Consciousness and Causality: Dharmakīrti Against Physicalism[1]

by
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It is well known that Buddhist conceptions of personal identity entail a version of the so-called 'bundle theory of self:' the human individual comprises five types of aggregates that serve as the basis for what we ordinarily designate as persons. What is less known (or least explored) is the extent to which this conception of personal identity informs the Buddhist epistemological account of cognition. Specifically, the assumption is that with Dignāga, Dharmakīrti and their successors, the bundle theory of personal identity is either glossed over in favor of more robust accounts of consciousness and cognition such as that provided by Yogācāra or challenged for its strict reductionism. I will argue that – rather than glossing over or challenging it – the Buddhist epistemologists uncover a structural asymmetry within the bundle theory between the mental and physical domains, and offer an alternative (if problematic) solution to account for the ineliminable aspects of phenomenal consciousness.

The following analysis focuses on Dharmakīrti's arguments against Cārvāka physicalism in the so-called proof of rebirth in the *Pramāṇasiddhi* chapter of his magnum opus, the *Pramāṇavārttika*, with a focus on classical Indian philosophical attempts to address the mind-body problem. The key issue concerns the relation between cognition and the body, and the role this relation plays in causal-explanatory accounts of consciousness and cognition. Here a number of questions arise. Does the central principle of Buddhist Abhidharma reductionism apply to consciousness? Is there a causal criterion for the presence of consciousness? If there is, can this causal criterion account for the specific features of consciousness, e.g., its intentionality, phenomenality, and reflexive character (*svasaṃvedana*)? Can a causal account of phenomena be reconciled with the seeming irreducibility of consciousness? The Buddhist answer to the challenge of Cārvāka physicalism displays many of the common features of classical Indian metaphysical debates on personal identity. My aim is not to trace its exegetical contour and restate its historical significance, but to propose a philosophical reconstruction that builds on two important features presented by the Buddhist account: an expanded conception of causality and a robust account of phenomenal content that, taken together, can help us come to terms with the legacy of mind-body dualism.

1. Buddhist reductionism

In replacing the subject with a play of momentary cognitive events, the Buddhist account of personal identity emphasizes what we may call – using the language of contemporary

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philosophy of mind – the dynamic, embodied, and embedded functioning of the five aggregates.[2] However, in the schematic analysis of the five aggregates, only "body" or "form" (*rūpa*) is a physical aggregate *stricto sensu*. Sensations, apperception, and volitions *can* acquire an objectual aspect, but are not empirical objects proper. Nor are they things in the generic sense of the Sanskrit term *vastu*, that is, abstract entities with well-defined properties and functional characteristics.[3] Thus, a sensation of pain is not reducible to the physical substrate, say a finger, in which it is instantiated (nor presumably to a mere physiological response). Rather, as object-oriented cognitive aspects (*viṣayākāra*), sensations and volitions are included in the broader Abhidharma category of mental factors (*caitasika*). Feelings may define the quality of the impressions that result from contact with an object, with the implication that they perhaps stand in a causal relation with these objects. But as internal mental states, they are also conditioned by habitual tendencies (*vāsanā*), which, in turn, they condition: one's physical condition after strenuous exertion may feel pleasant or unpleasant depending on one's level of fitness and degree of exercise frequency. Likewise, apperception (*saṃjñā*), the capacity to make intelligible or cause to be understood, although dependent on a multiplicity of psychological factors, captures the datum of experience only as fused into a single percept. Volitions too fit the same profile, with one important difference: rather than attending to the object at hand or providing a sort of transcendental unity of apperception, they bring forth future states of existence. As dispositions to act in certain ways, they cleave the mental domain into two classes of conditioned phenomena: those that are internal to consciousness (*saṃprayukta-saṃskāra*), such as, for instance, obsessive dispositions (*paryavasthāna*) like greed and delusion, and those that are dissociated from it (*viprayukta-saṃskāra*), usually taken to refer to latent dispositions (*anuśaya*) typically comprising various biological and physical traits.[4]

This aggregate model of personal identity is not incompatible with the notion that there are phenomenal primitives (or, in epistemological terms, cognitive universals) – irreducible features of experience. The experience of vividness (*spaṣṭa*), for instance, marks perception apart from mental imagery, thus making it possible to identify visual qualia as irreducibly perceptual.[5] Likewise, the experience of being dragged across the floor as opposed to

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2 This conception of embodied cognition finds its roots in Edmund Husserl's notion of the life-world (*Lebenswelt*). The paradigm of embodied (and enactive) cognition is explored at length in Dreyfus 1979, Varela/Thompson/Rosch 1991, Hutchins 1995, Clark 1997, Hurley 1998, Noë 2004, Gallagher 2005, and Thompson 2007.

3 Insofar as the aggregates of sensation, volition, etc. fall under the general Abhidharma category of *dharma*, they can be treated, at least under some scholastic interpretations (such as, for instance, of the Sthaviravāda) as substances (*dravya*). As Ronkin (2005: 15) has convincingly argued – taking her lead from Gombrich 1996 and Hamilton 1996 – the reductive analysis of human beings in terms of their constitutive aggregates is meant to capture not what human beings are *made of*, but rather what human experience is *constituted as*: specifically, as series of experiential events.

4 Detailed accounts of this twofold analysis of phenomena are found in Vasumitra's *Pañcavastukavibhāṣāśāstra* [*Wu shih p'i-p'o-sha Zun*], T 28 (1555), p. 989b2, Vasubandhu's *Abhidharmakośabhāṣya*, II, 23–34, and Yaśomitra's *Sphuṭārthā Abhidharmakośavyākhyā*. Cox (1995, ch. 4) offers the most detailed account to date of the *citta-viprayuktasaṃskāra*. For a broader discussion of the process by which mental factors that arise in conjunction with a given intentional object come to be associated with the qualities of the respective object, see Waldron 2003: 57ff.

