

Contrasting Nyāya-Vaiśeṣika and Buddhist Explanations of Attention*

Alex Watson

INTRODUCTION

In contemporary Cognitive Science and Philosophy of Mind, ‘attention’ is a burgeoning field, with ever increasing amounts of empirical research and philosophical analysis being directed towards it in recent years.¹ In this paper I make a first attempt to contrast how Nyāya-Vaiśeṣikas² and Buddhists would address

* I thank the following people for having taken the time to read drafts of this paper and give comments: Mark Siderits, Christian Coseru, Jonardon Ganeri, Roy Perrett.

¹ For overviews of the field, see Mole (2013), Watzl (2011) and (2011a).

² I am using this hyphenated form ‘Nyāya-Vaiśeṣikas’ simply as a short way of referring to both Naiyāyikas and Vaiśeṣikas. I do not mean to imply that there was a single composite school comprising both. But on the issues discussed in this paper, I do not find any significant divergences between the two.

some aspects of attention that are discussed in that literature. The sources of what I attribute to Naiyāyikas and Vaiśeṣikas are the sections dealing with the *manas* ('internal organ', 'organ of attention') in the *Nyāyabhāṣya*, *Nyāyamañjarī* and *Praśastapādabhāṣya*. The words 'Buddhist' and 'Buddhism' in this paper refer specifically to the Sautrāntika Buddhism of Vasubandhu's *Abhidharma-kośabhāṣya*.

In section 1 I will lay out the ontological postulates that Nyāya-Vaiśeṣikas and Buddhists deemed necessary for the explanation of attention. In section 2 we will look at three arguments that the Nyāya-Vaiśeṣikas gave for their principal postulate, the *manas*, and three corresponding Buddhist responses to those arguments. Sections 3 and 4 will look at contrasting Nyāya-Vaiśeṣika and Buddhist explanations of, respectively, shifts of attention and competition for attention. In the closing section I identify three things that are commonly attributed to attention and that may seem impossible in both the Nyāya-Vaiśeṣika and the Buddhist models; I show how the two Indian models can account for them.

1. The ontological postulates of attention

In the Buddhist view, we need postulate no new faculty to explain attention, at least nothing that is separate from awareness, certainly no substance. For the Nyāya-Vaiśeṣikas, by contrast, to explain attention a substance, an organ responsible solely for attention, is postulated. This organ, known as the *manas*, was said to be the size of a single atom. Before the self can become aware of a sense-object, it must first direct the *manas* to the location of the sense-faculty that is receiving the object's data: to the eyes for visual data, to the nose for smells, to the mouth for tastes, etc. The metaphors used are that of a boy (= self) sitting in the corner of a room throwing a rubber ball (= attention) to different locations of the room (= different parts of the body), or a master directing his servant to certain tasks.

In comparing the Buddhist and Naiyāyika explanations of attention, one of our main questions will be whether a *manas* is necessary for the explanation of attention, or whether the Buddhists can explain what needs to be explained without postulating such an entity. Now we will be giving the Buddhists an unfair advantage if we focus on those features of the *manas* that derive from the outdated physiology that led to its detailed specification. It may be to the Buddhists' ad-

vantage that they did not postulate an organ the size of an atom that rushes around the body at high speed, and that has form/shape (it is *mūrta*), but lacks tangibility (*sparśa*) or resistance, enabling it to pass right through matter such as the muscles, sinews etc. that make up the inside of a body. But whether it is a problem for them that they postulated no faculty of attention separate from awareness is a question worth investigating.

Let us therefore distinguish between the *manas* conceived of merely as that which carries out a certain cognitive role, and the *manas* as the atomic, quasi-physical³ substance that was said to carry out that role by moving around the body. For it may be that without getting the physiological instantiation right, the Naiyāyikas made a valuable *a priori* contribution by postulating an entity responsible for a certain function within the cognitive architecture of the individual. So this is a distinction between a faculty of attention defined purely by its roles – its empirical realization left unspecified –, and the realization of the role-player in the physical mechanisms of the brain and body. One accounts for attention in the cogni-

³ Its physicality is suggested by the fact that it has a size, is capable of movement and has a form/shape; its non-physicality is suggested by the fact that it lacks resistance and can thus pass right through matter.

tive architecture of the subject; the other is an empirical explanation of the actual mechanics. The first belongs to the metaphysics of mind and attention, the second to neuroscience and psychology. It will be unfair to dismiss Nyāya on the grounds that they get the second wrong, just as people don't blame or neglect Aristotle for relying on the physics and biology of his time. So let us push the second into the background and foreground the first.⁴

The *manas* – and the power of attention that it carries with it – is an instrument that is under the control of the self, and that in accordance with the latter's executive commands can move from sense-faculty to sense-faculty in order to enable the self to focus on and thus receive information from different modalities. Functioning as an intermediary bottleneck between the self and the data received by sense-faculties, its limited capacity explains why the self is aware of only one thing at once, and is not flooded by data from all of the sense-faculties simultaneously.⁵ The stuff out of which the *manas* is made will be irrelevant to us, as will the mechanics of its movement from one sense to another. We will note, howev-

⁴ I thank Jonardon Ganeri and Roy Perrett for elaborating this distinction for me and suggesting its employment here.

⁵ Cf. Broadbent (1958), Posner and Boies (1971), and Posner and Warren (1972).

er, that it is a substance – an unconscious one, as were all instruments for the Nyāya-Vaiśeṣikas.⁶ And we will continue to speak of its movement from one sense to another, but ‘movement’ can be taken to refer to whatever change is necessary for this inner organ to switch from connection with one sense-faculty to connection with another.

We have so far been speaking of the *manas* as that which enables a connection between the self and the sense-faculty whose object needs to be attended to, thereby explaining the self’s limited capacity. But its domain is not restricted to data coming in through the five external sense-modalities; it extends to internal sense data: ideas, pleasures, pains, desires etc. It is the instrument that enables these too to be attended to.

