaparampareti kim īśvareṇa | tarhi vedārthānabhijñādhyāpakenoccāritavedasya na tadarthapratītiicchayoccāraṇam iti tātparyābhāvān na pramāṇam na vā tato 'rthaniścaya iti cet—na | anādau saṃsāre tasya vedasya kadācit kenacin mīmāṃsādyadhīnavedārthajñānavatā tatpratītiicchayoccāraṇam kṛtaṃ tāvataiva tatparatvam iti |*

Now, we might worry that this localist strategy doesn't fit well with Gaṅgeśa's own remark that the status of testimony as an epistemic instrument depends on the underlying intention. Gaṅgeśa's commentator, Rucidatta, addresses this point with reference to cases like *The Parrot*.

[Objection:] Since, in the case of the utterance of a parrot, etc., there is a testimonial awareness even though the absence of intention is ascertained, there is a deviation [from the rule that the status of testimony as an epistemic instrument depends on the hearer's awareness of the intention underlying the utterance]. It is not to be said that, since Īśvara's intention is present, this is not so. For it is impossible to apprehend that intention, since there is no means of apprehending it, given that the utterance of a parrot and so on is unconstrained by exegetical rules, etc.

[Reply:] No. For, in that case, it is possible to apprehend that intention even by means of semantic fitness and so on, because, without an apprehension of those, an awareness of the semantic relation isn't established. This is what some say. According to others, that awareness of the underlying intention is said to be a cause only in other cases [i.e., in cases that don't involve the utterance of a parrot, etc.].<sup>73</sup>

Rucidatta sketches two solutions on behalf of Gaṅgeśa. First of all, it is possible to argue that, in these cases too, Īśvara's intention brings about the relevant utterance, and it is possible for the hearer to grasp that intention on the basis of various features of the utterance such as semantic fitness, etc. The other strategy is to give up the idea that an awareness of the speaker's intention is actually necessary in cases like this. In other words, the claim that an awareness of the speaker's intention is a cause of testimonial knowledge-events needs to be qualified so that it applies only to some (but not all) testimonial knowledge-events.

Let's sum up. Contrary to some modern interpretations, Gaṅgeśa clearly thinks that the testimonial awareness-events that arise in cases like *The Parrot* and *The Mistaken Deceiver* are knowledge-events.<sup>74</sup> According to Gaṅgeśa's preferred proposal, the epistemic

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<sup>73</sup> TCMP p. 12: *nanu śukādivākye tātparyavyatirekaniścaye 'pi śābdabodhād vyabhicāraḥ, na ca tatrāpīśvaratātparyasattvān na tathātvam iti vācyam | śukādivākyasya nyāyaprakaraṇādyananurodhitayā grāhakābhāvena tatra tadgrahasyāśakyatvād iti cet, na, yogyatādināpi tatra tadgrahasambhavāt | tadagrahe tatrānvayabodhāsiddher ity eke | tadatiriktasthala eva taddhetutvam uktam ity anye |*

<sup>74</sup> Modern commentators, such as Mukhopadhyay (1992) and Phillips (2012), think that Gaṅgeśa doesn't recognize the testimonial awareness-events that arise in *The Parrot* and *The Mistaken Deceiver* as knowledge-events. This, obviously, contradicts what I have been claiming. So, it's worth examining the views of these authors more carefully. Start with Mukhopadhyay: he thinks that, for Naiyāyikas a linguistic utterance can have the status of an epistemic instrument only if it is produced by a speaker with the right epistemic virtues, so the utterance in *The Parrot* or *The Mistaken Deceiver* can't be an epistemic instrument (Mukhopadhyay 1992, p. 285). Mukhopadhyay's argument isn't persuasive. As we have already seen, Gaṅgeśa thinks that, in these cases, the status of the relevant utterances as an epistemic instrument isn't explained by any epistemic virtue of the immediate speaker. The relevant epistemic virtue is either (i) Īśvara's true awareness of the content of the utterances, or (ii) conditions like semantic fitness, etc. or the hearer's true awareness regarding such conditions. So, Mukhopadhyay is misreading Gaṅgeśa. Phillips' argument is slightly more promising: he appeals to the fact