5 One may extend visual tropes to the domain of imagery, rational deliberation, and introspective awareness, but these are metaphorical rather than literal uses. Dignāga's conception of *mānasa-pratyakṣa*

moving freely serves to contrast action from agency, and support the view that even unreflective and habitual practices, if consciously undertaken, are constitutively agentic. As the classical example of watching a dance performance while entertaining various thoughts demonstrates, one may be solicited to respond in ways that are wholly unreflective. Being consciously present to the situation at hand, however, means that these solicitations elicit not merely a reflex but rather a subjective response. A brilliant dance performance does not simply induce applauding; rather, the performance solicits appreciation, which serves as an appropriate and deliberate response in such circumstances.[6] Applause is not merely a participant reactive attitude, but a learned subjective response to excellence (except, perhaps, in instances where it reflects norms of audience participation).

It has been argued, most forcefully by Mark Siderits (2003, 2011), that Abhidharma reductionism entails physicalism, the view that everything is or supervenes on the physical (where "physical" stands for the world as described by our best physics). Although Dharmakīrti shares the empirical stance of Abhidharma, the naturalism that informs his epistemological project is patently anti-physicalist. According to the Sautrāntika Abhidharma account of materiality that Dharmakīrti favors, entities reduce to their phenomenal primitives: the particular (*svalakṣaṇa*) is a token of a type, not blue in general, but this unique intensity of cerulean. Furthermore, the formal properties of material objects are analyzed either in terms of how they are impacted by contact or as factors that oppose resistance. These properties, however, do not extend to the atoms themselves, which according to the Abhidharma form the building blocks of materiality. As monadic units the atoms are seen as devoid of any formal properties (*rūpaṇa*). It is only as atomic compounds (*saṃghātastha*, *saṃcita*) that atoms are subject to the same properties of resistance and destruction as composite material entities.[7]

The reductionist model of Abhidharma, like all philosophical attempts to carve reality at its joints, works against the common conception that empirical awareness provides access to an external, stable, and self-sustaining world: a world as is (captured by the notion of *svabhāva*) rather than as it appears to an observer. But the human mind is not (like) a clear mirror reflecting back the external world, as naïve realism would have it; rather, its image is as projected by a mind not entirely free of its own propensities and confabulations. What Abhidharma offers, then, is a metaphysics of experience, where the irreducible elements of existence and/or experience (*dharma*) are not fixed substances but activities, properties, or dynamic patterns of connectedness that are constitutive of the world *as perceived* (*lokasaṃjñā*). As the Nikāyas clearly state (e.g., SN IV, 96), our sensory organs (vision, hearing, etc.) operate in a world whose contours are disclosed in a dynamic and mutually constituted setting of objects and meaning. In practical terms, that means

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(lit. "mental perception"), thus, captures the distinct introspective awareness or attentiveness that accompanies the perceptual occasion.

6 This example is meant to support an argument for minimal agency as an ineliminable feature of cognitive awareness. The finer point is that 'unreflective' does not mean 'unconscious' or purely 'behavioral.' Skillful means, much like skillful coping, are treated here as modes of unreflective, but minimally conscious and implicitly subjective, agency.

7 See, for example, AK I 13 and AKBh *ad cit*. (Pradhan 1975: 9): *paramāṇurūpaṃ tarhi rūpaṃ na prāpnoty arūpaṇāt / na vai paramāṇurūpam ekaṃ pṛthag bhūtam asti / saṃghātasthaṃ tu tad rūpyata eva*.

experience marks the boundary of what there is: the nexus of causes and conditions that set the boundaries of lived experience are determined by the operations of our cognitive architecture. Color, for instance, only exists for an organism that is sensitive to light.

How does this dynamic picture of what there is take on the characteristics of self and other? And how do these emergent phenomena in turn create the conditions for grasping and attachment? For the Buddhist, the answer does not lie primarily in the patterns of conditioning that explain the aggregation of phenomena, but in certain defining characteristics that belong to the structure of experience itself. Not only are the senses conceived as receptacles of experience (*adhiṣṭhāna*), they also serve as ground or support, joining the external domain of sensory activity (*bāhirāyatana*) with the internal domain of perception (*ādhyātmikāyatana*). We can make sense of Dignāga's stance (at PS, I, 1 and PSV *ad cit*.) that perception gives us the particular as such, without any conceptual mediation, only insofar as the domain of sensory activity is reducible to its most basic physiological function.

Now, does the central principle of Abhidharma reductionism apply to consciousness? The principle states that things reduce to their component parts, which are ultimately real only if they are further irreducible. If something can be reduced either by breaking it down to more basic constituents or through conceptual analysis, then it is not ultimately real. Pots are not ultimately real, nor are persons real in this ultimate sense.[8] Consciousness too is but a stream of momentary conscious events of different types (visual, auditory, introspective, etc.). But reductionism about consciousness is problematic. Why? Because it cannot explain its most basic features: its intentional, phenomenal, and self-reflexive character (*svasaṃvedana*). The recognition that conscious awareness has these ineliminable structural features creates a series of doctrinal problems for Buddhism in its post-Abhidharma stage of development. For Mādhyamika thinkers like Nāgārjuna, notions such as 'intrinsic' and 'ineliminable' run counter to the cardinal Buddhist view that all phenomena are momentary, impermanent, and interdependently arisen. Conceived largely as a response to Madhyamaka dialectics, Yogācāra sets out to account for the nature of consciousness and cognition itself, bracketing metaphysical assumptions about the kind of things that there are.

The relation between mind and world continues to be a subject of ongoing debate between Buddhists and their opponents, and among rival Buddhist schools up to the present day. The debates in Buddhist metaphysics of mind are not primarily exegetical (the presence of a vast commentarial literature notwithstanding); rather, they often reflect deep philosophical differences. When these differences are grounded in merely exegetical claims, the text-critical method offers the best way to find solutions. However, if these differences are also grounded in empirical and/or experiential claims, the analytic tools of contemporary philosophy and advances in our empirical investigation of cognition ought

[8] One important exception here are the Pudgalavādins, for whom persons, who are conceived in dependence upon the aggregates (although neither identical nor different from them), are nonetheless real. In Vasubandhu's summary of this position, for the Pudgalavādin "if a consciousness is aware of a person in dependence upon a visible form known to exist by means of the eye, it is said that a person in known to exist by means of the eye" (AKBh IX in Pradhan 1975: 463). Translation *per* Duerlinger 2003: 77. Persons are ultimately real (for the Pudgalavādin) because, as Amber Carpenter has convincingly argued, "perception-*dharmas* and consciousness-*dharmas* … are related to one another in a … person-constituting way" (2015: 27).

to in principle help move this debate forward in more profitable directions. The mind-body problem may be as intractable now as it was for Dharmakīrti in the seventh century, but our conception of what counts as legitimate, reliable evidence, is less arbitrary, at least with regard to the sort of things that can be said to exist both in a concrete and abstract sense. Few philosophers today who are sympathetic to and influenced by Buddhist ideas find traditional Buddhist beliefs about rebirth and cosmic bodhisattvas to be live options.