We have a contrast between a relatively inflationary Nyāya-Vaiśeṣika account (according to which the explanation of attention requires the postulation of an attention-organ – which is a substance – and an attention-process, the ‘move-

⁶ See *Nyāyakandalī* p. 175,6, *manas cetanaṃ na bhavati, karaṇatvād ghaṭādivad iti*: ‘The *manas* is not conscious, because it is an instrument, like a pot or such like’.

ment' of the *manas*) and a relatively deflationary Buddhist account (according to which it does not). For Buddhism it is simply the case that every act of awareness, every instance of consciousness, pays attention to its object.⁷ This was elaborated in terms of awareness, by its nature, 'turning towards' (*ābhogaḥ*) its object. For Buddhism we need to accept the existence only of 'awareness-events' or 'acts of awareness' (which necessarily involve attention); to postulate a *manas* separate from these is to postulate a ghost in a machine (or a mantra in some medicine; see below) that works quite effectively without it.

We find this kind of reasoning in the *Abhidharmakośabhāṣya* in a passage in which the question being addressed is why consciousness changes, why it does not always occur in the same form.⁸ An obvious answer that changes in consciousness can be brought about by changes in the objects of consciousness is not given; in-

⁷ Attention (*manaskāra*) is named (e.g. *Abhidharmakośabhāṣya* 2.24) as one of ten mental factors that accompany every awareness-event (*citta*).

⁸ *Abhidharmakośabhāṣya* p. 1222,9ff, *idaṃ sphuṭaṃ codyam āpadyate kasmān na nityaṃ tādṛśam evotpadyate ...*: 'Clearly the following question arises here: why does [consciousness] not arise always in the same form?'. The passage has been translated by Sanderson (1995: 47ff.), Duerlinger (2003: 102ff.) and Kapstein (2001: 370ff.).

deed the passage gives the impression that what is being spoken of are times such as during meditation or dreaming when one's eyes are shut, or times when there are no changes in the objects that are within the range of the person's senses, or times of intense thinking or day-dreaming when such changes do not affect one's awareness. The Vaiśeṣika maintains that consciousness changes because it is caused by specific conjunctions (*saṃyogaviśeṣa*) of the self and *manas*.⁹ In other words consciousness will not always stay the same because the present conjunction of self and *manas* will give way to another, different one.

But this reply does not satisfy Vasubandhu, because both the self and *manas* are unchanging according to the Vaiśeṣika, so how could there be different conjunctions between them? The Vaiśeṣika replies that different conjunctions of self and *manas* are associated with different cognitions (*buddhi*). The idea here is presumably that in one moment the *manas* may be conjoined with the self while the latter has a particular cognition inhering in it; at other moments the *manas* will be conjoined with the self while the latter has different cognitions inhering in it. This answer predictably prompts the Buddhist to ask: but what causes the cognitions to differ from each other? Here the Vaiśeṣika appeals to the ripening of dif-

⁹ *Abhidharmakośabhāṣya* p. 1222,10.

ferent latent impressions (*saṃskāra*). A conjunction of self and *manas* that is caused by a particular latent impression will be associated with a particular cognition; a conjunction of self and *manas* that is caused by a different latent impression will be associated with a different cognition.

But, argues Vasubandhu, this means that self and *manas* are not contributing at all to the explanation of changes of consciousness. It is the latent impressions that are carrying all of the weight. Why not, therefore, jettison self and *manas* from one's ontology? The Vaiśeṣikas are deriving changes from *self-manas conjunctions* depending on latent impressions, but they could derive them from *the stream of consciousness* depending on latent impressions, thus ridding themselves of two unperceived entities whose contribution to change, given that they are both unchanging, is mysterious. If they do that, they arrive at the Buddhist model.¹⁰

¹⁰ *Abhidharmakośabhāṣya* p. 1223,4–1224,2, *nityam aviśiṣṭe manasi katham saṃyogaviśeṣaḥ? buddhiviśeṣāpekṣa iti cet, sa eva paricodyate: katham buddhiviśeṣa iti? saṃskāraviśeṣāpekṣād ātmamanaḥsaṃyogād iti cet, cittād evāstu saṃskāraviśeṣāpekṣāt* [Lee edition, Dwārikā Dās Śāstrī edition, supported by Yaśomitra's commentary; *-āpekṣatvāt* Pradhan edition]: 'Since the *manas* is permanently unchanging [like the self], how can there

It is in this context that Vasubandhu gives the example of a mantra with which a fake doctor enchants his herbal medicines, claiming that they only work because of the mantra (fearing that otherwise his patients will obtain the herbs themselves and dispense with him).¹¹ Just as the curative power of the herbs can be explained entirely by their own potency, without any appeal to that of mantras, so changes in consciousness can be explained entirely by changes in its latent impressions, without any appeal to self and *manas*.

be different conjunctions [between the two of them]? If [the Vaiśeṣika] says, “[the conjunctions] are associated with different cognitions”, the same question [with which this whole passage started] should be put: how can the cognitions differ? If [the Vaiśeṣika] answers that specific cognitions are derived from connections between the self and the internal organ that are associated with specific latent impressions, then why should he not derive them from consciousness itself depending on specific latent impressions?’

¹¹ *Abhidharmakośabhāṣya* p. 1224,2–3 and Yaśomitra’s *Sphuṭārthā* ad loc. The *Bhāṣya* reads, *na hi kiṃcid ātmana upalabhyate sāmāthyam auśadhakāryasiddhāv iva kuhakavaidyaphuḥsvāhānām* [Pradhan edition; *-phuḥsvāhānām* Dwārikā Dās Śāstrī edition]. ‘For we do not see that the self would have any power [to influence the production of consciousness], just as [there is no evidence that] the *phuḥsvāhās* uttered by quack doctors [contribute] to the efficacy of the herbs [they prescribe].’ I follow Sanderson (1995) for both the choice of readings and the translation.

