Object Reidentification and the Epistemic Role of Attention

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Abstract:

Reidentification scepticism is the view that we cannot knowledgeably reidentify previously perceived objects. Amongst classical Indian philosophers, the Buddhists argued for reidentification skepticism. In this essay, I will discuss two responses to this Buddhist argument. The first response, defended by Vācaspati Miśra (9th century CE), is that our outer senses allow us to knowledgeably reidentify objects. I will claim that this proposal is problematic. The second response, due to Jayanta Bhaṭṭa (9th century CE), is that the *manas* or the inner sense, functioning as a capacity of attention, helps us knowledgeably reidentify objects. I will explain how this second response answers the Buddhists' challenge.

Keywords: object reidentification, skepticism, attention, Nyāya, Buddhism

REIDENTIFICATION SCEPTICISM is the view that we cannot knowledgeably reidentify previously perceived objects. In classical India, some Buddhists defended this view.[1] Non-Buddhists—the Naiyāyikas, the Mīmāṃsakas, and the Jainas—rejected it. The debate between these two camps revolved around cases of this kind.

> **Hunters**. A group of hunters are chasing after a deer. The deer takes shelter behind a rock, the hunters are able to scare it out of hiding. As the hunters see the deer emerging from behind the rock, they judge, "This is that deer!"

Here, the hunters reidentify a previously experienced object, and undergo an awareness-episode of the form, "This is that φ!", where φ could either be a sortal or a proper name, the demonstrative "this" refers to the currently perceived object, and the expression "that φ" refers to the previously perceived object. Call any such awareness-episode an *episode of object reidentification* (*pratyabhijñā*). If such awareness-episodes constitute (or yield) knowledge, then REIDENTIFICATION SCEPTICISM is false. The Buddhists argued that we cannot acquire knowledge through episodes of object reidentification.

The Naiyāyikas, i.e., the defenders of Nyāya, responded to this argument. In this essay, I discuss two such responses. The first response, due to Vācaspati Miśra (9th century), is that our outer senses allow us to knowledgeably reidentify objects. This proposal, I will argue, is problematic. The second response, defended by Jayanta Bhaṭṭa (9th century CE), is that the *manas* or the inner sense, functioning as a capacity of attention, helps us knowledgeably reidentify objects. I will explain how this second response answers the Buddhists' challenge.

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[1] This was necessary, because these Buddhists were committed to the theory of *momentariness*, i.e., the view that all ultimately real particulars are *momentary*, i.e., lack temporal extension. If REIDENTIFICATION SCEPTICISM were false, then an agent could knowledgeably reidentify objects, and thereby know that at least some objects are not momentary.

I. THE BUDDHIST ARGUMENT FOR REIDENTIFICATION SCEPTICISM

Let us begin with a precise formulation of REIDENTIFICATION SCEPTICISM.

> REIDENTIFICATION SCEPTICISM. For any distinct two times t and t^*, if an agent S observes an object x at t and an object y at t^*, then S cannot know that x is identical to y.

The Buddhist argument for REIDENTIFICATION SCEPTICISM is this. Suppose, for any two distinct times t and t^*, an agent S observes an object x at t and then observes an object y at t^*.

> P1. If S knows that x is identical to y, then there is a means by which S knows it.
>
> P2. There is no means of knowing by which S could know this.
>
> C. S does not know that x is identical to y.

P1 is common ground between the Buddhists and their opponents: they subscribe to a common epistemological framework on which any piece of knowledge is produced by a means (*karaṇa*), which explains *how* the relevant agent knows. The disagreement between the Buddhists and their opponents lies over P2: the Buddhists think P2 is true, while their opponents reject it. The Buddhists argue in this way. If P2 is false, there must be a means of knowing by which an agent could know that an object x observed at some time is identical to an object y observed at another time. What is this means of knowing? According to the Buddhists, there are only two obvious options—perception (*pratyakṣa*) and inference (*anumāna*)—but neither can explain how such knowledge arises.

A. Option 1: Perception

In his *Commentary on Epistemology* (*Pramāṇavārttika*), the Indian Buddhist philosopher Dharmakīrti (7th century CE) presents several arguments against the claim that perception allows us to knowledgeably reidentify previously observed objects. Some of these arguments rest on theoretical presuppositions that the non-Buddhists will reject (see, e.g., Dunne, 2004, pp. 116ff), so I will focus on what I take to be the most neutral of these arguments.

Dharmakīrti says: "Unless an agent recalls that which has been experienced in the past, and ascribes its properties to that which she perceives now, she cannot undergo an awareness of the form, "This is that!" But how can that happen in a case of knowledge produced by the senses?" (*Pramāṇavārttika* 2.506 in Saṃkṛtyāyana, 1953, p. 453). Relying on Dharmakīrti's commentator, Prajñākaragupta, we can spell out the argument as follows.

> DISTRIBUTION. If an agent is to know solely by perception that the object o is both F and G, then she must know solely by perception that o is F and she must know solely by perception that o is G.
>
> OBJECT REIDENTIFICATION. In true episodes of object reidentification, an agent judges that the same object o is now in a certain condition C_{now}, *and* was previously in a certain condition C_{then}.
>
> PERCEPTUAL INACCESSIBILITY. An agent cannot know solely by perception that an object o was previously in a certain condition C_{then}.
>
> CONCLUSION. Therefore, true episodes of object reidentification cannot constitute (or yield) perceptual knowledge.