2. Physicalism and its discontents

The *Pramāṇasiddhi* section of the *Pramāṇavārttika* contains Dharmakīrti's famous proof of rebirth, better known for its ingenious attempt to answer, using mainly *a priori* arguments, the Cārvāka's challenge that consciousness originates, or otherwise has its causal basis, in the body. The key verses (PV II vv. 34–72) and the extensive commentarial literature thereon (from Devendrabuddhi, Prajñākaragupta, Ravigupta, and Manorathanandin, to the Tibetan translations by Sa skya paṇḍita and Śākyaśrībhadra) have been explored at length in Eli Franco's superb monograph, *Dharmakīrti on Compassion and Rebirth* (1997). Its key arguments have likewise been discussed in a series of recent, mainly philosophical, engagements with this topic.[9] The proof is occasioned by the claim, first advanced by Dignāga in the *Pramāṇasamuccaya*, that the Buddha does not merely avail himself of the right sources of knowledge (*pramāṇa*), but rather he in some fashion embodies them. Dharmakīrti, as is well known, takes this claim one step further when he argues at PV II vv. 34–131 that the proof of the Buddha being a *pramāṇabhūta* lies in compassion cultivated by practice over many lifetimes, and in the veracity of his teachings (*upadeśa*).[10]

Of course, the Buddhist epistemologist's appeal to the Buddha as an enlightened knower to justify the claim that perception and inference are trustworthy sources of knowledge – because the Buddha declares them to be so – is unmistakably circular. Ernst Steinkellner clearly explains this circularity:

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9 See Vetter 1964, Hayes 1993, Taber 2003, and Arnold 2008.

10 There are two basic ways to make the case for the Buddha being a *pramāṇabhūta*: (i) demonstrate the possibility of infinite compassion, and thus of previous lifetimes dedicated to perfecting such a goal, and (ii) argue for the veracity and viability of the Four Noble Truths as proof that only someone motivated by such compassionate aims could have gained this sort of knowledge. The second demonstration has Dharmakīrti employ the so-called "no alternative" (*agatyā*) strategy: "Given this [teaching of the Four Noble Truths], which leads to achieving human ends, which is reliable and worth practicing, [we] accept that [this teaching] must be equally so with regard to the other domain [e.g., of scriptural or imperceptible truths]. [Such teaching could] **not** [have been offered] **with the intent of deceiving** [others], because it is not an obstacle [but rather an aid to knowledge]; **and also because there is no reason for the speaker to engage in aimless deception**. Both instances, thus, demonstrate the validity of reasoning on the basis of scriptural sources **on account of there being no** [**other**] **way**" (PV I v. 217 and PVSV *ad cit*.: *tasyāsya puruṣārthopayogino 'bhiyogārhasyāvisaṃvādād viṣayāntare 'pi tathātvopagamaḥ*, *na vipralambhāya*, *anuparodhāt*; *niṣprayojanavitathābhidhānavaiphalyāc ca vaktuḥ*. *tad etad agatyobhayathāpy anumānatvam āgamasyopavarṇitam*). Tillemans (1993: 16ff.) thinks this causal relationship between compassionate undertaking and the effectiveness of embodied epistemic warrants only works for things that are empirically tractable (such as the Four Noble Truths). See also Kataoka 2005: 256–59 for an illuminating discussion of Dharmakīrti's second argument, and the problematic issue of proving matters that fall outside the domain of empirical ascertainment.

> (1) Our ordinary valid cognitions (*pramāṇa*) establish the authority of the Buddha's teaching (*buddha-vacana*); (2) the validity of our cognitions (*prāmāṇya*) is understood as their reliability (*avisaṃvāditva*); (3) reliability depends on successful activity (*puruṣārtha-siddhi*); (4) all human goals are determined by the "ultimate goal" (*nirvāṇa*); the "ultimate goal" is indicated in the Buddha's teaching (*buddha-vacana*) (Steinkellner 2003: 328).

So: perception and inference are taken to be instrumentally capable of demonstrating that the Buddha is a trustworthy teacher. Because of his trustworthiness, his teachings are valid and provide further proof that only perception and inference qualify as sources of knowledge (again, to come full circle, because the Buddha has established that to be the case).[11] Why claim that valid cognition establishes the authority of the Buddha's teachings in the first place? Why not simply be content with establishing knowledge on the best possible foundation, whether or not the Buddha's teachings are in agreement with it? If Buddhist epistemology can lay claim to methodological universalism on account of its reliance on perception and reason alone, reverence for the Buddha as a perfect embodiment of epistemic excellence can seem redundant (except perhaps on political or religious grounds).[12]

Does appeal to the authority of the Buddha as a true embodiment of the sources of knowledge, then, undermine the Buddhist epistemological stance? Not necessarily. Indeed, as Franco notes, "Dharmakīrti argues here … that the Buddha used perception and inference, not that they are valid because of him" (Franco 1999: 65). Precisely what it means to 'embody' the sources of reliable cognition remains an open question, regardless of whether Dharmakīrti's argument is found to be circular or not. It is not enough to say that the Buddha is a true embodiment of reliable cognition: one must also show in what ways. Dharmakīrti's own answer to this question invokes three distinct elements: the Buddha embodies the sources of knowledge by means of (i) his compassion, (ii) his knowledge, and (iii) the actions that bear testimony to this compassion and knowledge. But neither listing the Buddha's attributes nor the fact that he reasons and acts on the basis of compassion and knowledge justify the veracity of *our* cognitions (and the sources thereof).