virtues that explain the epistemic status of those awareness-events are *local* to the utterance or to the hearer: it is either semantic fitness, etc., or the hearer’s true awareness of semantic fitness, etc. This localist approach to epistemic virtues became influential amongst later Naiyāyikas. For example, in his *Kārikāvalī*, Viśvanātha Nyāyapañcānana says, “In the case of testimonial awareness, the epistemic virtue would be a knowledge-event either regarding semantic fitness or the speaker’s intention.”<sup>75</sup> Similarly, in *Nyāyakaustubha*, Mahādeva Puṇatāmakāra (17<sup>th</sup> century CE) straightforwardly endorses Gaṅgeśa’s second proposal: “In this manner, in the case of a testimonial knowledge-event, a knowledge-event regarding semantic fitness is the epistemic virtue.”<sup>76</sup> Thus, the second solution that Gaṅgeśa offers to the problem of epistemic luck seems to have been widely accepted in later Nyāya.

### Jayadeva’s Extension of Localism

Gaṅgeśa’s localist solution to the problem of epistemic luck focuses on testimony. Can the story be extended to inference? Gaṅgeśa’s commentator, Jayadeva, says, “Yes.” In his commentary *Āloka*, Jayadeva says:

It is to be understood that, even in the case of inference, a true awareness of the absence of rebutting defeat (*bādhā*) serves as the epistemic virtue.<sup>77</sup>

Just as the hearer’s true awareness about semantic fitness, i.e., the absence of rebutting knowledge-events (*bādhakapramā*), serves as the epistemic virtue in the case of testimony, so also does the correct awareness about the absence of rebutting knowledge-events serve as the epistemic virtue in the case of inference. Thus, we end up with a perfectly systematic solution to the tension between the *Nyāya Definition of Knowledge* and *Nyāya Infallibilism*.

However, Jayadeva thinks that this solution doesn’t quite work. The problem is expressed in the voice of a Naiyāyika who thinks that Gaṅgeśa’s solution works for testimonial knowledge-events, but not for inferential ones.

[The opponent:] The absence of rebutting defeat, simply insofar as it exists in itself, is a constituent element (*aṅga*) of inference, but not insofar it is an object of awareness. For the former is parsimonious. This because, [if things were otherwise], given that the absence of the absence of a target boils down to the target, it would follow that an awareness of the target is the cause of an awareness of the target. And this is not

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that, for Gaṅgeśa himself, the hearer’s awareness of the speaker’s intention is a necessary condition for testimonial knowledge-events; this is missing in these cases (Phillips 2012, p. 85). Our discussion shows that Phillips is wrong. Gaṅgeśa thinks that an awareness of the immediate speaker’s intention isn’t necessary for a testimonial knowledge-event. Following Rucidatta, we can respond to Phillips in two distinct ways. We could either say that the intention that we are aware of in cases like *The Parrot* and *The Mistaken Deceiver* is Īśvara’s intention, or that an awareness of the intention underlying the utterance is simply not required in such cases.

<sup>75</sup> *Kārikāvalī* v. 134abc in NSM 484.4-5: *śābdabodhe yogyātāyās tātparyasyātha vā pramā | guṇaḥ syāt...*

<sup>76</sup> NKau 69.9.10: *evaṃ śābdapramāyāṃ yogyatāpramā guṇaḥ |*

<sup>77</sup> *Āloka* in TCMA 198.17: *anumāne ’pi bādhābhāvayathārthajñānaṃ guṇa itī boddhavyam |*

possible, since the fault of proving that which has been proved is an impediment to inferential knowledge-events.<sup>78</sup>

The problem is this. If we take a correct awareness about the absence of rebutting defeat to be the cause of inferential knowledge-events, then the agent can only correctly infer a target if she already correctly judges that the absence of the target isn't present in the site. Now, according to a principle widely accepted in Nyāya, the absence of an absence of a positive entity (*bhāva*), e.g., fire, is simply that entity itself.<sup>79</sup> So, this would mean that an agent's inferential knowledge-event about a target, e.g., fire, must be preceded by her own true awareness regarding the presence of that target in the site. Thus, the agent would not be inferring anything new. Such an inference would suffer from the fault of proving what has been proved (*siddhasādhana*), which (under normal circumstances) prevents inferential knowledge-events from arising.

