A Buddhist theory of Unconscious Mind (*ālaya-vijñāna*)

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Freud shocked the Western world just over a hundred years ago with his audacious assertion that our actions, thoughts and feelings are largely determined by processes occurring outside our conscious awareness. We have accommodated ourselves to this 'dethroning' of the rational ego, but the sting still remains: our experience is inescapably shaped by cognitive structures and processes we neither clearly control nor even fully discern. We are not, it seems certain, truly in charge. Although this same basic message is currently couched in the unquestioned voice of science, rather than the questioned voice of psychoanalysis, this irrevocable loss of our autonomous self, like the sudden death of close friend, haunts us still.

This was not what happened in India some fifteen centuries ago when Buddhist and Hindu yogis and philosophers systematically examined and analyzed how unconscious processes determine the shape of our experiences and delimit the autonomy of our actions. But since these observations arose out of traditions that had long before deconstructed any autonomous ego, the idea of unconscious mental processes upheld, rather than undermined, their overall moral vision. Paradoxically, the loss of an autonomous self proved a gain in understanding of self.

This essay aims to explain how this came about within Buddhist traditions, how and why an explicit notion of unconscious mental processes, called *ālaya-vijñāna*, developed within classical Indian Yogācāra Buddhism. We shall note in passing parallels found in modern psychology or cognitive science.

Briefly, we will trace the development of this distinctively Buddhist concept of unconscious mind back to the early texts of the Pāli Canon. Although there was no explicit *concept* of unconscious mind in early Buddhism (roughly 5th-2nd centuries BCE), there was an awareness of processes that later Buddhists, like many modern scholars, would consider *descriptively* unconscious. These included not only the various cognitive processes that subserve all ordinary perception, but also our ongoing emotional dispositions and sense of self-identity.

Even the concept of consciousness itself (Pāli: *viññāņa*; Sanskrit: *vijñāna*) comprised cognitive functions that were continuous and implicit as well as those that were momentary and explicit.

All this changed, though, with the developments in Abhidharma Buddhism from the 2^{nd} c. BCE until well after the appearance of the Yogācāra school (the 'Yoga Practitioners') in the 5th c. CE. The Abhidharma traditions focused on momentary, conscious mental processes with such philosophical sophistication and systematic rigor that they could not readily conceptualize the continuing but implicit dimension of the cognitive and affective processes described in the earlier texts, let alone their gradual transformation along the path to liberation.

The Yogācāra notion of *ālaya-vijñāna* and its associated concepts, we shall argue, largely arose in response to this conceptual challenge. They formulated a multidimensional model of mind that first differentiated momentary conscious processes from continuous, nonsconscious ones, and then articulated an equally continuous and implicit sense of self-identity underlying and informing all our cognitive and affective processes. Together, these comprise the Yogācāra Buddhist theory of unconscious mind.

Although we will focus only on Buddhism here, it is important to note that contemporaneous Hindu texts, such as Patañjali's *Yoga-sūtra*, shared the same basic analyses and used the same basic vocabulary. These yogic traditions clearly recognized, as Mircea Eliade rightly observed, that "the great obstacles to the ascetic and contemplative life arose from the activity of the unconscious, from the *saṃskārā*s and the *vāsanā*s—'impregnations,' 'residues,' 'latencies'—that constitute what depth psychology calls the contents and structures of the unconscious" (Eliade, 1973, xvii).

In order to understand how Yogācārin Buddhists came to this recognition we must first examine how the concept of consciousness was understood in early Buddhism and why it became problematic in the following Abhidharma milieu. Only then will we be able to appreciate "the contents and structures" comprising the 'Buddhist Unconscious.'

I. Early Buddhist Theory of Consciousness

Although most of the basic terms that Indian Buddhists used for analyzing mind were also found in other Indian traditions, they often had distinctive connotations derived from the distinctive worldview of the Buddha. Unlike the Upanishadic seers of his own era, the Buddha (ca. 480-400 BCE) was concerned not so much with Being (*sat*), with what is purportedly real and permanent (*nitya*), as he was with becoming, with how things *come to be*. Specifically, he was concerned with the arising and, above all, with the cessation of the mental obscurations and afflictive actions that keep beings trapped in the cycle of compulsive behavioral patterns known as *saṃsāra*. From its beginnings, then, Buddhist analyses of mental processes were not only couched in the language of causation—of how things arise and cease due to their causes and conditions—but were also aimed toward transforming these processes and thereby alleviating the suffering they entailed. It was thus both formally similar to, yet oriented quite differently from, modern scientific analyses of mind.

This distinctive view is summarized in the Buddha's famous formulation of 'dependent arising' (S. *pratītya-samutpāda*):

When this is, that comes to be; with the arising of this, that arises. When this is not, that does not come to be; with the cessation of this, that ceases. (M II 32, etc.)

Although quite simple, the implications of this way of analyzing phenomena were profound indeed, and they continued to unfold throughout the history of Indian Buddhist thought.