Whatever Dharmakīrti's motives might have been in seeking to ground epistemic norms in a proof of rebirth, the arguments against the Cārvāka claim that consciousness begins and ends with the body offer interesting new ways to conceptualize the mind-body problem. I will not dwell on the preamble to the proof, which takes compassion to act as a cause in an effort to achieve the kind of knowledge Buddhas require for accomplishing their mission. As John Taber (2003) has convincingly demonstrated, there is nothing particularly original in articulating a conception of epistemic authority grounded on reliable testimony (as provided by an *āpta*, a trustworthy person or, as in the case of Kumārila's stance, of the Vedas). One gets to limit the range of reliable sources of knowledge to perception and

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11 Various formulations of this argument, first proposed by Nagatomi (1959) and Vetter (1964), are also found in Franco 1997, 1999, and Dunne 2004.

12 The rhetorical implications of this sort of appeal to the Buddha's embodiment of epistemic excellence are well known. They concern the various models and proofs of omniscience, notwithstanding intramural debates about what exactly constitutes the content of such omniscient (*hence* epistemically warranted) states: the nature of things, their reality, or the knowledge of all things whatsoever. See McClintock 2010: chapters 4 & 5 for a detailed study of these proofs and their epistemic and rhetorical implications.

inference (accepted by most Indian schools of thought) and at the same time hold on to tradition by granting the foundational figure (or text) privileged epistemic status.

Instead, I want to focus on the metaphysical considerations that ground the causal account Dharmakīrti puts forward, and the specific conception of consciousness that thus emerges. As noted above, the Buddhist holds that consciousness is but a stream of conscious episodes of different types (visual, auditory, etc.). If conscious awareness is taken to be made out of these discrete units, a dilemma arises: what accounts for the sense of continuity of awareness and, more importantly, what could serve as the basis for the arising of each instance of cognitive awareness from one moment to the next? The bundle theory stipulates that every phenomenon is part of a complex causal web. Indeed, the Sanskrit notion of *skandha* (lit., "heap") captures rather well the aggregated nature of phenomena – something fashioned by the collective combination of multiple causes and conditions (as Vasubandhu glosses it in AKBh *ad* I, 7). The constitutive factors themselves exist only as part of a causal continuum of interdependently arising phenomena. Of course, not all the constitutive factors that ground causation contribute in equal measure: some are basic or necessary and some are merely contingent. The Cārvāka claims that the body alone is the source of cognition. But on the aggregate model of personal identity, the body is just one among the five constitutive factors of agency. The principle that establishes effects as markedly different from their cause or as not pre-exiting in the cause (*asatkāryavāda*), which Sāṃkhya philosophers likewise confront, runs counter to empirical evidence. We observe that like causes like: cows give birth to calves, and fermented milk yields yoghurt. Atypical cases, such as the caterpillar's metamorphosis into a butterfly, are just the exceptions that prove the rule. Central to this model of causation is the so-called principle of "similar kind(s)" (*sajāti*), which demands that phenomena arise not in an arbitrary manner, but thorough homogeneous causal chains.

On this principle, then, cognitive awareness cannot arise from something non-conscious, such as the physical body. As Dharmakīrti notes (PV II vv. 35–36a), there could be "unwarranted consequences" (*atiprasaṅga*) for presupposing otherwise, even as he does not spell out what those consequences might be. One possible interpretation is that Dharmakīrti is committed to a strict ontological difference between "cause" (*kāraṇa*) and "condition" or "conditioning factor" (*pratyaya*): the former can only give rise to a specific type of effect, while the latter can serve as a basis for the arising of multiple effects. The acorn can only grow into an oak tree, but the same soil and climactic conditions may provide support for various tree species.

On the reductionist Abhidharma model, all aggregate entities reduce to two kinds of basic constituents: elemental atoms (*dravya-paramāṇu*) comprising the four primary elements (*mahābhūta*), and the atomic totality (*saṅghāta-paramāṇu*), which includes the secondary elements associated with each of the four sense spheres (with the exception of sound). Although the position of the Sarvāstivāda – Vaibhāṣika differs somewhat from that of the Sautrāntika (on which Dharmakīrti relies) in terms of how the lines are drawn between primary and secondary existents, the sense spheres, as a domain of phenomenal

primitives, do belong in the Ābhidharmika's ultimate ontology.[13] It is worth noting that this elemental domain is ascertained on the basis of different types of cognitive awareness rather than as a mind-independent reality. For the Vaibhāṣika, sensible phenomena – say, the experience of a pot's color, weight and shape – are real, despite their reducibility to more basic monadic elements of experience (e.g., phenomenal primitives). However, there is an obvious tension between treating something both as a construct and as ultimately real. In articulating the Sautrāntika position, Vasubandhu is keen to point out that shapes and colors are ultimately real only insofar as they display a certain *causal* or *pragmatic* efficacy, that is, only to the extent that they generate the appropriate cognitive event: in the case of shape and color, a corresponding visual experience.[14] In perceiving a pot, it is not the pot itself that serves as the basis for the arising of the cognitive event but rather the causal efficacy of material elements and phenomenal primitives.

Here too conditioning factors play an important role. Under certain conditions something solid may become liquid, like heat causing the melting of a block of ice into water. Given the speculative nature of Abhidharma metaphysics, there should be no surprise in finding disagreements about the specific ways in which properties attach to each aggregated entity. For instance, while for the Vaibhāṣikas entities borrow their physical properties from the elements themselves, Sautrāntikas take them to be present only as mere potentialities. In a block of ice, the fire element is only potentially present, for without it, ice cannot melt into water. Dharmakīrti works out this account of causal efficacy in terms of the strict regularities that must obtain between elements in a causal series. These regularities act as a kind of "restriction in causal potential" (*śaktiniyama*)[15] – a notion that Dharmakīrti uses to argue for the limited or restricted efficacy of causal elements. For instance, a lotus seed cannot produce a cow and oil cannot be extracted from sand. The so-called essential nature (or 'nature-*svabhāva*') of the causally efficient element in a causal chain suggests that entities are not simply the product of a given causal chain or causal complex (*hetusāmagrī*). Rather, they are the product of specifically active elements within that chain and of the conditions that make it possible for those active elements to manifest their potentiality.[16]

However, regardless of whether ice melts because an internal principle of preponderance governs the transformation of physical substances, or because conditioning factors bolster a particular causal chain of events, it simply cannot be the case that yoghurt could just as easily come from clay as from milk and a gilt could give birth to a calf just as naturally as to

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13 Atomism – the notion that matter reduces to some elemental constituents – finds expression for the first time in Dharmaśrī's *Abhidharmahṛdaya* (2nd c. C.E.), before receiving extensive treatment in the *Mahāvibhāṣā*.