Let us motivate the premises.

The argument for OBJECT REIDENTIFICATION is not hard to reconstruct. When an agent undergoes a *true* episode of object reidentification of the form "This is that!" where the demonstratives "this" and "that" pick out the same object *o*, the object *o* is ascribed two properties: *this-ness (idantā),* which amounts to the property of existing at present before the observer*,* and *that-ness* (*tattā),* which roughly amounts to the property of existing at a past time perhaps at another location*.* Thus, in such an awareness-episode, the agent judges that the same object *o* is now in a certain condition C_{now}, *and* was previously in a certain condition C_{then}.

The argument for PERCEPTUAL INACCESSIBILITY that emerges from Prajñākaragupta's commentary is this. An agent's outer sense-faculties can only be in contact with the present condition of an object; an agent cannot have perceptual knowledge of what her outer sense-faculties cannot in contact with; therefore, an agent cannot know by perception alone what the past condition of an object was.

What about DISTRIBUTION? Neither Dharmakīrti nor Prajñākaragupta are of much help here. Fortunately, Kamalaśīla (8th century CE) offers a justification for DISTRIBUTION. Most classical Indian philosophers agree that when an agent knows something, there always is a means of knowing (*pramāṇa*). The means of knowing is the causally most important factor (*sādhakatama-kāraṇa*) amongst the conditions that are causally necessary for the production of knowledge. On Kamalaśīla's view, this notion of *causal importance* should be fleshed out in an epistemological context in terms of the contribution that a causally necessary factor makes to the content of the relevant awareness-episode (*Pañjikā* on *Tattvasaṃgraha* v. 451 in Krishnamacharya, 1984, p.159). Now, in a true episode of object reidentification, the same object *o* is characterized by two properties. So, the content of such an awareness-episode can be cashed out as a conjunction between two different propositions: *o* is in C_{now} and *o* was in C_{then}. Let us say that an awareness-episode at time *t* constitutes perceptual knowledge just in case perceptual interaction between one's senses and one's environment at or immediately before *t* serves as the causally most important factor in the production of that knowledge. Kamalaśīla's point is that the fact that *o* was in C_{then} was known by a previous perceptual interaction between the agent's sense-faculties and her environment, so the present perceptual interaction between the agent's sense-faculties and her environment does not make the greatest contribution to the content of the awareness. Therefore, the present perceptual interaction between the agent's sense-faculties and her environment cannot be the means of knowing when it comes to episodes of object reidentification. That is why such awareness-episodes cannot constitute (or yield) perceptual knowledge.

For Kamalaśīla, therefore, if an agent is to know by perception that the object *o* is both *F* and *G*, the present or immediately earlier perceptual interaction between the agent's sense-faculties and her environment must be responsible for the agent's knowledge that *o* is *F* as well as her knowledge that *o* is *G*. In other words, she must perceptually know that *o* is *F* and that *o* is *G*. This is just what DISTRIBUTION says.

One may be tempted to reject this argument either by rejecting the epistemological framework being used here, or by rejecting the notion of causal importance that Kamalaśīla invokes. However, there is something plausible about DISTRIBUTION, which can be recovered independently of any of these assumptions. If an agent knows a proposition P solely on the basis of a mechanism S1, and a proposition Q

solely on the basis of a mechanism S2, she cannot know P&Q on the basis of S1. For example, suppose I am told by Ann that Bob is in his office, and told by Bob that Carol is in her office, and their testimony gives me knowledge about the whereabouts of Bob and Carol. Using those bits of knowledge, I may come to know that Bob and Carol are in their offices. But I do not gain knowledge on the basis of Ann's testimony or Bob's testimony alone. The intuitive rationale for DISTRIBUTION seems to be that if P is known due to the epistemic labour of one information-gathering mechanism, and Q is known on the basis of epistemic labour of another information-gathering mechanism, attributing the knowledge of P&Q to just one mechanism seems like a mistake: it blurs the division of epistemic labour between those mechanisms. Thus, DISTRIBUTION does strike me as *prima facie* plausible.

Together, DISTRIBUTION, OBJECT REIDENTIFICATION, and PERCEPTUAL INACCESSIBILITY get us the conclusion that episodes of object reidentification cannot constitute (or yield) perceptual knowledge.

B. Option 2: Inference
Let us now address the question of whether we can know by inference that an object x observed earlier is identical to an object y observed later. Some Nyāya philosophers think we can.[2] Uddyotakara (6th century CE) is one of them (*Nyāyavārttika* on *Nyāya-sūtra* 3.1.14, in Tarkatīrtha and Tarkatīrtha, 1984, pp. 845-6).[3] He endorses:

> SAMENESS. For any two times t, t^*, an agent's awareness of an object x observed at t and her awareness of an object y observed at t^* are about the same object if (i) there is no potential rebutting evidence (*bādhaka-pramāna*) against the claim that x is identical to y, and (ii) the two awareness-episodes are describable with the same linguistic expression.

Suppose I have seen Una wearing a jumper yesterday, and now I see her wearing a similar jumper. Suppose I also know that I have undergone two perceptual awareness-episodes, each of which is describable as *an awareness-episode about Una's jumper*. Moreover, I know that Una does not have two perceptually indistinguishable jumpers, that no has switched her jumper with a perceptually indistinguishable but actually distinct jumper, and so on. This might put me in a position to know that there is no potential rebutting evidence against treating the jumper I see now as identical to the jumper I saw yesterday. Using SAMENESS, then, I can learn by inference that the jumper I see now is the same as the one I saw yesterday.