* * *

Alongside this contrast between a heavy and light ontology surrounding attention, the following related contrasts can be made:

For Buddhism, to be paying attention to something means nothing more than to be aware of it.¹² For the Nyāya-Vaiśeṣikas it means, in addition to that, that one's *manas* has 'moved' to the sense-faculty that is sensing the object and is in connection with that sense-faculty.

¹² *Manaskāra* (standardly translated as 'attention') is for Buddhist Abhidharma, as stated above, that feature of a cognition that turns or orients it towards an object (*cetasa ābhogaḥ*, *Abhidharmakośabhāṣya* ad 2.24). See Dreyfus (2011) for an elaboration of the way that mindfulness (*smṛti*) and concentration/absorption (*samādhi*), which both contribute to the continued attentiveness of a mental state towards its object, are also part of what we mean in English by 'attention'. All three of these, according to *Abhidharmakośabhāṣya* 2.24, necessarily accompany every mental state. And according to Vasubandhu's Sautrāntika modification of Vaibhāṣika Abhidharma, the mental factors (*caitta*) – such as *manaskāra*, *smṛti* and *samādhi* – that accompany awareness (*citta*) are not distinct from that awareness. For the Nyāya-Vaiśeṣikas, by contrast, the *manas* is something quite separate from, and of a quite different nature than, awareness.

For the Nyāya-Vaiśeṣikas awareness cannot shift without a shift in the location of a *manas*. For Buddhism it can; it can shift, for example, simply as a result of the ripening of a new latent impression.

For the Nyāya-Vaiśeṣikas, attention (along with its organ, the *manas*) is an instrument necessary for the rise of awareness and is in that sense temporally prior to, and ontologically separate from, awareness. For Buddhism attention cannot occur in separation from awareness; it is one aspect of it.¹³

For the Nyāya-Vaiśeṣikas, attention is carried along by the *manas*, something that is of a quite different nature from awareness; it is an organ, awareness is not, it is unconscious, awareness is conscious. For Buddhism attention is simply a feature of awareness, the fact that awareness is turned towards its object.

¹³ Awareness, for Buddhism, consists of on the one hand the awareness itself (*citta*), and on the other the various features that necessarily accompany it and qualify it: its hedonic tone (*vedanā*), the fact that it is turned towards its object (*manaskāra*), etc.

2. Arguments for the *manas*

We will now look at some of the arguments for the existence of a *manas* and see how Buddhism can respond.

2.1 The argument from absent-mindedness¹⁴

Frequently, when a person with functioning sense-faculties is within the range of sense-data, awareness of the sense-data will arise. A non-deaf person in the presence of a sound will frequently be aware of the sound. But this does not always happen. A person may be entranced by a picture in an art gallery and completely unaware of the sounds around them. This leads us to infer that some factor is present in the first kind of case but absent in the second. This factor, for the Nyāya-Vaiśeṣikas, is the presence of the *manas* at the location of the ear. The ‘absent-mindedness’ of the second person is to be interpreted as ‘absence of the *manas*’.

Since the Buddhists do not postulate an organ of attention, how can they account for the difference between these two cases? They can assert that in the second case the person’s attention (*manaskāra*), i.e. their consciousness’ turning towards

¹⁴ See Chakrabarti, A. (2005) and Chakrabarti, K. K. (1999: 104).

an object, is pointed elsewhere – at the picture and not the sound. Consciousness can only point in one direction at once. If it is pointed towards the picture, then it will be fully occupied with the picture; it cannot simultaneously point towards, i.e. be receptive to, the sound.

2.2 The argument from capacity limitation

As alluded to above, one of the main arguments for the existence of a *manas* is that, without one, the self would be flooded simultaneously by data from all five senses. But it is not flooded in that way. In any one moment we are aware only of a minute selection from all of the sounds, tastes, smells and colourful forms that are stimulating our sense-faculties, all the sensations on our skin and in the insides of our bodies. The *manas* provides an explanation of this fact: allowing the self to connect with only one piece of information at once, it acts as a bottleneck.¹⁵

How can Buddhism explain this fact, given that they do not posit a *manas* as bottleneck? A partial explanation has already been given above: Attention, for Buddhism, is consciousness' turning towards or pointing to an object, and a

¹⁵ Chakrabarti, K. K. (1999: 103–104).

pointer cannot point in more than one direction at once. Thus each individual consciousness/cognition (lasting for just a moment) has only one object. If one object is grabbing consciousness' attention, that will block the way for other potential objects. Buddhism appeals to this idea rather than to the existence of an unperceived organ of attention.

I said that this is only a partial explanation. Let us distinguish between the existence of a bottleneck and the determination of what precisely will pass through the bottleneck. The *manas* explains not only the former but also the latter: the reason why data from one particular sense-faculty rather than another makes it through to consciousness is because the *manas* is in connection with that faculty. The Buddhist idea that consciousness can only point in one direction at once accounts only for the existence of the bottleneck. Section 4 below ('Competition for Attention') will look in detail at how Buddhism can account for what passes through the bottleneck.