14 See, for example, AK k. 10–13 and AKBh *ad cit*., and discussion in Hattori 1988: 39–41 and Ronkin 2005: 56–59.

15 This notion appears in several places on the *Pramāṇavārttika* and its autocommentary (see, e.g., PV I.43, I.195, and I.255 and PVSV *ad cit*.). As John Dunne notes, summarizing Dharmakīrti's position, the point of the restriction is to tie the causally efficient element to its specific causal antecedent: "it is impossible for an apple seed to produce certain types of effects because it is impossible for it to arise from certain kinds of causes" (2004: 162).

16 On the distinction between 'nature-*svabhāva*' of an entity and its location in a causal totality, see Steinkellner 1971: 185f. and Dunne 2004: 163f. Dunne's translation of the relevant passage from PV I.7 and PVSV *ad cit*., slightly altered, reads: "The arising of an effect that is inferred by way of a causal complex is characterized as a *svabhāva* of that causal complex, because the [the capacity for] the effect's production does not depend on anything else."

a piglet. Given the widespread belief in pre-modern India that sentience can have multiple origins (e.g., egg-born, sprout-born, womb-born, and moisture-born), Dharmakīrti does in principle concede that the material elements could serve as a basis for the arising of cognition. But empirical observation also yields restrictions: the principle of preponderance may well apply to all kinds, but a cow is not just a collection of elements with a certain predominant property like solidity, heat, or capacity to produce milk. Nor is it a conceptually constructed entity like a forest, or a cart, that is analytically reducible to its constitutive parts. There must be more than just the configuration of matter that accounts for the arising of cognitive awareness (PV II vv. 37–38). The structural asymmetries within this aggregate conception of personal identity are becoming obvious.

3. Causation and emergence

The canonical literature presents us with a standard formula for the dependently arising phenomenon of consciousness:

> Dependent on the eye and forms, visual-consciousness arises. The meeting of the three is contact. With contact as condition there is feeling. What one feels, that one perceives. What one perceives, that one thinks about. What one thinks about, that one mentally proliferates. With what one has mentally proliferated as the source, perception and notions resulting from mental proliferation beset a man with respect to past, future, and present forms cognizable through the eye.[17]

On this standard account, a specific type of consciousness accompanies each of the sense modalities. In this specific case, what is occasioned is an instance of visual awareness. No one constitutive factor in this nexus of interactions has causal priority: instead, the association between perception and thinking results from the habitual tendency of the mind towards conceptual proliferation. Note that while sense, object, and conscious apprehension come together as a consequence of past habituations and other conditioning factors, the ensuing cognitive awareness is both sustained by and sustains these factors. As stated, the principle of dependent arising would place consciousness alongside other factors in the causal web in an interrelated, symmetric, and mutually supportive system of relations. The sense would be as necessary for the arising of cognitive awareness as this awareness would for the optimum functioning of the organism. But, as Dharmakīrti points out, the class of internal mental states that comprise thoughts, memories, and affects does not appear to depend on the senses. Introspective awareness (*manovijñāna*), which Dharmakīrti (following Dignāga) categorizes as a distinct type of perception, specifically "mental perception" (*mānasa-pratyakṣa*), does not depend on the sensory systems. Rather, following the Yogācāra analysis of the afflicted mind (*kliṣṭa-manas*), Dharmakīrti takes introspective awareness to be mired in the same confusion and ignorance that can also cloud understanding and render sense perception ineffective. A deluded mind is incapable of providing reliable testimony about matters of fact: the believer in ghosts is more likely

[17] MN I, 111–112 in Ñāṇamoli/Bodhi 2001: 203.

to perceive the rustle in the bushes as a shadowy figure stalking them, rather than a gust of wind.

The relational asymmetry between cognitive awareness and the other contributing factors becomes obvious: for Dharmakīrti, introspective awareness cannot thus arise from "the body together with all the senses" because its occurrence is observed even when one or more of the senses are impaired (PV II v. 47). Dharmakīrti would welcome the wealth of empirical evidence from clinical neuroscience about such phenomena as the "locked-in syndrome" or the persistence of "minimal consciousness" in patients diagnosed as being in a vegetative state.[18] This sort of evidence, it seems, lends support to his thesis that sentience, as a minimally conscious state, enjoys a certain degree of causal autonomy from more specific higher-order modes of cognitive awareness.[19] It also suggests that, given the difficulty of diagnosing whether a patient is in a minimally conscious state rather than a permanent vegetative state, the distinction between unconscious mental states and states of consciousness with minimal cognitive and behavioral function is less clear than it may seem. Rather than being unconscious, a cognitively and behaviorally non-responsive individual could simply be minimally conscious. Most importantly, in the absence of a better understanding of the tight correlation between mental and physical (e.g., brain) states, such evidence sets the stage for developing a wider conception of causality than physicalism allows.

Recall that Dharmakīrti does not reject the idea that the body can serve as a support for cognition. Indeed, he acknowledges that in some circumstances the occurrence of a sensation, say of pain, can simply be the result of a wound in the body. The pain has both qualitative features or qualia (sharp, stingy) and intentional content, insofar as it discloses the body as the locus of tissue damage. Furthermore, the co-occurrence of bodily processes and specific mental states at best suggests that the body is a contributing factor in the arising of cognition, not that it actually causes it. Presupposing otherwise would entail that there is a closer causal connection between cognition and the body than even the physicalist is willing to admit, one that ensures, for instance, that cognition could persist in the body after death (PV II v. 51).

As Taber (2003: 492) notes in pursuing a similar line of inquiry, what we see here is a clear example of Occam's Razor: Dharmakīrti argues against taking cognitive awareness to be a product of bodily functions because he thinks the mental domain is the natural place

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18 For a descriptive account of the varieties of locked-in syndrome, see Bauer/Gerstenbrand/Rumpl 1979 and Laureys et al. 2005. A detailed review of the literature on minimal states of consciousness experienced by coma patients, which also puts forward a model of consciousness that takes it to be an emergent property of the collective functioning of widespread frontoparietal brain networks, is found in Laureys/Schiff 2012.