Jayadeva entertains a possible solution to this problem: the relevant epistemic virtue doesn't have to be a true judgement about the absence of rebutting defeat; it only has to be an awareness of a lack of incompatibility between the target and the relevant delimiter of sitehood (*pakṣatāvachhedaka*).<sup>80</sup> The delimiter of sitehood is the property that specifies which object plays the role of the site in an inference. When I undergo an inferential awareness, "The hill contains fire," the delimiter of sitehood may be hillhood (*parvatatva*). An awareness of there being no incompatibility between the delimiter of sitehood and the target is necessary for this inferential awareness to arise. If I were to think that the property of being a hill is incompatible with the presence of fire, then I wouldn't conclude that the hill contains fire.

Jayadeva isn't happy with this solution. For the solution commits us to the idea that an awareness of an incompatibility between the delimiter of sitehood and the target serves as an

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<sup>78</sup> *Āloka* in TCMA 198.18-20: *nanu bādhabhāvaḥ svarūpa-sann evānumānāṅgaṃ na jñātaḥ, lāghavāt, sādhyābhāvābhāvāsya sādhyaparyavasitatvena sādhyajñānasya sādhyajñānanakativāpatteḥ | na caitat sambhavati, tatsiddhasāadhanasyānumitipratibandhakatvād iti |*

<sup>79</sup> See Das (2020) for discussion of this principle in later Nyāya.

<sup>80</sup> *Āloka* in TCMA 199.18-19: "Therefore, just like the awareness of semantic fitness which, by nature, is one referent's being devoid of a delimiter of incompatibility with a property that resides in another referent of a subsentential expression, a true awareness regarding an absence of incompatibility (*virodha*) between the delimiter of sitehood and the target is the epistemic virtue [in the case of inference]" (*tasmād ekapadārthe 'parapadārthaniṣṭhadharmavirodhitāvachhedakaśūnyatvarūpayogyatājñānavat pakṣatāvachhedakasādhyayor avirodhaviṣayakayathārthajñānaṃ guṇa iti |*). Notice that Jayadeva defines semantic fitness in a manner similar to Gaṅgeśa's own definition of the notion (see footnote 41). According to Jayadeva, the subsentential expressions that occur in an utterance are semantically fit just in case the referent of each subsentential expression lacks any property in virtue of which it would be incompatible ("the delimiter of incompatibility") with a property that resides in the referent of another subsentential expression. In the case of the utterance, "He sprinkles it with fire" (*vahninā siñcati*), sprinkling (*seka*) has a property that makes it incompatible with the relation of determinanthood (*nirūpakatva*) that resides in the referent of the expression "with fire", i.e., instrumenthood of fire. That is why the expressions in question are semantically unfit. Similarly, in the case of a judgement, "The thing which possesses a prior absence of odour possesses odour," (*gandhaprāgabhāvavān gandhavān*), the target is odour, while the delimiter of sitehood is the property of possessing the prior absence of odour. Since these two are incompatible, someone who is aware of this incompatibility cannot (rationally) arrive at an inferential awareness that has this content.

impediment to inferential awareness. Given Gaṅgeśa's definition of pseudo-reasons, this would mean that this sort of incompatibility is a separate kind of pseudo-reason. So, this view will violate the traditional five-fold classification of pseudo-reasons.<sup>81</sup> Jayadeva's own commentator, Maheśa Ṭhakkura, seems to think that this concern is unfounded. For we can subsume this sort of incompatibility under a recognized variety of pseudo-reasons, namely rebutted reasons (*bādhitahetu*). Still, Maheśa thinks Jayadeva ignores this solution because his own solution is much clearer.<sup>82</sup>

Jayadeva's solution is based on a certain account of epistemic virtues and epistemic defects.<sup>83</sup> He rejects the conception of epistemic virtues and defects that motivated Gaṅgeśa's first solution to the problem of epistemic luck: the claim that only knowledge-events can serve as the epistemic virtues in cases of inference. Jayadeva thinks that this is wrong. Even though the causes of an awareness may include a knowledge-event, that alone cannot guarantee that the awareness is true. For example, suppose I perceptually recognize Pierre outside a café. When I enter the café, this earlier perceptual awareness may cause me to infer that the café doesn't contain Pierre. But this inference of Pierre's absence, though based on a knowledge-event, may be erroneous. Analogously, if I correctly infer the absence of Pierre from the café after undergoing an illusion as of him being outside the café, my inferential judgment may constitute a knowledge-event about Pierre's absence from the café. This shows that, even if knowledge-events (or errors) are included amongst the causes of our awareness-events, they needn't function as epistemic virtues (or as epistemic defects). According to Jayadeva's own proposal, epistemic virtues simply are positive factors (i.e., not mere absences of epistemic defects) which bring about knowledge-events, while epistemic defects simply are positive factors (i.e., not mere absences of epistemic virtues) which bring about instances of error.