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[2] Not all arguments that purport to refute the Buddhist theory of momentariness are capable of refuting REIDENTIFICATION SCEPTICISM. Vātsyāyana and Uddyotakara offer somewhat plausible arguments against momentariness (see *Nyāyabhāṣya* and *Nyāyavārttika* on *Nyāya-sūtra* 3.2.12-4 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 826-46; for a possible Buddhist response, see NM Ch. 7 in Varadācārya, 1983, pp. 315-6). Even if these arguments are successful, they cannot refute REIDENTIFICATION SCEPTICISM. In **Hunters**, for instance, in order to know by inference that the deer observed earlier is identical to the one observed later, the hunters have to rule out the possibility that there were not two perceptually indistinguishable, but actually distinct, deer behind the rock. Such sceptical possibilities, insofar as they are compatible with the persistence of the deer observed earlier, cannot be ruled out solely using arguments against the Buddhist theory of momentariness.
[3] Others include Bhāvivikta, whom Śāntarakṣita discusses (*Tattvasaṃgraha* vv. 462-5 and 468-70 in Krishnamacharya, 1984, pp. 162-4). I do not discuss Bhāvivikta's arguments here because the sceptical challenge that applies to Uddyotakara is effective against those arguments.

The Buddhist philosopher, Śāntarakṣita (8th century CE) responds to this proposal. He starts with the observation that it is sometimes possible to describe awareness-episodes about two distinct objects, e.g., the flames of a lamp at two successive moments, with the same linguistic expression, namely, "an awareness of the flame of the lamp" (*Tattvasaṃgraha* vv. 471-2 in Krishnamacharya, 1984, p.165). It may also be the case that there is no potential rebutting evidence against treating the two flames observed at different times as the same object. But, clearly, they are distinct. So, SAMENESS is false.

Here, the Naiyāyika can offer an obvious reply: there is indeed some counterevidence against the claim that the flame of a lamp at one time is identical to its flame at another time; for the flames vary in sizes across time. Śāntarakṣita anticipates this response: he insists that that similar counterevidence is also available in relation to any episode of object reidentification (ibid, vv. 473-5 in Krishnamacharya, 1984, p.165). Suppose we accept a causal theory of intentionality on which an agent can be aware of an object o only if o causes the relevant awareness-episode. This means that if two awareness-episodes, occurring at different times, are directed the same object o, then there is a causal condition—namely the object o itself—which is causally necessary for both these awareness-episodes. But, on the Buddhist view, if two awareness-episodes $e1$ and $e2$ occur at different times, then there is no condition c which is causally necessary for both $e1$ and $e2$ (for an argument, see Kamalaśīla's *Pañjikā* on *Tattvasaṃgraha* vv. 473-4 in Krishnamacharya, 1984, p.165). This yields the conclusion that if two awareness-episodes occur at different times, they cannot be directed at the same object. This argument, if sound, should rebut the claim that an object observed later is identical to an object observed earlier.

In response, the Naiyāyikas can reject the claim that two non-simultaneous awareness-episodes cannot have a common cause. But there remains a further sceptical worry that Uddyotakara's proposal faces. As Dharmakīrti notes (though perhaps not in response to Uddyotakara), we often erroneously judge two objects to be the same: we mistake regrown hair for hair that has been cut, and mistake one ball shown by a magician for another perceptually indistinguishable ball. In such cases, we sometimes later gain rebutting evidence that reveals our mistake (*Pramāṇavārttika* 3.504cd-505 in Saṃkṛtyāyana, 1953, p. 453). If Uddyotakara is correct, then, in **Hunters**, the episode of object reidentification can constitute (or yield) knowledge only if the hunters antecedently know that there is no potential rebutting evidence of this kind. But this requirement seems too demanding; for the hunters may not have enough background empirical knowledge to eliminate the possibility of future rebutting evidence. This seems true about most cases of object reidentification: typically, we do *not* reidentify objects on the basis of any empirical knowledge that rules out the possibility of potential rebutting evidence! Thus, an inference like the one that Uddyotakara mentions cannot explain how *most* episodes of object reidentification constitute (or yield) knowledge.

Let us sum up. So far, we have been discussing a Buddhist argument for REIDENTIFICATION SCEPTICISM: namely, that neither perception nor inference can help us knowledgeably reidentify objects. In the next two sections, I sketch two responses from Naiyāyikas to this argument.

II. THE PERCEPTUAL MODEL

In response to the Buddhist argument for REIDENTIFICATION SCEPTICISM, Vācaspati Miśra defends the view that an agent can gain perceptual knowledge through episodes of object reidentification. The Buddhists rejected this view by appealing to PERCEPTUAL INACCESSIBILITY, i.e., the assumption that an agent cannot know by perception alone that an object was previously in a certain condition. For the Buddhists, since an agent's outer senses can only be in contact with the present condition of an object, an agent cannot know by perception alone that an object was previously in a certain condition. Vācaspati rejects this assumption: he thinks that an agent can indeed perceive the past condition of an object and therefore can know by perception that it was in that condition (*Tatparyaṭikā* on *Nyāyasūtra*, henceforth *NS*, 1.1.4 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 118-9). On this view, in order to be perceived, the past condition of an object does not have to be in contact with the outer senses; it just has to appear as part of the content of a perceptual awareness-episode produced by the outer senses.