19 Working out the implications of empirical research on borderline states of consciousness for a theory of consciousness, Bayne, Hohwy and Owen (2016) point out the inadequacy of models that equate global states of consciousness (e.g., alert wakefulness, dreaming, and such comatose conditions as vegetative and minimally conscious states) with levels of consciousness. Unlike local states of consciousness, typically associated with the contents of consciousness (e.g., perceptual states, thoughts, and desires), global states are supposed to indicate that consciousness comes in degrees. But, as Bayne et al. conclude, being conscious, much like being married or being a bachelor, does not come in degrees. Rather, being conscious, at a minimum, is not merely a matter of occupying the first-personal stance, but of having various cognitive capacities available for perceptual and behavioral tasks.

for cognitive awareness. The mental domain is sufficiently complex to support its own operations. No need, therefore, to bring in an incongruous factor such as the body, which obeys a different set of laws, to explain the arising and specific operations of cognitive activity (PV II vv. 33–44). Nothing is closer to each instance of cognitive awareness than a cognition immediately preceding it. Why not postulate that each state of cognitive awareness serves as the antecedent cause for cognition? Hence Dharmakīrti's dictum: "let only what is observed as the cause always be considered the cause" (PV II v. 44cd). And what is observed is the constant stream of mental states.

Furthermore, as the literature on meditative absorption testifies, while this stream of cognitive awareness can be altered, it cannot be halted. In the *Bhāvanākrama* I, 212, for instance, Kamalaśīla argues against those who think meditative cultivation essentially amounts to casting aside all mental activity and achieving a state of unconscious concentration (*asaṃjñīsamāpatti*). What is achieved is a state of non-conceptual awareness, rather than the cessation of all mental activity (*manasikāra*). Consciousness, it seems, persists so long as the body is alive (even as the relation between life and mind remains somewhat unclear). Indeed, concepts such as *bhavaṅga-citta* or "life-continuum mind" hint at an intimate correlation between mind and life, despite the largely speculative nature of the Abhidharma account in which it occurs.[20]

Dharmakīrti's attempt to carve out a space for the autonomy of cognition from material causation, while retaining the efficient-causal model, showcases not only his logical ingenuity but also his keen phenomenological sense. We may wonder, then, why he allows his observations to be constrained by doctrinal considerations, rather than deferring to the empirical evidence alone. The Cārvāka physicalist too is a keen observer, but – not saddled with the sort of doctrinal commitments that press the Buddhist into a defense of rebirth – paints a starker picture of the human condition. Just like fermented grain yields a liquid with the capacity to intoxicate, so also consciousness must be regarded as nothing more than a product of the type of material organization that is constitutive of biological organisms. The Cārvāka's response to the principle of similar kinds (*sajāti*) is a new conception of causality: emergentism.[21] Mental properties are ontologically novel emergent properties that supervene on the physical.

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20 The Pāli Abhidhamma typically glosses *bhavaṅga* as a mode or function of consciousness that captures its receptive or transitional state, as when attention shifts from one object to another. The principal sources (Buddhaghosa's *Visuddhimagga* and *Atthasālinī*, Buddhadatta's *Abhidhammāvatāra*, and Anuruddha *Abhidhammatthasaṅgaha*) are quite explicit that, like all other aspects of consciousness, *bhavaṅga* too is intentionally constituted, that is, it is consciousness of something. However, because it stands for consciousness in its liminal state, its intentional content is not available for reflection. It is the kind of consciousness that persists in the interval between more alert states of mind; hence, its association with the continuum of life. Cf. Gethin 2005.

21 On the appropriation of 'emergentism' as a category for describing the Cārvāka account of consciousness and cognition, see Ganeri 2011 and Coseru 2017.

4. The challenge of physicalism

As we noted above, Dharmakīrti's statement about the relation between consciousness and causal explanation points to the autonomy of cognition. His view is most clearly stated in the following verse:

> [Nor are the senses, or the body together with the senses, the cause of cognition, for] even when every single one of the senses is impaired, the [corresponding] cognitive awareness is not impaired. But when [the cognitive awareness] is impaired, their (i.e., the senses') impairment is observed.[22]

But cognitive awareness is obviously in some kind of dependency relation to the body, as demanded by the causal principle of dependent arising. For instance, visual awareness can only emerge in organisms that are sensitive to light. The Cārvāka does grant that cognitive awareness can have novel properties not observed in the material substratum (the body) that serves as its basis. But unlike the dualist picture the Buddhist paints, the Cārvāka contends that as an awareness of a certain type (visual, auditory, etc.) consciousness must be related to the body's specific functionality in the respective cognitive domain. Given that consciousness takes the form of an apprehension of objects (that is, given its inherently intentional structure), and given that apprehension only occurs in specific modes of cognizing such as perceiving, imagining, or remembering, consciousness can be present neither when the sensory systems are not yet developed (e.g., in the embryonic stage) nor when they are not responsive (e.g., in a state of coma). Is there a causal criterion for the presence of consciousness? And, more importantly, can the Buddhist answer the challenge of physicalism without appealing to the kind of evidence (e.g., "the remembrance of past lives") the Cārvāka would simply not accept?

I have discussed the Cārvāka's objection to the autonomy of consciousness in detail elsewhere (see Coseru 2017), specifically with reference to Śāntarakṣita's *Tattvasaṃgraha*, and Kamalaśīla's commentary thereon. Here I will simply attempt to restate the arguments in a formal description.[23] The physicalist's objection to any presumed continuity of awareness is framed by some easily recognizable arguments, all of which have key Buddhist tenets as their premise, but draw different conclusions. The first argument may be summarized as follows:

> P1: An individual is nothing but a bundle of aggregates.
>
> P2: Aggregates, including consciousness, are reducible to their material substrata (viz., atoms).
>
> C: ∴ Conscious awareness must be an emergent property of a certain type of material aggregation (typical for biological organisms).

[22] PV II. v. 39: *pratyekam upaghāte 'pi nendriyāṇāṃ manomateḥ / upaghāto 'sti bhaṅge 'syās teṣāṃ bhaṅgaś ca dṛśyate*.