What does this tell us about cases like *Mist and Fire*? Jayadeva's final explanation is relatively simple. In any inference, if an agent arrives at a true inferential judgement, her final

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<sup>81</sup> *Āloka* in TCMA 200.6-7: "This is not so, because the awareness of an incompatibility with the target, which is the delimitor of the property of being an additional pseudo-reason and which doesn't cross-cut [the distinguishing characteristics of other pseudo-reasons], would serve as an impediment" (*nacāivam, adhikahetvābhāsātāvacchedakasādhyavirodhajñānasyāsamkīrṇasya pratibandhakatvāt* |)

<sup>82</sup> See *Darpaṇa* in TCMA 199.26-27 and 200.23-24.

<sup>83</sup> TCMA 200.11-15: "We say here. The following distinction doesn't hold: 'Only an error is a defect, and only an instance of knowledge-event is a virtue.' For, there is a deviation because a knowledge-event about a counterpositive of an absence causes an error about the absence, and a superimposition of a counterpositive of an absence causes a knowledge-event about the absence. Rather, virtuehood (*guṇatva*) consists in having a causehood that is a counter-relatum (*pratiyogin*) of an effecthood that is delimited by the property of being a knowledge-event such that it doesn't produce anything in virtue of being an absence which is delimited by a nature that is a delimitor of the property of producing knowledge-events. And defecthood consists in having a causehood that is a counter-relatum of an effecthood that is delimited by the property of being an error such that it doesn't produce anything in virtue of being an absence whose counterpositiveness is delimited by a nature that is a delimitor of the property of producing knowledge-events." (*atra brumaḥ | bhrama eva doṣaḥ, pramaiva guṇa iti na vibhāgaḥ, pratiyogipramāyā abhāva-bhramam prati pratiyogyāropasyābhāvapramām prati janakatvena vyabhicārāt, kintu pramājanakāvacchedaka-rūpāvacchinnābhāvatvenājanakatve sati pramātvāvacchinnakāryatāpratiyogikakāraṇatākatvaṃ guṇatvam, pramājanakatāvacchedakarūpāvacchinna-pratiyogikābhāvatvenājanakatve sati bhramatvāvacchinna-kāryatā-pratiyogika-kāraṇatākatvaṃ doṣatvaṃ...*) I have given a simplified explanation of these definitions above.

judgement must be based on a correct judgement that the site contains something that is pervaded by the target. Consider *Mist and Fire*: even though I am wrong to think that the hill contains smoke, my subsumptive judgement that the hill contains smoke that is pervaded by fire is still partially true. For, after all, the hill does contain something that is pervaded by fire! That, in turn, explains why I arrive at a true judgement. Therefore, the epistemic virtue that explains the truth of my inferential judgement (and its status as a knowledge-event) is my correct awareness of the hill as characterised by something that is pervaded by fire. Hence, Jayadeva writes:

Therefore, in this case, the awareness of a pervaded object with respect to something that possesses a pervaded object and the awareness of a pervaded object with respect to something that doesn't possess a pervaded object are the virtue and the defect respectively. For that is parsimonious. However, [the virtue] isn't the awareness of a specific pervaded object with respect to something that possesses that very pervaded object, and so on. For that is not parsimonious.

And, thus, since something that is pervaded [by fire] must necessarily be present at a place that actually contains fire even when one isn't aware of that specific pervaded object, how can the status of an inferential awareness as a knowledge-event be ruled out even in a case where the smoke, etc. which is apprehended as pervaded by fire is absent from that place? This is because, when there is an awareness of some other pervaded object [i.e., smoke] with regard to a site that actually contains a pervaded object, it is possible for one to have an awareness of the site as possessing a pervaded object. For it is not possible that the awareness of a site only as possessing that very pervaded object which is present in it is the cause of inferential awareness-events, since it has already been said that this won't be parsimonious.

Therefore, this [status of such an inferential awareness as a knowledge-event] can be accommodated by appealing to the awareness-events of people like us. What then is the point of admitting the awareness of Īśvara in order to account for that? This is the direction the reader should go in.<sup>84</sup>

In a nutshell, Jayadeva proposes the following revision to the Nyāya theory of epistemic virtues (which Gaṅgeśa himself had mentioned earlier). Instead of treating a true subsumptive judgement as the epistemic virtue that gives rise to inferential knowledge-events, we should treat the agent's true awareness of the site's possessing something that is pervaded by the target as the epistemic virtue. Not only is this proposal parsimonious, but it also allows us to explain the truth of such awareness-events without appealing to any kind of divine awareness.