2.3 The argument for the necessity of an instrument of inner awareness

As we saw above, the *manas* is required to bring about awareness not just of sense-data coming from outside the person, but also of thoughts and feelings and other 'inner sense-data'. The main argument found in Nyāya and Vaiśeṣika texts

for the necessity of such an instrument of inner awareness is as follows: All perception, such as perception of external objects, requires an instrument. Perception of pleasure and pain etc. is a kind of perception, so it requires an instrument. The instrument in this case cannot be any of the five external objects, since they are restricted to their own particular kinds of object. So we arrive at the *manas* as the instrument of this kind of perception.¹⁶

One could challenge that all perception requires an instrument; or that perception of pleasure and pain etc. is a kind of perception. But if it is granted that external sense-perception requires an organ of attention, it would be very strange to maintain that inner perception does not. If awareness of sounds and smells requires paying attention to them, so too surely does awareness of inner ‘objects’. And it is a fact of experience that internal sense-data and external sense-data can compete with each other for one’s attention, with one losing out to the other, so we need the same organ of attention that is responsible for admitting data from only one of the five external senses to be also the determiner of whether internal sense-data will make it through the bottleneck. We need one entity to be potentially in contact with both internal and external data and to choose between them (or to

¹⁶ Chakrabarti, K. K. (1999: 104–105); *Nyāyasūtra* 3.1.16 and *bhāṣya ad loc.*

carry out the subject's choice), i.e. to connect with one of these two and to thereby exclude connection with the other. If we were able to become aware of internal sense-data without this being enabled by the *manas*, then attending to data from an external sense-faculty (as a result of the *manas*' presence there) would not preclude simultaneous awareness of a huge – unlimited – amount of internal data. This, being contrary to experience, is an undesirable consequence. It seems then, that the self will need the *manas* to pay attention to, and become aware of, cognitions, pleasures, pains and the like.

But from the Buddhist point of view the picture has become clunky, suffering from a multiplication of entities. For internal sense-data occurs in the self – pleasures, pains, desires, thoughts etc. are qualities that reside in the self for Nyāya. Why then should the self require an instrument – unconscious and external to the self – to become aware of pleasures etc. that belong to it, having it as their locus, substrate and subject? Why should it have to reach outside of itself in order to see what is within it?¹⁷

¹⁷ When, in conversation, I put this to Parimal Patil as a strange consequence that Nyāya is saddled with, he countered with the analogy of someone who has something on their person, e.g. in their pocket, but who in order to know whether they do or not, has to

For the Buddhists, the involvement of a Naiyāyika *manas* is redundant here. Cognitions, pleasure and pains are, for them, self-illuminating. They are simply different forms that the stream of consciousness takes at different times; that which is aware of them is the stream itself. There is no need for an instrument that is separate from them to retrieve them and deliver them to some separate agent of consciousness.

An infinite regress argument, furthermore, could be brought forward here. If cognitions, pleasures and pains etc. were not aware of themselves, but required a separate instrument to bring them to the awareness of a separate subject, then that instrument (the *manas*) would have to be aware of them, in order to deliver them to the subject. But given that all awareness requires an instrument for Nyāya, the *manas* will need an instrument to become aware of the cognitions and the like. So we have an infinite regress. If the Naiyāyika attempts to stop this by denying that the *manas* needs an instrument to become aware of the cognitions etc., then his claim that the self needs an instrument to become aware of

use their hand to check. Another possible analogy is that of a person needing a mirror to see the back of their body. And, indeed, even to see the front of their body they require *some* instrument, namely a sense-faculty.

the cognitions will lose force. If the *manas* does not require one, why should the self?

The most likely way of blocking the infinite regress that the Naiyāyika will appeal to is to deny that the *manas* is aware of the cognitions (indeed, as mentioned above, the *manas* is unconscious). To this the Buddhist could retort: when the problem at hand is how things are brought to awareness, how consciousness of them arises, how can something that is incapable of awareness provide the decisive answer? Either the self has the power to be aware of a pain within itself or not. If it does not, then an unconscious instrument will not help. If it does, an unconscious instrument will be redundant. This is of course not a knock-down argument. The Naiyāyika could assert that the self does have the power to be aware of a pain, but it needs an unconscious instrument, just as a person in the dark has the power to see what is in front of them, but needs a light to actualize that power.¹⁸

¹⁸ The Buddhist could assert that the analogy is not parallel. When the person turns on their light, the primary change is in the external world not in the person. Their power of sight was active even when there was no light. The darkness they saw was a darkness in the external world. It is not that the power of sight was actualized by the light; it was ac-

3. Shifts of Attention

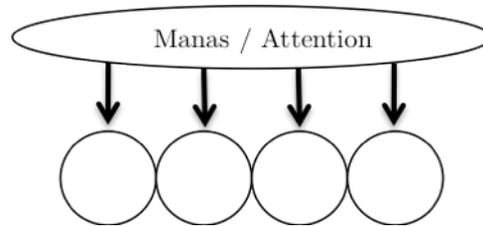
Let us now look at those aspects of mental life where one might think that there is more involved in attention than simply cognition's turning towards its object – where attention seems not to be reducible to a mere feature of awareness – and consider how the Buddhist view can account for them without the concept of a *manas* or any separate faculty of attention.

1) The moving of attention away from a present to a new object. Surely here attention opposes itself to the current act of awareness, and is thus something over and above awareness.

The difference between the Buddhist and Brahminical explanation of this is as follows. For the Brahminical thinkers, there is one thing called attention that

tualized previously too. But the Naiyāyika is asking us to believe that a self that is itself completely devoid of the power of consciousness (that is the Naiyāyika's explanation for why it itself cannot perceive its pains etc.), has a spark of consciousness arise in it as a result of its connection with an unconscious *manas*.

exists throughout the process; in the first moment it points in one direction, and then in order to bring about a shift to a new object, it points in another.



For Buddhism what we have is first one awareness with its particular object, and then the rise of a new awareness with a new object. Valuing ontological parsimony, the Buddhist sees no warrant for postulating the thing on top in the diagram. We experience just a sequence of perceptions/cognitions/etc. Since we apprehend no second layer, no unitary attention over and above this sequence, why grant reality to it? (We are dealing with an ontology that aims to stick very closely to experience. We find this same reluctance to grant reality to anything other than what can feature as an object of concept-free perception in Buddhism's denial of a self and denial of universals.¹⁹)

¹⁹ There were a few things, though, that Vasubandhu and other Buddhist ontologists granted reality to, despite being imperceptible, for example the sense-faculties.