[23] Śāntarakṣita's summary of the Cārvāka position on consciousness and causation is found in TS vv. 1857–1870. For a detailed study of the relevant Cārvāka fragments that survive, see Bhattacharya 2009: 33–43 and Franco 1997: 253–256.

The Cārvāka is comfortable with the aggregate conception of personal identity, and welcomes its epistemic consequences (only irreducible elements are ultimately real). Since consciousness is an aggregate phenomenon, essentially reducible to a stream of momentary conscious events, it too must be the product of a specific kind of material organization, perhaps the sort typical of organisms endowed with a nervous system. The Buddhist faces two important problems: first, that of explanatory sufficiency: why shouldn't material organization with its emergent properties and functionality suffice as an explanatory account for the arising of consciousness? Second, that of causal relevance: what evidence is there that consciousness, as the Buddhist claims, generates cognitive activity in ways that cannot be accounted for by material causes and conditions? Empirical observation, it seems, yields an altogether different picture, one where conscious states are tightly correlated with bodily processes.

The second argument extends this critique, taking into account the intentional structure of awareness, and pointing to its conditioning factors, specifically that cognition appears to be tied to the development and maturation of the body.

> P1: Consciousness is always *consciousness of* (i.e., it is intentional).
>
> P2: Conscious apprehension occurs only in specific modes (perceiving, remembering, etc.).
>
> C: ∴ Consciousness cannot be present if the cognitive systems are undeveloped (embryonic stage) or unresponsive (comatose state).

Here the Cārvāka admonishes against taking adult experience to be normative for consciousness at all stages of biological development. For in utero, when the cognitive systems are not yet formed, there is neither vision nor visual object. What sense would it make then to talk about visual awareness without a visual system? Of course, the physicalist is in no better position than the Buddhist to explain the arising of consciousness. But at least, from the physicalist's standpoint, recognizing that material causation must play a key role in whatever properties or characteristics consciousness exhibits, is a step in the right direction.

Finally, the third argument invokes the principle of positive and negative co-variance (*anvaya-vyatireka*) to make the case that consciousness can only become manifest in one cognitive chain:

> P1: Different types of bodies (of human and non-human animals), and different tokens of the same body, manifest different types of consciousness.
>
> P2: Granted the principle of positive and negative co-variance.
>
> C: ∴ Consciousness cannot apprehend that which is contrary to its mode of realization (consciousness can only be associated with *the one* cognitive chain of either human or non-human animals, that can serve as its basis).

If the arising of consciousness is grounded in the body, then it is specific to each body both within and across species. That is, for the Cārvāka every concrete mental state arises from a corresponding bodily process or function. The persistence of conscious awareness within

a given mental stream is only invariably concomitant with that stream as a specifically embodied individual. At least in Śāntarakṣita's reconstruction, the Cārvāka appears to hold a version of the token identity theory of mental states: every concrete mental particular (e.g., a given sharp pain) can be identified with some concurrent physical (or neurophysiological) state. This view is supported by two key principles that inform the Cārvāka's philosophy of mind: (i) the human being is just an aggregate of the four elements, the combination thereof instantiating its mental properties; and (ii) mental properties thus instantiated result from the specific ways in which the elements combine.[24] But as Kamalaśīla notes in his commentary,[25] there is disagreement among the Cārvākas on how to interpret earlier statements (attributed to Bṛhaspati) about the precise ways in which these instantiated mental properties relate to the elements, either taken in isolation or combined.

Given these considerations, the Buddhist faces a dilemma: the aggregated conception of personal identity seems to support the physicalist position that consciousness is an emergent property of certain types of material organization. Consciousness cannot be both part of this causal web and just an instance in a beginningless stream of conscious events. Can the Buddhist answer the physicalist challenge while retaining a causal-explanatory framework in accounting for the relation between cognition and the body? In a detailed analysis of the explanatory role of causal generation, Kamalaśīla identifies an important difference between the operations of causality in the physical domain and the limits models of material causation face when extended to consciousness and cognition.

> Whenever an effect is dependent on a collection of causes and conditions it does not arise when even one of these conditions is absent, for it would not be dependent upon them, if it did. It could be said, "All the atoms insofar as they occur in [its] proximity are the cause of cognition." In that case a difference should be observable between the effect produced by a non-deficient cause and that produced by a deficient cause, as the two are different. Otherwise, a distinction in the [capacity of the] cause [to bring about different effects depending on its fitness] would be futile. In effect, when a cause that has been perfect in all its aspects becomes defective in some respect, it does not occasion a difference in the mind and that which is mental (*mano-mati*), on account of the fact that preceding auditory and other kinds of impression continue intact [in the mental stream].[26]

We see here a clear acknowledgement that cognitive awareness depends upon the efficacy of all underlying causal factors (perceptual, volitional, dispositional, etc.), and the recognition that, in turn, these factors reduce to their causal totality (*kāranasāmagrī*). On a strict

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24 See Bhattacharyya 2002, and discussion in Ganeri 2011: 5.

25 See in particular, TSP *ad* TS 1885–1866 (in Shastri 1968: 450), and discussion in Coseru 2017.

26 TSP *ad* TS: v. 1886 (in Shastri 1968: 450): *na hi sāmagrīpratibaddhaṃ kāryam anyatarābhāve bhavati*; *tat pratibaddhasvabhāvatvahāniprasaṅgāt / atha yathā sanidhānam sarve 'pi caitanyasya hetavaḥ*? *evam tarhi vikalāvikalāṅgadehajanitayor viśeṣena bhavitavyam kāranabhedāt*, *anyathā kāryasya bhedo nirhetukaḥ syāt*. *na vā 'vikalāṅgasya sataḥ paścād vikalāṅgatāyām upajātāyām kaścin manomater viśeṣo 'sti*; *śrutādisamskārasya tadānīm apy avikalasyaivānuvṛtteḥ*.

account of causal generation, cognitive error would track closely deficient causation.[27] But that does not always happen. One might perceive a sparkling lake where there are only naturally occurring conditions for an optical illusion. This perceptual illusion is not simply a case of misapprehension, for the illusion persists even after it has been disambiguated (that is, after one has come to apprehend the appearance of the lake as a mirage). What the error argument targets is strict causal generation: the notion that each mental state is instantiated by a suitably relevant combination of physical elements and processes. The persistence of perceptual illusion even after disambiguation, and the possibilities of effective action such disambiguation opens up (not chasing after a mirage), work against the strict causal model of the Cārvāka physicalist, which reduces human agency to changes in the microphysical structure of each individual.