Vācaspati's positive proposal is this. For Vācaspati, memory plays an important role in any case of *epistemic perception*, i.e., any case where an agent perceives an object *o* as *F*. In such cases, the agent first undergoes a *non-epistemic perception* of an object *o*, where she does not perceive the object *o* as anything. But then she notices some feature of the object. That triggers a memory of previously experienced objects of a similar kind, all of which perhaps share the property of *F*-hood. The memory of these instances of *F*-hood, then, allows the agent to perceive the object *o* as *F*. According to Vācaspati, a similar story could be told about cases of object reidentification. In **Hunters**, when the hunters see the deer emerge from behind the rock, they at first do not see it as the deer they saw before. But then some features of the deer trigger a memory of the past condition in which they encountered the deer. This might make the hunters integrate a part of the content of this memory—namely, the deer's past condition C_{then}—with the content of their current perceptual awareness—namely, the deer as characterized by its present condition C_{now}—and undergo an awareness of the deer as something that is currently in C_{now} but was previously in C_{then}.

This conception of perceptual awareness suffers from a number of problems. First of all, Vācaspati seems to overstate the analogy between ordinary cases of epistemic perception and cases of object reidentification. He seems to think that memory plays the same epistemic role in the two kinds of cases, but that is not obvious. In ordinary cases of epistemic perception where I gain perceptual knowledge, memory helps me make explicit in perceptual awareness certain properties that are already instantiated in my environment. In cases of object reidentification, it does not just help me do so, but it also supplies a new property—i.e., the property of previously being in the past condition C_{then}—which is then ascribed to an object I encounter in my environment. So, there is an epistemically significant difference between these two kinds of cases.

On a related note, Vācaspati's proposal requires us to give up a plausible-sounding principle that the Buddhist presupposes:

> PERCEPTUAL CONTACT REQUIREMENT. If an agent is to know at a time *t* solely by perception that an object *o* is *F*, then at *t* (or immediately before *t*) the agent's outer sense-faculties must be in contact with the object *o* and its property of *F*-hood, both of which must be present in her environment.

In ordinary cases of epistemic perception, this requirement may indeed be satisfied. For example, if I come to know that a banana is crescent-shaped by perceiving that banana as

crescent-shaped, the shape of the banana is something that my outer sense-faculties, e.g., vision, can be in perceptual contact with. By contrast, if in an episode of object reidentification I come to know that the same object is now in condition C_{now} but was previously in C_{then}, there is no plausible story on which the property of previously being in C_{then} is something that my outer sense-faculties can be in contact with; for that condition might involve properties that the object no longer has. So, the PERCEPTUAL CONTACT REQUIREMENT will fail here.

The third problem with Vācaspati's picture is this. It entails that perceptual awareness produced by a certain sense-faculty is not really insulated from inputs of other sense-faculties, or, for that matter, from the influence of the agent's background cognitive states, e.g., by the bits of information contained in her memory. This, arguably, makes room for a form of *cognitive penetrability of perception* (Macpherson, 2012; Stokes 2013; Shea, 2014; Silins, 2016). The challenge for the Naiyāyika here is to spell out what kinds of background information states can influence perceptual awareness in this way. If the view is completely unconstrained, the Naiyāyika may indeed be led to somewhat bizarre consequences. For example, some Naiyāyikas are willing to say that an agent may come to know that a bunch of flowers are fragrant by *seeing them* as fragrant. This is because such Naiyāyikas think that it is possible for any memory trace or recollective awareness-episode to influence the content of perceptual awareness. Pre-theoretically, however, it is not obvious that we should classify the relevant awareness-episodes as cases of *seeing* at all. But it is at least equally—if not more—plausible that, in these cases, the agent is making a judgement on the basis of visual information and information made available to her by memory. Thus, even if she gains some knowledge on the basis of such a judgement, that knowledge will not be purely perceptual.

III. THE ATTENTIONAL MODEL

In response to Buddhist arguments for REIDENTIFICATION SCEPTICISM, Jayanta Bhaṭṭa lays down two distinct proposals. The first closely resembles Vācaspati's perceptual model of object reidentification. On this account, episodes of object reidentification can constitute (or yield) the kind of perceptual knowledge that the outer senses produce. On the second proposal, episodes of object reidentification constitute (or yield) perceptual knowledge, but this knowledge is produced by the inner sense or the *manas* and not by the outer senses. Since, within the theoretical framework that Jayanta presupposes, the *manas* functions as a capacity for attention, I will call this view the *attentional model*.

A. The *Manas* as a Capacity for Attention

Jayanta borrows his conception of the *manas* from Vātsyāyana, the 4th century commentator on the *Aphorisms of Nyāya* (*Nyāya-sūtra*). Vātsyāyana posits the *manas* in order to explain three phenomena (see Watson (forthcoming) for a nice discussion of the first two roles of the *manas*; for discussions of the Nyāya-Vaiśeṣika theory of the *manas* more generally, see Chakrabarti 1999; Chakrabarti, 2005; Ganeri, 2012, ch. 13, 2018, ch. 7).