2) If attention were inseparable from awareness, then there would be no instance of attention preceding awareness. How, then, can Buddhism explain those cases that we might term anticipatory attention, i.e. the placing of one's attention somewhere in anticipation of an object's arrival in that place?

Here too, Buddhism sees no need to accept the existence of some *manas*-like entity that travels to a certain location, let's say the eye, waits there, and then encounters an object that appears in the line of vision of the eye. Rather what we have are just two separate, but temporally contiguous, awarenesses. In the first one, one sees whatever falls in the location to which the eye is pointed, possibly just empty space (or in certain psychology experiments concerned with attention, a blank screen), and in the second, one sees whatever new object then appears in that location. So again, instead of a two-tier model, with both a sequence of awarenesses, and on top of them a separate (and a unitary) thing called attention, we have just a one-tier model. But how does Buddhism capture the sense of something here waiting and then receiving? It claims just that the first moment is characterized by alertness and expectation, and in the second moment an object is perceived at the expected location.

3) But there still seem to be aspects of these two examples that the Buddhist model has not explained. In the first example there is a sense of a decision being taken to withdraw from the present sense-object and shift to a new one. In the second example what is it that directs the attention to the eye in the first place? There is a sense of one's awareness or one's attention being *placed* there. The Buddhist model seems quite able to explain a sequence of awarenesses characterized by passivity, where a sequence of objects impinges on them, but not so suited to explain those times when the subject consciously directs their awareness in certain directions.

Before looking at how Buddhism explains these cases, let us ask whether this sense of consciousness or the subject of consciousness directing attention/awareness is perhaps an illusion. Let us here introduce a third Indian tradition, that of Sāṅkhya, which answers this question in the affirmative. For the Sāṅkhyas, though we may think we are controlling the direction of our attention, it is in fact determined wholly by unconscious habits. The self, which is characterized by consciousness, looks on, but contains no agency whatsoever: impulses leading to physical or mental action, including the directing of attention, do not issue from it. But the self, though in reality capable only of purely passive observation, superimposes on to itself, falsely ar-

rogates to itself, responsibility for these actions such as the directing of attention. Unconscious habit directs the attention in a certain way, the self becomes aware of its attention having shifted, and then says to itself ‘I did that’.

This Sāṅkhya view reminds one of Benjamin Libet’s experiments in Berkeley. Subjects were asked to perform simple gestures while their neuronal activity was measured. What he found was that a split second before a subject makes the decision to perform the gesture, neurons already transmit the order to the hand to do it. This has been taken to suggest that when our consciousness thinks that it is freely and autonomously performing a task, rather what is happening is that on becoming aware of an impulse that started at the neurobiological level, quite independently of its will, consciousness gives itself credit for initiating that impulse. In this view then, as in Sāṅkhya, consciousness retrospectively explains an impulse as having issued from itself, despite that impulse having a quite different origin.

How does the Buddhist model differ from this Sāṅkhya model, in particular with regard to the question of amount of conscious control over the direction of attention? For Buddhism certain impulses, in the form of intentions to perform a physical or a mental action such as the directing of attention, *do* is-

sue from consciousness; these intentions, furthermore, *do* have causative power over the direction of attention.

How does the Buddhist model differ from the Nyāya-Vaiśeṣika model, in particular with regard to the question of amount of conscious control over the direction of attention? In the Nyāya-Vaiśeṣika model (1) the self's control over the direction of attention is total. And (2) the answer to the question of what accounts for what is being attended to is the same in every case: the fact that the *manas* is in contact with the sense-faculty whose object is being experienced, and the fact that the self has dispatched it there.

In the Buddhist model by contrast (1) consciousness' control over the direction of attention is far from total, since consciousness' intentions are merely momentary phenomena, which, though they may determine what is attended to in the very next moment, cannot guarantee that attention will stay focused on the object in question after that. (2) Intentions, furthermore, are just one out of many different factors that can determine what is attended to. (Attention can be pulled around by the force with which an object appears, by karmically conditioned tendencies, cravings etc.)

Thus although both the Nyāya-Vaiśeṣika and the Sāṅkhya views, unlike the Buddhist, assert the existence of a self, there is a sense in which they occupy the two extremes, with Buddhism falling in middle.

Setting aside the Sāṅkhya view, let us further develop the contrast between the Buddhist and the Nyāya-Vaiśeṣika views. In the latter case we have one thing, the self, which is responsible for every shift of attention, as well as every instance of attention staying in the same place. We have a top-down model in which the self's attentional commands are carried out by the *manas*, an instrument that automatically obeys these commands. The Buddhist model, by contrast, is characterized not by unity and vertical hierarchy, but by plurality and horizontality: by plurality in the sense that shifts in attention are brought about by a plurality of heterogeneous factors; by horizontality in the sense that shifts in attention are not brought about by commands from above, but by the previous moment in the stream of consciousness (or by the forceful arrival of a new sense-object within the range of the individual).

One could add a third contrast to these two pairs of unity / plurality, top-down verticality / horizontality, namely a contrast between a 'personal' and an 'impersonal' model. Shifts of attention are explained by the Nyāya-Vaiśeṣikas on the analogy of a master ordering a servant; attentional causa-

tion issues from a person or a person-like self. Buddhism, by contrast, constitutively denies the existence of any self or person (*ātman*, *puḍgala*, *puruṣa*) either in the mind-stream or as the substrate of the mind-stream. Shifts of attention within this mind-stream are explained as the result of an impersonal causation that operates between mental events. These mental events may include conscious intentions, but these are not the conscious intentions of a self or person; they are just events within a mind-stream.