When Dharmakīrti claims that a trustworthy cognition (*avisaṃvāda*) must also be causally effective, he advances a different naturalistic account of cognition than the one put forth by the Cārvāka, one that takes into account the intentional structure of awareness and its phenomenal character: perception is not simply the apprehension of a unique particular as such; rather it is the apprehension of a particular *as perceived*, which also discloses the perceiver's intentional stance. In the case of perceptual illusions such as mirages, it is not only the object or content of the experience that gets disclosed, but also the perceiver's vantage point, who can ensure successful action through a shift in perspective.

5. Causality and the co-constitutive manifest

Has the Buddhist satisfactorily answered the challenge of physicalism? Before we attempt an answer to this question, let us revisit once more Dharmakīrti's contention that the senses are rendered ineffective by an impaired consciousness. Regardless of whether we take him to be arguing from a Sautrāntika or Yogācāra position,[28] is it clear that even when he appears to reject the notion that the intentional object is causally related to the experience of a unique particular (as he does in PV III v. 320), Dharmakīrti is in fact pressing an important phenomenological point: specifically, that considerations about the structure of awareness must play a role in settling epistemological disputes. This point is necessary to support his account of the efficacy of cognition. If one does not factor in the dual-aspect theory of mental states in mapping out the relation between consciousness and causality, then one cannot understand why causal explanation retains an element of ontological subjectivity. The justification for taking reflexivity (*svasaṃvedana*, *svasaṃvitti*) as a condition for the possibility of warranted cognition may indeed stem from Dharmakīrti's commitment to

[27] The assumption behind strict models of causal generation is that a suitably efficacious causal chain generates each epistemically salient cognitive state: the state of quench is generated by water ingestion or water metabolism. Cognitive error, as in the case of water mirages and such, results from a defective cause: that is, the water in the mirage has the formal properties of real water (etc., reflectance) but lacks the latter's efficacy: illusory water does not quench thirst.

[28] As Franco (1997: 87) notes, whether we attribute it to Dharmakīrti's genius or the versatility of the Sanskrit language, it is possible to read him as endorsing both the Yogācāra view of the luminosity of the mind (*prabhāsvaraṃ cittam*) – which, consequently, means that one may have to take reflexive awareness (*svasaṃvedana*) as the only warranted type of cognition – and the Sautrāntika notion that the appearance of objects in cognition corresponds to eternal particulars.

the self-luminosity theory of consciousness. But what is important about this theory is that it rules out the possibility of reducing cognition to subpersonal levels of explanation. Walking is a complex motor skill, which, once learned, may appear involuntary. The same can be said about language and basic perceptual function. But what ensures their epistemic and pragmatic efficacy is the ongoing active presence of an implicit awareness that attends to the object at hand.

The mind's attentive capacity (*manaskāra*), then, makes a certain dimension of human cognition not merely the effect of causal chains in the physical domain but a causal factor in its own right in the domain of cognition. This self-reflexive aspect of cognition can remain constant with respect to a given object of experience (say, a column of smoke), despite it being prompted by a deficient cause (in this case, a dust column). On account of this apparent variance, consciousness is neither entirely grounded in, nor explainable in terms of, physical elements and processes. The Buddhist does not deny that cognitive states are made manifest (*abhivyajyate*) when the body is present, only that their manifestation is to be understood in strictly physical causal terms.

4. Conclusion or how to avoid the fallacy of ambiguity

Let me conclude by revisiting a question that was asked at the beginning of this paper: are causal accounts of generation for material phenomena reconcilable with the seeming irreducibility of consciousness? By reducing the analysis of consciousness and cognition to transactions in the physical domain, the Cārvāka, much like contemporary physicalists, is committing a category mistake: consciousness is a subjective phenomenon and thus its manifestation cannot be accounted for in the impersonal language of causality for material objects. Is it possible, then, that even Dharmakīrti, insofar as he seeks a causal explanation for the epistemic reliability of certain cognitions, is guilty of the very charge he levels against the physicalist? As I argued elsewhere (Coseru 2017), ontological reductionism is not the same as epistemological reductionism. Indeed, there is a systematic ambiguity between the ontological and the epistemic sense in using the word 'empirical' and its cognates to capture causal relations.[29] Sometimes 'empirical' stands for contingent states of affairs, and sometimes for a method that can be used to establish something as factual. Facts about one's subjective experience, for instance, are not empirically accessible in the way that facts about external objects (or their atomic constituents) are. The basis for the *epistemic* subjective-objective distinction is an ontological distinction in modes of existence.

In short, ontological subjectivity is no bar to epistemic objectivity. Consciousness, unlike its contents, is implicitly manifest. Conscious awareness does not become manifest by being reflected upon, as do its specific contents (which are only available when attended to in perception or brought under a specific concept). That is to say: consciousness has an observer-independent status. I do not become conscious by observing the occurrence of my mental states. Rather, I become aware of the contents of my experience by virtue of being conscious. Causality, on the other hand, is an observer-relative phenomenon: the very notion of 'event' presupposes an observer. Events thus stand in a particular kind of

[29] This distinction is examined at length by Searle (2015: 74ff.).

relation to their antecedents only to the extent that there is a conception of causality in place. That causality should be an observer-relative phenomenon does not mean, however, that it is arbitrary. Rather, its observer-relative status simply suggests that it contains an element of ontological subjectivity.

Dharmakīrti (and his successors) may well admit that aggregated entities reduce to their ontological primitives, which alone are real. But causally describable series of events are not incompatible with treating such basic events as irreducibly mental. Buddhist conceptual reductionism about consciousness, therefore, does not necessarily entail physicalism.

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MN Majjhimanikāya: *Majjhima-Nikāya*, vols. I–II, ed. Vilhelm Trenckner; vol. III, ed. R. Chalmers. Oxford 1993–2004.

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PSV Pramāṇasamuccayavṛtti: See PS.

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TSP Tattvasaṃgrahapañjikā: See TS.

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