1. The *manas* explains why an agent is not simultaneously bombarded with information from all five outer senses (*Nyāyabhāṣya*, henceforth *NB,* on *NS* 3.1.17 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 738-9). At any moment, our sense-faculties are exposed to a range of distal stimuli; however, not all these

stimuli are things that we become perceptually aware of. The *manas* provides an explanation of this fact: since it allows the self to connect with only one sense-faculty at a time, it restricts the range of particulars and properties that an agent can perceptually attend to and become aware of. Thus, the *manas* serves as an *information bottleneck* (Broadbent,1958; Mole, 2013, Section 2; Wu, 2014, ch. 6).

2. The *manas* also explains how an agent becomes aware of her mental occurrences, e.g., her pleasures, pains, desires, and aversions (*NB* on *NS* 3.1.17 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 738-9). Since the Nyāya-Vaiśeṣika theorists do not take mental occurrences to be self-intimating, the only epistemically direct method by which an agent can become aware of her own mental occurrences is through introspection. For the Nyāya-Vaiśeṣika theorists, it is the *manas* that produces such introspective awareness-episodes by acting as an internal monitoring mechanism.

3. The *manas* also explains the apparent *phenomenal unity* of consciousness, i.e., the fact that we ordinarily take ourselves to be undergoing several experiences at the same time (Spence, 2014; Ganeri, 2018, ch. 7). By serially but swiftly attending to the objects in contact with the different senses, the *manas* creates the illusion that we are undergoing many different experiences simultaneously (*NB* on *NS* 3.2.57-8 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 897-8).

In the first and third cases, the *manas* functions as a capacity for serial, perceptual attention, i.e., a capacity for serially attending to objects connected to the agent's senses. In the second case, it functions as a capacity for introspective attention, i.e., a capacity for attending to objects or events within the agent, and not outside in the world (Sosa, 2003; Chalmers, 2003; Goldman, 2004; Wu, 2014, ch. 8). For Vātsyāyana, the *manas*, as a capacity of attention, has no proprietary domain of objects. On the one hand, it is complicit in the production of our perception of external objects. On the other hand, it produces introspective awareness of internal occurrences. Thus, the *manas* is not domain-specific like the outer senses, which are only capable of grasping a narrow range of particulars and properties. It can be directed at any object (*sarvaviṣaya*) (*NB* on *NS* 1.1.9 in Tarkatīrtha and Tarkatīrtha, 1984, p. 182).

In *The Blossoms of Reason (Nyāyamañjarī,* henceforth *NM*), Jayanta endorses this conception of the *manas* (*NM* Ch. 8 in Varadācārya, 1983, p. 408-11). However, he goes on to suggest that the task of the *manas* as a capacity for attention is not merely to selectively attend to this or that object connected to our senses, or to attend to our internal goings-on. It also performs the task of *bringing to bear* upon current perceptual inputs information that the agent already possesses. Here is the story. Jayanta thinks that all awareness-episodes whose contents partly depend on memory can be attributed to the *manas*. The reason for this is that information retrieval from memory itself requires the intervention of the *manas* as a capacity of attention (Ibid., pp. 410-411).[4] In typical cases of inferential and testimonial awareness, the agent gets some information on the basis of her perceptual experience, but then she arrives at a new awareness-episode using some

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[4] For a precedent, see Vātsyāyana's portrayal of the *manas* as an *instrument of reflective awareness* (*mati-sādhana)* (*NB* on *NS* 3.1.16-7, in Tarkatīrtha and Tarkatīrtha, 1984, pp. 737-8). In his commentary on these passages, Vācaspati glosses reflective awareness as recollective awareness, inferential awareness, etc. (*smṛty-anumānādi-jñāna*) (ibid., p. 737).

information that she already possesses. In the case of inference, for instance, the agent may first observe smoke on the hill, and then recall that wherever there is smoke there is fire; on the basis of those two pieces of information, she may infer the presence of fire on the hill. In the case of testimonial awareness, the agent may first hear someone say a sentence, and then recall the meanings of the words in the sentence. This, in turn, might enable her to combine the meanings of those words in the right order, and thereby understand the meaning of the sentence. In each case, however, the agent first receives some perceptual input, and then brings some information she already possesses to bear on that perceptual input. Thus, Jayanta takes the *manas* to be causally essential to episodes of cognitive processing where an agent exploits information stored in her memory for the purposes of drawing out the significance of perceptual information.[5]

B. Integration
In light of this picture, Jayanta ascribes to the *manas* the function of producing *integrative* awareness-episodes, i.e., awareness-episodes that combine the deliverances of current perceptual experience with the contents of memory. Here are three examples.

The first kind of awareness is *numerical cognition* (NM Ch. 6 in Varadācārya, 1983, p. 162; for a different treatment of a similar case, see NM Ch. 7 in Varadācārya, 1983, p. 332). Jayanta considers a scenario where an agent is watching another person, Devadatta, eat mangoes. As Devadatta finishes eating his hundredth mango, the agent judges, "Devadatta has eaten those hundred mangoes!" Suppose the relevant awareness-episode is a case of knowledge. On the one hand, it cannot be a case of perceptual knowledge. Jayanta's reasoning seems to be this. Here, the definite description "those hundred mangoes" picks out a collection of mangoes, none of which exist anymore. So, they cannot be detected by the agent's outer sense-faculties. Hence, this awareness-episode cannot constitute (or yield) the kind of perceptual knowledge that the outer senses yield. On the other hand, it cannot also be a case of recollective awareness. On the account of memory accepted by Jayanta and other Naiyāyikas, memory cannot provide the agent with any new information; it only transmits information that the agent has acquired from some independent source. However, in this case, when the agent judges that Devadatta has eaten those hundred mangoes, she seems to gain some new information that she did not possess before. Jayanta's solution to this problem is to say that it is the *manas* that generates this kind of numerical cognition. First, with the help of the *manas*, the agent recalls the previous occasions on which Devadatta ate a mango. Then, by combining these deliverances of memory with the inputs of perception, the *manas* helps the agent track how many fruits Devadatta has eaten so far. This gives rise to the judgment that he has eaten a hundred mangoes.