3.1 Against the self-*manas* model

I now point to three fairly obvious problems with the concept of the *manas* (and hence three advantages of the Buddhist model), problems which I have not seen either mentioned or addressed in the texts, though it is quite possible that there are such discussions of which I am unaware.

1) Phenomenological investigation of the changing course of our attention surely reveals that it is not always, in fact not usually, directed by conscious decisions on the part of the subject. Here I am talking not just of those cases where a new sense object arrives with force within the range of the sense-faculties, a loud noise for example, though such cases are indeed obvious ex-

amples of attention seeming to operate, like a reflex, without the intervention of the knowing subject. But even if we were to exclude those cases (along with the similar case of the rise of intense bodily sensations such as pains), and focus on periods of time in which the mind is occupied with thoughts, ideas, daydreams, worries, memories, surely it is a small minority of shifts of attention that are preceded by, and seemingly brought about by, a conscious decision and command on the part of the subject of consciousness.

2) If every shift of attention, as well as every instance of attention staying in the same place, were all the result of the will and command of the self, surely there would never be any discrepancy between what is being concentrated on and what the subject wants to be concentrating on. If attention were under the sole control of the self, it would never move away from an object until ordered to do so by the self. How then can we account for, for example, the disappointment felt by a subject at not having been able to keep their attention on something, for example while meditating, writing a paper, learning Sanskrit paradigms. The explanation of this is difficult if there is only one

subject (with this subject being the sole director of attention), but easy if there is, as in Buddhism, a plurality.²⁰

3) There is a problematic duality in the concept of the *manas*, as both that which responds to the self's commands and that which enables the self to have the information on the basis of which to issue its commands. The self needs it to become aware of the objects of the senses. Yet surely the self already needs to have that awareness in order to make informed decisions about where to dispatch it.

When an object erupts into the range of the subject with force, a loud noise to return to our earlier example, surely we don't want to say that before the self becomes aware of the noise it first has to direct the *manas* to the ear. How would it know to direct the *manas* there unless it first knew that there was a noise to be listened to? But if it does somehow detect the noise before dispatching the *manas* there, why dispatch the *manas* there at all?

²⁰ See below for more on how Buddhism would explain the situation.

4. Competition for attention

We have been looking at the issue of ‘shifts of attention’, i.e. at what precisely happens when one’s attention moves away from one object to a different object. Now I would like to ‘shift attention’ to a related but slightly different issue, that of ‘competition for attention’. When any number of potential things are available to be attended to, what is it that determines which one ‘wins’, i.e. succeeds in being attended to?

The Nyāya-Vaiśeṣika answer is a relatively straightforward one: it is the self that arbitrates, and comes down on the side of one among the various candidates. It then puts its decision into action by dispatching the *manas* to the location of the sense-faculty whose object it has chosen to attend to.

For Buddhism these competitions for attention can be decided without any top-down arbitration. Let us separate out two different kinds of case.

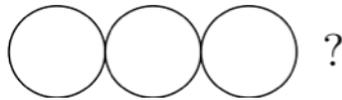
A) Perception

There are all sorts of things in one’s visual field at any one moment; there are also potential objects of other senses – noises, smells etc. What is it that determines what will be attended to? Here it is quite easy to come up with some principles that obviate the need to appeal to top-down arbitration. A

sense-object that poses a threat to the individual will grab its attention more than a simultaneous one that does not. An object of desire will attract attention to itself more than one for which the subject has no strong feelings.

B) Cognitions other than Perception

On the Buddhist model, the stream of consciousness unfolds moment by moment. Whatever arises – a memory, a daydream, a thought, etc. – will be what is attended to. Thus the question of what determines what attention will shift to is equivalent to the question of what determines what kind of moment of consciousness will arise, i.e. what the content of the next moment of consciousness will be.



To give an indication of Buddhist thinking here, we can observe a passage from the *Abhidharmakośabhāṣya*.²¹ Vasubandhu asks us to imagine that the idea of a particular woman arises in someone's mind-stream; what will be at-

²¹ Pages 1220–1222. The passage has been (differently) translated by Sanderson (1995: 46–47), Duerlinger (2003: 101–102) and Kapstein (2001: 369–370) and summarized by Gold (2011: 13–14).

tended to next? It will depend on what latent impressions are contained in that mind-stream, as these will determine what the primary associations are to that woman. If we are talking of a monk, perhaps repulsion to her body will arise. Or if we are talking of a layperson who is a friend of the woman's husband or son, perhaps an image of the husband or son will emerge.

Vasubandhu indicates some principles as to which out of a number of different associations are likely to come to the surface. Out of the many associations to the particular woman, those which are common, intense or recent are most likely to be activated, since those latent impressions will be more powerful than the latent impressions of less common, less intense or less recent associations.

But even if there is a common, intense or recent latent impression available and on the point of reaching fruition, it will be interrupted by the advent of a powerful sense-object, either external (e.g. the arrival of one's son) or bodily

(e.g. being hit over the head); in that case the emergence of an association to that woman will be inhibited.²²

* * *

So when there is a competition between various potentially available objects of attention, Buddhism feels no need to appeal to any top-down arbitration. There is neither a *manas* in contact with the chosen object of attention, nor a self making a choice about where to send the *manas*. There is simply a competition in which the most forceful candidate emerges as the winner.

In order to make this absence of top-down control plausible, I give here two analogies. In a running-race the winner is simply the one who crosses the line first; it is not that competitors have to stop before the finishing line and be ushered

²² After having given this indication of some principles that govern what contents of consciousness arise, i.e. what is attended to, Vasubandhu cites a verse to the effect that this is a mere indication of the workings of the mind. A complete knowledge of the causes that determine the unfolding of mind-streams is the domain only of omniscient ones. Without omniscience we cannot know even all of the causes of a single eye in a peacock's tail, let alone the much more subtle matter of all of the causes of the particular unfolding of a stream of consciousness.

across at the discretion of the referee. Similarly it is just built into our psychic system that whichever latent impression advances towards the level of consciousness most forcefully will make it through and block the way for others. It is unnecessary to postulate some agent at the threshold – whether the person, or some homunculus-like entity at a sub-personal level – that is needed to give its approval before entry to consciousness can be achieved.