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<sup>84</sup> TCMA 200.15-22: *tad iha vyāpyavati vyāpyajñānam avyāpyavati vyāpyajñānam pramā'pramājanakatvena guṇo doṣaś cāstu lāghavāt, na tadvyāpyavati tadvyāpyajñānādi, gauravāt | tathā ca vastuto vahnyādīmati yatkiñcidvyāpyāvaśyambhāve tadajñāne'pi tadvyāpyatayā grhītasya dhūmādes tatrāsattve'py anumiteḥ prāmānyam kena vāraṇīyam? vastuto vyāpyavati vyāpyāntarajñāne'pi vyāpyavattvajñānasambhavāt | na hi yad eva vyāpyan tatrāsti tadvyāpyavattvenaiva jñānam anumitihetur iti sambhavati, gauravād ity uktatvād ity asmadādijñānenaiva tadupapatteḥ, kin nu tadanurodheneśvarajñānasvīkāra iti dik |*

Jayadeva's proposal is an instance of the same kind of epistemic localism that Gaṅgeśa himself endorses. Not only did the early Naiyāyikas take the production of testimonial knowledge-events to be dependent on the transmission of knowledge from a speaker to a hearer, but they also took the production of inferential knowledge-events to be dependent on the transmission of knowledge from certain initial awareness-events—e.g., the agent's awareness of the reason as a property of the site and her awareness of pervasion—to a final cognitive state, i.e., her inferential judgement. According to them, if these initial awareness-events weren't knowledge-events, the final inferential judgement couldn't be a knowledge-event either. Following Gaṅgeśa, Jayadeva rejects this picture. For him, the epistemic status of these initial awareness-events doesn't really affect the epistemic status of an inferential judgement. What matters is whether the subsumptive judgement (which is based on these initial awareness-events) is partially true, i.e., whether the agent correctly judges that the site contains something that is pervaded by the target. And this partial truth of the subsumptive judgement is independent of the epistemic status of those initial awareness-events. As long as the subsumptive judgement is partially true in the relevant respect, the final inferential judgement is guaranteed to be true. So, a subsumptive judgement that is correct in this way constitutes the epistemic virtue that produces inferential knowledge-events. This approach to inference makes the relevant epistemic virtue *local* to the last step of the cognitive process, and therefore downplays the epistemic importance of the initial steps of the process. Thus, this is an instance of epistemic localism.

How influential was Jayadeva's solution? A version of this solution seems to have been widely accepted by later Naiyāyikas. In his *Kārikāvalī*, Viśvanātha Nyāyapañcāna says, "Moreover, in the case of inferential knowledge-events, the epistemic virtue would be a subsumptive judgement with respect to a site that possesses the target."<sup>85</sup> He explains in his commentary, "In the case of inferential knowledge-events, the awareness of being characterised by something pervaded by the target with respect to a site that possesses the target is the epistemic virtue."<sup>86</sup> Similarly, Mahādeva Puṇatāmakāra says:

In the case of inferential knowledge-events, a good subsumptive judgement is the epistemic virtue. And a good subsumptive judgement isn't a subsumptive judgement that, by nature, is a knowledge-event. For an inferential knowledge-event is produced even by means of a subsumptive judgement that apprehends something which isn't pervaded or isn't a property of the site as such [i.e., either as pervaded or as a property of the site]. Rather, it is a subsumptive judgement that has as its qualificand [i.e., the site] something that possesses the target. And, thus, in virtue of being a subsumptive judgement which has as its qualificand something that possesses fire, etc., such a

<sup>85</sup> *Kārikāvalī* verse 132d-133ab in NSM 484.1-2: *atha tv anumitau punaḥ | pakṣe sādhyaviśiṣṭe tu parāmarśo guṇo bhavet |*

<sup>86</sup> NSM 484.8: *anumitau sādhyavati sādhyavyāpyavaiśiṣṭya-jñānaṃ guṇaḥ |*

subsumptive judgement serves as the cause of an awareness which is delimited by the property of being an inferential knowledge-event that has fire, etc. as its qualifier.<sup>87</sup>

For both Viśvanātha and Mahādeva, if a subsumptive judgement is to bring about an inferential knowledge-event, it doesn't itself have to be a knowledge-event. It only has to be partially true: it must correctly ascribe to the relevant site the property of possessing something that is pervaded by the target. And this will be true just in case the site in question possesses the target. This strongly suggests that Jayadeva's solution came to be the standard way of reconciling the *Nyāya Definition of Knowledge* with Gaṅgeśa's *Virtue Infallibilism* in cases of inference like *Mist and Fire*.