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[5] Jayanta suggests that other kinds of epistemically indirect awareness-episodes, such as doubt (*saṃśaya*) and supposition (*tarka*), may only *sometimes* be produced by the *manas* (NM Ch. 8 in Varadācārya, 1983, p. 411), thereby implying that such awareness-episodes could be produced by the outer senses (perhaps with some help from the agent's memory). However, since perceptual doubt or supposition do not constitute knowledge, I do not take this claim to be incompatible with Jayanta's considered view on these matters: namely, that the perceptual awareness-episodes, when influenced by memory, do not yield knowledge; they have the same status as instances of perceptual illusion, e.g., a case where the agent sees a rope as a snake, because her recollective awareness of snake-hood penetrates her perceptual awareness of the rope. Thanks to Alex Watson for raising this point.

Jayanta's second example is similar: it involves the awareness of words (NM Ch. 6 in Varadācārya, 1983, pp. 162-3 and pp. 200-201). In their debates with the grammarians, the Mīmāṃsakas and the Naiyāyikas are called upon to explain how an awareness of a unitary referring expression is possible on the basis of hearing a sequence of phonemes. The standard reply is that the auditory perception of the last phoneme, reinforced by the recollection of the previous phonemes, results in the awareness that some referring expression has been uttered. But this does not take us very far. If the recollective awareness of the previous phonemes follows the auditory perception of the final phoneme, then the Naiyāyikas and the Mīmāṃsakas need to explain how the phonemes are arranged in the right order, so as to generate an awareness of the right referring expression. Why do we not follow the order in which the relevant awareness-episodes arise and place the last phoneme first in the sequence of phonemes? The challenge cannot be avoided simply by positing a joint recollection of all the phonemes at once. Even then, the problem of order will persist. Jayanta's solution to this problem is to say that the *manas* takes as input the auditory perception of the last phoneme and the recollective awareness-episodes of the previous phonemes, and arranges them in the right order, so as to give rise to an integrative awareness of a referring expression (NM Ch. 6 in Varadācārya, 1983, pp. 162-3). Presumably, the idea here is that the *manas* as a capacity of attention keeps track of the order in which the phonemes were uttered, and uses that information to generate the relevant integrative awareness-episode.

Jayanta's third example is somewhat different: a kind of *amodal awareness* that integrates information provided by various sense-modalities (NM Ch. 7 in Varadācārya, 1983, p. 334). An agent, for instance, might see some jasmine blossoms at a distance, and undergo an awareness-episode of the form, "Those flowers are fragrant." Jayanta is unwilling to accept this position. According to him, since it is impossible for an agent to visually perceive the fragrance in the flowers, the awareness-episode—though perhaps dependent on an antecedent visual awareness-episode—cannot in itself be a visual awareness-episode. Moreover, Jayanta also does not think that the judgement in question is produced by inference, where one reasons from the premise that jasmine blossoms are typically fragrant to the conclusion that these flowers are also fragrant. Once again, Jayanta appeals to the *manas* as a capacity of attention to explain how this integration of the deliverances of perception with the deliverances of memory takes place. At first, the agent perceptually recognizes the relevant flowers as jasmine blossoms. This, in turn, triggers a recollection of previous occasions on which the agent has smelled the characteristic fragrance that jasmine blossoms have. Finally, the *manas*—which has access not only to the deliverances of the agent's visual system but also to the deliverances of memory—gives rise to a unitary awareness-episode, "Those flowers are fragrant."

C. Back to Object Reidentification

For Jayanta, episodes of object reidentification should be treated as integrative awareness-episodes, i.e., awareness-episodes that combine the deliverances of current perceptual experience with the contents of memory.

Earlier, Vātsyāyana defended a similar account of object reidentification:

An episode of object reidentification is an awareness-episode that integrates a temporally prior awareness-episode and a temporally posterior awareness-episode with respect to the same object: "I am now seeing that very object which I had seen earlier; this indeed is that thing." For instance, such an awareness-episode might arise in a scenario where an agent, who having seen an object with his left eye, reidentifies it with his other eye, and undergoes an awareness-episode of the form, "I am now seeing that very object which I saw." (*NB* on *NS* 3.1.7 in Tarkatīrtha and Tarkatīrtha, 1984, pp. 726-7)

On this view, an episode of object reidentification integrates two distinct awareness-episodes—a perceptual awareness-episode that happened at a past temporal instant *t1* and a perceptual awareness-episode that is taking place now at *t2*—with respect to the same object. What does that mean? Vātsyāyana describes a scenario where an agent first sees an object with his left eye, and a little later sees it again with his right eye. When she sees the object again, she recalls her previous experience. This could give rise to two distinct awareness-episodes: "I am now seeing that very object which I saw" and "This indeed is that thing." Both these awareness-episodes are episodes of object-reidentification; for, in each case, the agent takes the object of a current awareness-episode to be identical to the object of a past awareness-episode. It is in this sense that episodes of object reidentification integrate two distinct awareness-episodes, belonging to two different times, with respect to the same object.