Or one could compare the process to a conversation, where each of the participants in the conversation stands for a latent trace seeking actualization (the actualization of a trace will result in a particular memory, emotion, judgement, inference, dream-image etc.). Talking stands for the actualization of a trace. There is usually only one person talking at once. And what they say will be most compelling if it relates in some way to what has just been said. (I.e. traces whose content closely associates to the content of the present moment of consciousness will be imbued with more power to emerge than those whose content does not.) Usually there will be more than one person wanting to talk at once. But a person will not say what they want to say at exactly the same time as someone else's talking, for then they will not be heard. The stronger willed people will persist at trying to jump in until they are heard. The weaker willed ones will give up if too much noise and energy is coming from other people.

The point is that there is no arbiter, standing over all these people and saying, ‘okay, now you’; ‘okay stop, now time for someone else’. The agency comes from the participants alone. What unfolds is simply the result of the interplay between these participants and their energies; it is not planned by an overseeing authority, or monitored by a superintendent. A plurality of potential contents of consciousness can jostle with each other and yield a winner without a self playing the role of arbitrator.

Someone may object: But surely there are occasions in which the subject of consciousness does get involved, considers different options, comes to a decision about what to attend to, and then attends to it.

Buddhism allows for, and can explain such cases. What happens there is that the content of one, or more, moment(s) of consciousness is the weighing of different options, the content of the next is an intention to attend to one out of the options, and the content of the next is a focus on the chosen option. But this is not top-down control, it is a horizontal process of unfolding. Let us say that the options are to think about the novel one was reading earlier, to make a to-do list, or to learn a grammatical paradigm. As stated earlier, if top-down control from the self were involved, then once the decision has been taken that the learning of the grammatical paradigm is the most urgent and desired task to attend to, slips of

attention as the mind wanders are difficult to account for. If, by contrast, the competition is decided upon by a momentary intention, it is quite understandable why this will sometimes be unsuccessful in placing the attention on the grammatical paradigm for more than a few moments: understandable, because there is no such thing as a self keeping a *manas* focused on the chosen subject-matter until it is satisfied.

Indeed it is the heterogeneity that the Buddhist model can accommodate that is one of the things in its favour: it can accommodate both cases in which there is no involvement of the subject of consciousness and cases in which there is, whereas the Nyāya-Vaiśeṣika model implies that the self is never not involved.

5. Final Remarks

Before finishing, I point to three things, sometimes asserted of attention, which may at first sight appear to be contradicted by both the Naiyāyika and Buddhist models.

(1) We can pay attention to more than one thing at once.

(2) We can be simultaneously attentively aware of one thing and non-attentively aware of other things (for example data being received by other sense faculties).

(3) Attention admits of degrees; we can pay a lot of attention or a little bit of attention.

It might look as though both the Naiyāyikas and the Buddhists will have to deny all of these three. For they both assume models in which awareness has only one object. Since the *manas* is the size of a mere atom, it cannot be in contact with more than one sense-faculty at any one moment. It is precisely this fact that is emphasized by Naiyāyikas when they put forward the *manas* as a bottleneck that explains why we are not simultaneously flooded with data from more than one faculty. If the *manas* is only ever in contact with one faculty at a time, and there is no awareness without the involvement of the *manas*, then surely 1 and 2 are impossible; in any one moment full attention is paid to one object, and there is no awareness whatsoever of any other. Neither can attention admit of degrees, because the *manas* is either in contact with a sense-faculty or not; it cannot be partly in contact with it, strongly in contact with it, or weakly in contact with it.

On the Buddhist model too, each moment of consciousness has only one object; it certainly cannot be simultaneously directed at data from two different senses (1).

If awareness of an object has arisen, cognition must be paying attention to it, i.e. turned towards it; there can be no non-attentive awareness of an object (2). And attention, being a *dharma*, is either completely present or completely absent; it cannot come in different strengths (3).

We need to distinguish between what seems, phenomenologically, to be the case, and what is actually the case. Then we can see that denials of 1, 2 and 3 can take two different forms. A denial of 1 targeted at the phenomenological level will claim that if we focus closely on our experience, we will find that we only ever seem to be attending to one thing at once. A denial of 1 targeted at the level of reality will claim that though we may appear to ourselves as paying attention to more than one thing simultaneously, this is not what is actually happening.

Both Naiyāyikas and Buddhists deny 1 on the level of reality, but do not deny it on the level of phenomenology. How then do they explain that the situation is phenomenologically presented to us in a way that misrepresents reality? The Naiyāyikas appeal to the speed of the *manas*. Though it may appear to me that I am simultaneously delighting in the taste of food and the sound of music, the *manas* is in fact rapidly travelling back and forth between my mouth and my ears. It travels so fast, that the appearance of simultaneity results. The Buddhists appeal to the brevity of each moment of consciousness. Every second is

composed of hundreds of discrete awarenences, some having as their object the food and some the music. Let us say that thirty awarenences in a row are focussed on the food, followed by thirty on the music, followed by thirty on the food. The period in the middle during which the food is not being focussed on amounts to such a short period of time, that it appears to us as though our awareness never left the food. Thus the appearance of simultaneity results.

So much for the Naiyāyika and Buddhist attitude to 1. I have not encountered discussions of 2 or 3 in primary sources. But their responses could easily resemble their responses to 1. They could affirm 2 and 3 phenomenologically, but deny them on the level of reality. What would they say is really going on when we seem to be simultaneously attentively aware of one thing and non-attentively aware of other things? The Naiyāyikas could assert that when, for example, we are paying attention to a painting, but dimly (i.e. non-attentively) aware of the background noise in the art gallery, the *manas* is spending the bulk of the time at the eye and a small proportion of the time at the ear. The Buddhists could assert that the vast majority of moments of consciousness are aware of the painting, but a small proportion are aware of the noise.