## Conclusion

Let's take stock. Gaṅgeśa resolves the tension between the *Nyāya Definition of Knowledge* and *Nyāya Infallibilism* by appealing to a form of epistemic localism, i.e., the view that upstream causal factors play no epistemically significant role in the production of knowledge-events. What forced him to adopt this view?

The early Naiyāyikas reject epistemic localism. This, in turn, leads them to a view according to which the production of inferential and testimonial knowledge-events depends on the epistemic status of causally upstream awareness-events, e.g., the agent's initial awareness of the reason as present in the site or the speaker's awareness of the content of her utterance. They think that, if these awareness-events weren't knowledge-events, the resulting testimonial or inferential awareness-events couldn't be knowledge-events either. This commits these Naiyāyikas to a theory that excludes epistemically lucky awareness-events from the class of knowledge-events. But this commitment is problematic. For it is in tension with their view that any true non-recollective awareness can be a knowledge-event.

As Gaṅgeśa's first solution to this problem shows, some Naiyāyikas try to solve this problem without embracing epistemic localism. To account for the production of knowledge-events in cases like *Mist and Fire*, they appeal to Īśvara's knowledge. This solution seems *ad hoc*. Gaṅgeśa's preferred solution avoids this disadvantage. He argues that the production of testimonial knowledge-events doesn't depend on the epistemic status of the speaker's awareness, but rather depends on the truth-conducive properties of the relevant linguistic utterances and the hearer's true awareness regarding those properties. These are the epistemic virtues that produce such knowledge-events. By restricting epistemic virtues to downstream causal factors in this manner, Gaṅgeśa adopts a robust form of epistemic localism. His commentator, Jayadeva, extends this localist approach to the case of inference. Therefore, if the arguments of Gaṅgeśa and Jayadeva succeed, they will have shown that epistemic

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<sup>87</sup> NKau 69.3-7: *anumitipramāyāṃ salliṅgaparāmarśo guṇaḥ | salliṅgaparāmarśas ca na pramātmakaparāmarśaḥ | avyāpyāpakṣadharmayos tattvāvagāhinā parāmarśeṇāpi vastugatyā sādhyavati pakṣe pramānumitijananād api tu sādhyavadviśeṣyakaparāmarśaḥ eva | tathā ca vahnyādiprakārapramānumititvāvacchinnaṃ prati vahnyādimadviśeṣyakaparāmarśatvena hetutā |*

localism can help us resolve the conflict between the *Nyāya Deffinition of Knowledge* and *Nyāya Infallibilism*.

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## Conflict of interest

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

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- KC *Kārakacakram Śrīmadbhavānandasiddhāntavāgīśabhaṭṭācāryapraṇītam ; Śrīmanmādhavataṛkālaṅkāraviracitayā "Mādhavī" tīkayā tathā Sītāśaraṇatṛipāṭhinā kṛtayā "Pradīpa" tippaṇyā cābhyupetam.* Edited by Brahmaśaṅkara Śāstrī. Benares: Chowkhambha Sanskrit Series Office, 1942.
- KKh *Śrīharshapraṇītam Khaṇḍanakhaṇḍakhādyam Ānandapūrṇaviracitayā Khaṇḍanaphakkikāvibhajanākhyayā vyākhyayā 'vidyāsāgarī' ti prasiddhayā sametam Citsukha-Śaṅkaramiśra-Raghunāthakṛtaṭīkāvalambinyā tippaṇyā sanātham| Khaṇḍanakhaṇḍakhādyā.* Edited by Ganganatha Jha. Benares: Chowkhamba Sanskrit Book Depot, 1904-1914.
- KU *Khaṇḍanoddhāraḥ Sanmiśraśrīvācaspativiracitaḥ.* Edited by Vindhyesvarīprasāda Dvidevī. Benares: Medical Hall Press, 1909
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