Since Jayanta accepts the view that episodes of object reidentification are integrative awareness-episodes, it is only natural for him to think that episodes of object reidentification are produced by the *manas*. He says:

Alternatively, let us take episodes of object reidentification to be awareness-episodes that are produced by the *manas* and are directed at objects qualified by past awareness-episodes, just as we would treat an awareness-episode that ascribes fragrance to jasmine blossoms [that the relevant agent merely sees but does not smell]. (NM Ch. 7 in Varadācārya, 1983, p. 334)

The idea is explained as follows:

When one merely sees jasmine blossoms [and does not smell them], one cannot become aware, by means of one's outer senses, of the fragrance present in those flowers; for such fragrance cannot be detected by vision. Thus, in such a scenario, one may undergo an awareness-episode produced by the *manas* of the form, "Those flowers are fragrant." Analogously, in an episode of object reidentification, an object, e.g., a pillar, is qualified by a previous [perceptual] awareness-episode. This qualifier is something that one was aware of in the past. Therefore, episodes of object-reidentification must also be produced by the *manas*. (Ibid.)

Under this account, episodes of object reidentification are those awareness-episodes whereby an agent (correctly or incorrectly) identifies an object as something that was perceived before; it is in that sense that the agent's previous perceptual awareness-

episode qualifies the object. Jayanta's story is this. When an agent undergoes an amodal awareness of jasmines as fragrant, the *manas* integrates the content of a current visual awareness-episode (i.e., of the jasmines) with the content of a previous perceptual awareness-episode (i.e., her olfactory awareness of the fragrance of jasmines). Thus, it helps the agent ascribe to the currently perceived jasmines the fragrance that she has smelled in previously perceived jasmines but doesn't smell now. In the same manner, in episodes of object reidentification, the *manas* integrates the content of a current perceptual awareness-episode (i.e., of some object before her) with the content of a previous introspective awareness-episode (i.e., of a previous perceptual awareness of the same object) in cases of object reidentification (Ibid., p. 335). Thus, the *manas* helps the agent ascribe to a currently perceived object a property that the agent cannot currently introspect, namely the property of being perceived at some other time.

D. Resolving the Sceptical Challenge
This account of object reidentification resolves the challenge posed by the Buddhists. The Buddhists thought that an agent could not gain perceptual knowledge through episodes of object reidentification, because such awareness-episodes carry information about the past condition of a currently perceived object, and an agent's outer sense-faculties could not be in contact with the past condition of an object.

Jayanta is able to resolve this problem by appealing to the *manas*. Like all other Naiyāyikas, he accepts the commonsense assumption that objects do persist through time (for references to Nyāya arguments for this assumption, see footnote 2). So, on his view, it is possible for an agent to *correctly* identify an object before her as one that she has perceived before. Like all other Naiyāyikas, Jayanta wants to go further: he wants to say that in some (if not all) such cases, these episodes of object reidentification constitute (or yield) knowledge. Like Vācaspati, Jayanta takes such knowledge to be perceptual, and rejects the assumption we called PERCEPTUAL INACCESSIBILITY, i.e., the principle that an agent cannot know by perception alone that an object was previously in a certain condition. However, unlike Vācaspati, he does *not* think that the kind of perceptual knowledge that episodes of object reidentification constitute (or yield) is generated by the outer sense-faculties. This kind of perceptual knowledge, for Jayanta, is produced by the inner sense or the *manas*. Jayanta can grant the Buddhist assumption that an agent's outer sense-faculties cannot be in contact with the past condition of an object, and therefore cannot produce knowledge about the past condition of an object. But since the *manas* is not domain-specific like the outer senses, it can access the past condition of an object through memory, and therefore can produce knowledge about the past condition of that object. That is why PERCEPTUAL INACCESSIBILITY is false.

Here, in a nutshell, is Jayanta's account of how episodes of object reidentification constitute (or yield) knowledge. For Jayanta, one function of the *manas* is to integrate certain pieces of information stored in an agent's memory with information received from perception. Suppose we grant the commonsense assumption that objects persist through time. Now, when an agent perceives an object, the *manas* as a capacity of attention does two things: first, it registers some properties of the perceived object, and then uses them to retrieve information about similar objects that the agent may have perceived before. So, if the *manas* functions properly, the agent should be able to recall previous perceptual experiences where she may have encountered the same object that she sees. As a result,

the agent would undergo correct and reliably formed integrative awareness-episodes of the form, "This is that!" Thus, an agent can knowledgeably reidentify previously perceived objects.

This raises a worry. Even though Nyāya epistemologists may have subtle arguments for the claim that objects persist through time, a philosophically unsophisticated agent may not be able to formulate such arguments, and thus may fail to rule out the Buddhist view that all objects are momentary, i.e., lack temporal extension. Even if such an agent correctly judges that an object that she currently perceives is identical to a previously perceived object, her judgement will be based on insufficient evidence, and therefore will not constitute (or yield) knowledge.

This worry is unfounded. For Jayanta, the kind of knowledge that the *manas* produces through episodes of object reidentification is *perceptual*, and therefore just as *immediate* as the kind of knowledge that we acquire from the outer senses. We certainly do not have to antecedently refute idealism in order to gain perceptual knowledge about the external world. Similarly, we do not have to antecedently refute the Buddhist theory of momentariness in order to gain knowledge on the basis of episodes of object reidentification.