How would the two traditions explain seeming variation in the intensity of attention? A period of extremely intense attention could be explained by the Naiyāyi-

kas as resulting from the uninterrupted presence of the *manas* at the location of one sense-faculty, and less intense attention as resulting from presence interrupted by absences. Similarly, intense attention for the Buddhists would result from a long sequence of unidirectional awarenesses, and less intense attention from interruptions in such a sequence by awarenesses focussed on data from different senses.

Thus to argue against the Naiyāyika and the Buddhist views on the grounds that they implausibly deny 1, 2 and 3 neglects that they are quite capable of explaining the phenomenology that leads us to assert 1, 2 and 3.

References

Primary Sources

Abhidharmakośabhāṣya. Page numbers refer to the Dwārikā Dās Śāstrī edition; readings of the Lee edition and Pradhan edition are reported when they differ:

Dwārikā Dās Śāstrī edition: *Abhidharmakośa and Bhāṣya of Ācārya Vasubandhu with Sphuṭārthā Commentary of Ācārya Yaśomitra*. Ed. Swāmi Dwārikā Dās Śāstrī. Bauddha Bhāratī Series 5, 6, 7, 9. Vārāṇasī, 1981.

Lee edition: *Abhidharmakośabhāṣya of Vasubandhu; Chapter IX: Ātmavādapratīṣedha*. Ed. Jong Cheol Lee. Bibliotheca Indologica et Buddhologica 11. Tokyo: The Sankibo Press, 2005.

Pradhan edition: *Abhidharmakośabhāṣya of Vasubandhu*. Ed. P. Pradhan, Tibetan Sanskrit Works Series 8. Jayaswal Research Institute, Patna, 1967 (second, revised edition by Aruna Haldar, without improvement of the text: 1975).

Nyāyasūtra: in *Nyāyabhāṣya*.

Nyāyabhāṣya. Gautamīyanyāyadarśana with Bhāṣya of Vātsyāyana. Ed. Anantalal Thakur. Nyāyacaturgranthikā 1. New Delhi, 1997.

Nyāyakandalī: in *The Padārthadharmaśāstra of Praśastapāda with the Nyāyakandalī of Śrīdhara*, ed. V. P. Dvivedin. Vizianagaram Sanskrit Series 6, 1895; Reprinted 1984.

Nyāyamañjarī. Nyāyamañjarī of Jayantabhaṭṭa, with Ṭippaṇi—Nyāyasaurabha by the Editor. Ed. K. S. Varadacharya 2 Volumes. Oriental Research Institute Series 116, 139. Mysore, 1969 and 1983.

Praśastapādabhāṣya. Word Index to the Praśastapādabhāṣya: a Complete Word Index to the Printed Editions of the Praśastapādabhāṣya. Ed. Johannes Bronkhorst and Yves Ramseier. Delhi, 1994.

Sphuṭārthā. Sphuṭārthā Abhidharmakośavyākhyā, The Work of Yaśomitra, Tokyo: The Sankibo Press, 1932–36; reprinted 1971, 1989.

Secondary Sources

Broadbent, D. E. (1958). *Perception and Communication*. New York: Pergamon Press.

Chakrabarti, A. (2005). ‘Manas: In Defence of the Inner Self’, in K. Ramakrishna Rao & Sonali Bhatt Marwaha (eds.) *Towards a Spiritual Psychology: Essays in Indian Psychology* (Samvad India Foundation/Aditya Prakashan).

Chakrabarti, K. K. (1999). *Classical Indian Philosophy of Mind; The Nyāya Dualist Tradition*. New York: SUNY. (Indian Edition: 2001. Delhi: Motilal Banarsidass.)

Dreyfus, G. (2011). ‘Is Mindfulness Present-Centered and Nonjudgmental? A Discussion of the Cognitive Dimensions of Mindfulness.’ *Contemporary Buddhism* 12(1): 41–54. DOI:10.1080/14639947.2011.564815

Duerlinger, J. (2003). *Indian Buddhist theories of persons. Vasubandhu’s “Refutation of the theory of a self”*. London: RoutledgeCurzon.

Gold, J. (2011). ‘Vasubandhu’, *Stanford Encyclopedia of Philosophy*. URL:
<http://plato.stanford.edu/archives/sum2011/entries/vasubandhu/>

Kapstein, M. (2001). *Reason’s traces; identity and interpretation in Indian and Tibetan Buddhist thought*. Studies in Indian and Tibetan Buddhism. Boston: Wisdom.

Mole, C. (2013). ‘Attention’, *Stanford Encyclopedia of Philosophy*. URL:
<http://plato.stanford.edu/entries/attention/> (Originally written in 2009, substantially revised in 2013.)

Posner, M. I. and Boies, S. W. (1971). ‘Components of attention.’ *Psychological Review* 78: 391–408.

Posner, M. I. and Warren, R. E. (1972). ‘Traces, concepts, and conscious constructions’, in A. W. Melton and E. Martin (eds.) *Coding Processes in Human Memory*. Chichester: Winston and Wiley.

Sanderson, A. (1995). ‘Passages in the 5th and 9th Chapters of Vasubandhu’s *Abhidharmakośabhāṣya*’. Edited, translated and annotated by Alexis Sanderson. Unpublished Teaching Material for M.Phil in Classical Indian Religion, Oxford 1995.

Watzl, S. (2011). 'The Philosophical Significance of Attention.' *Philosophy Compass* 6/10: 722–733.

Watzl, S. (2011a). 'The Nature of Attention.' *Philosophy Compass* 6/11: 842–853.