However, it may be possible to resurrect REIDENTIFICATION SCEPTICISM in a different way. The sceptic could point out that for any scenario in which an agent successfully reidentifies an object, we could construct a phenomenally indistinguishable scenario where she fails to do so. Suppose material objects do persist through time. So, I may look at Una's jumper, and believe correctly that she is wearing the same jumper that she was wearing yesterday. However, it is possible to construct a scenario in which she is wearing another jumper that is perceptually indistinguishable from the one that she wore yesterday. In such a scenario, if I believe that Una is wearing the same jumper that she was wearing yesterday, I will be wrong. Call the first scenario the *good case* of object reidentification, and the second the *bad case*. Assuming that an agent's evidence only entails truths, my evidence in the bad case of object reidentification should not rule out the possibility that the jumper I see now is distinct from the one I saw earlier. Moreover, one could argue that since the good and bad cases of object reidentification are phenomenally indistinguishable to me, then my evidence in the two cases must be the same. But, then, my evidence in the good case cannot rule out the possibility that the jumper I see now is distinct from the one I saw earlier. One might conclude from this that even in the good case, I am not in a position know that I see the same jumper that I saw earlier.

This sceptical argument is not the earlier Buddhist argument for REIDENTIFICATION SCEPTICISM; it is just a version of the old sceptical argument from error. A similar argument should yield the conclusion that we cannot gain perceptual knowledge about the external world. For any proposition about the external world that we may claim to know perceptually, it is possible to construct a phenomenally indistinguishable scenario where we are not in a position to know that claim. Suppose, under normal lighting conditions, I am looking at a red wall, and know that the wall is red. Now, we can construct a phenomenally indistinguishable scenario, where I am only looking at a white wall lit up with trick red lighting but falsely believe that the wall is red. Call the first scenario the *good case* of perception, and the second the *bad case* of

perception. An argument like the one given above would have us conclude that I am not in a position to know in the good case that the wall is red.

The same strategies that are available for resisting this second sceptical argument are available to the Naiyāyikas for resisting the new argument for REIDENTIFICATION SCEPTICISM. The argument depends on three assumptions.

FACTIVITY. An agent's evidence only entails truths.

EVIDENTIAL INTERNALISM. If two scenarios are phenomenally indistinguishable to an agent, then she has the same evidence in the two scenarios.

INFALLIBILISM. For any proposition P, if an agent's evidence does not rule out the possibility that P is false, then she cannot be in a position to know P.

Even if we grant FACTIVITY (which I think we should), the two other assumptions can be rejected. EVIDENTIAL INTERNALISM will be rejected by an *evidential externalist*, i.e., someone who thinks that our evidence does not depend solely on our phenomenal states (Williamson, 2000, ch. 8). INFALLIBILISM will be rejected by a *fallibilist* who takes what an agent is in a position to know to depend on factors external to an agent's evidence, e.g., on how well the agent's belief-forming mechanisms are functioning.

Both these strategies are compatible with the general theory of knowledge that Naiyāyikas defend. On this view, as long as the agent's belief-forming mechanisms instantiate certain epistemic virtues (*guṇa*) and are free from certain epistemic defects (*doṣa*), the agent will be able to acquire knowledge. In the good case of object reidentification, the *manas* functions virtuously: it integrates the object *x* of a current perceptual experience with the object *y* of recollective awareness, such that *x* is in fact identical to *y*. Moreover, certain epistemic defects are also absent: since conditions are normal (e.g., there is no trick lighting or perceptually indistinguishable but distinct jumper lying around), the *manas*'s capacity to detect any possible difference between the two objects of awareness is not compromised. By contrast, in the bad case of object reidentification, the jumper I now see is not the jumper I saw before, and due to the perceptual indistinguishability of the two, my *manas* is not able to register the difference between the two jumpers. Thus, in the good case of object reidentification, the *manas* as a capacity for attention exemplifies certain epistemic virtues that are absent from the bad case and lacks certain epistemic defects that are present in the bad case.

Using this account of knowledge, the Naiyāyikas could reject either EVIDENTIAL INTERNALISM or INFALLIBILISM. They could say that the presence of epistemic virtues and the absence of epistemic defects in the good case of object reidentification help me end up with conclusive evidence that the jumper I see now is the same as the jumper I saw earlier. So EVIDENTIAL INTERNALISM is false. Or they could say that despite having the same evidence in the good and the bad cases, the presence of epistemic virtues and the absence of epistemic defects in the good case put me in a position to know that the jumper I see now is the same as the one I saw before. So, INFALLIBILISM fails.

IV. CONCLUSION

Let us take stock. In Section I, I outlined a Buddhist challenge against the claim that we can knowledgeably reidentify previously observed objects. In Sections II and III, I discussed two distinct Nyāya responses to this argument. The first response, offered by Vācaspati Miśra, is that the outer senses can help us knowledgeably reidentify objects. The second response, which is offered by Jayanta Bhaṭṭa, attributes this function to the

manas. On this view, the *manas* as a capacity of attention serves as a *mechanism for integration* (*pratisandhāna*): it can help the agent integrate the contents of current perceptual awareness with the contents of recollective awareness, and can thereby help her successfully reidentify previously experienced objects. This second proposal, I have claimed, does constitute an adequate response to the Buddhist challenge.

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