This is particularly evident in Buddhist analyses of consciousness (S.: *vijñāna*; P.: *viññaṇa*).¹ In early Buddhist thought, consciousness (or cognitive awareness, which I shall use almost interchangeably) arises in conjunction with several specific conditions. These are denoted in two different formulations which together adumbrate the major components of the Yogācāra model of mind some seven centuries later:

Visual cognitive awareness arises dependent on the eye and visible form. (S II 73)
Cognitive awareness arises dependent upon karmic formations (P. *sankhārā*; S. *saṃskārā*). (S II 2)

In the first formula, a specific form of cognitive awareness is said to occur when an appropriate object appears in its sense field, impinging upon its respective sense organ, and there is attention thereto. Forms of cognitive awareness in human beings are classified according to our six faculties—eyes, ears, nose, tongue, body and mind. These modes of cognitive awareness

all arise from the contact (*sparśa*) between the faculties and their correlative objects. Though simple, this analysis entails a number of interesting implications.

First, unlike most philosophical traditions, in this analysis cognitive awareness is *not* a faculty that actively cognizes objects. It is merely an automatic result of the coming together of an appropriate stimulus with its respective sense organ. Second, cognitive awareness is therefore a temporal event, which only occurs when the sense organs are appropriately stimulated. These stimuli, though, need not be objects *per se*. They are whatever brings about some difference, some change in the sense organ in relation to its respective sense-field. Without such differences, such change, there would be no cognitive awareness. We are, for example, effectively blinded in a snow or sand storm, where there are no contrasting colors. And we seldom notice the steady hum of a fan until it turns off. A stimulus is thus like a spark: it has to stand out enough from its context, both spatially and temporally, for it to instigate a moment of awareness. These contextual and temporal distinctions are therefore not so much objects *of* cognitive awareness, as they are necessary conditions *for* it. An absolutely independent object, like a perfectly camouflaged insect, is effectively imperceptible.

Third, the kind of distinctions that can evoke such awareness depends upon the structure of the sense faculties, which is why they are called 'powers' (*indriya*). That is, it is the responsive structure of the faculties that determine what can be a stimuli. According to cognitive scientist, Christine Skarda (1999, 85f), the receptor neurons of the sense organs are "stimulus-specific in terms of their response characteristics. Each responds maximally (i.e. with a burst of intense electrical activity) to a specific type or class of stimuli," but not to others. We cannot see the ultra-violet light that bees do, nor hear the ultra-sonic sounds that bats do. Without special tools, they are simply not part of our world. This essential correlation is nicely captured by the expression 'visible object.' In short, the contours of *our world* are effectively defined by the range of our possible cognitions, which depend upon the structure of our particular faculties. Like the 'visible object,' ours is an 'experience-able world.' Although this is often overlooked, it is exactly how the Buddha defined 'world' (*loka*) in the Pāli texts:

In this fathom-long body, with its perceptions and thoughts, I proclaim the world (*loka*) to be, likewise the origin of the world and the destruction of the world, likewise the method leading to the destruction of the world. (A II 48)

And thus it also follows, our fourth point, that since cognitive awareness arises only with the contact between a sense faculty and its correlative stimuli or objects, it is not a function of either of these separately. Without a sense faculty there would be no cognitive awareness, of course, but neither would there be any cognitive awareness without some stimuli or object. Although this, too, is often unstated, cognitive awareness in early Buddhism is therefore neither realist nor idealist, neither wholly objective nor purely subjective. Rather, cognitive awareness occurs at the interface, the concomitance, of a sense-organ and its correlative stimuli; it is transactional as well as temporal.

This is remarkably similar to certain scientific understandings of color perception. According to cognitive scientists, Lakoff and Johnson,

Colors... are not objective; there is in the grass or the sky no greenness or blueness independent of retinas, color cones, neural circuitry, and brains. Nor are colors purely subjective; they are neither a figment of our imaginations nor spontaneous creations of our brains... Rather, color is a function of the world and our biology interacting (Lakoff and Johnson, 1999, 24-5).

All these characteristics follow from the perspective of dependent arising: that phenomenon automatically occur when the appropriate conditions are present.

We do not experience things this way, though, and further analysis suggests why. First, although cognitive awareness itself depends upon distinctions or discernments (*vi-jñāna* is literally a 'knowing separately'), it is also always accompanied by apperception or recognition (P. *saññā*; S. *saṃ-jñā*, a 'knowing together;' M I 295). "Apperception," according to a typical, albeit later, definition, "means apprehending the distinguishing mark (*nimitta*) of an object... ascertaining 'this is blue, it is not yellow" (TBh, 21). Phenomena are thus not only cognized disjunctively (*vi-jñāna*), they are also recognized (*saṃ-jñā*) conjunctively, that is, in terms of categories or classes.

An analysis of perception as two-fold is also found in cognitive science. Psychiatrist Oliver Sacks, for example, recently observed that "whether it is color or motion, a double process of breaking down and building up, or decomposition and recomposition... seems to be unavoidable" (2004, 85). The way this works, according to Christine Skarda, is that receptor neurons first "isolate their triggering stimuli," which are then contrasted with each other by "post-receptor" neurons that "deal with the phenomenal event occurring within the sense organ at one remove, as it were" (1999, 85f). She also illustrates this by color perception. "The color red, for example, acquires its character because (1) a particular wavelength of light is isolated and (2) is then contrasted within the visual system with the wavelength of light that humans perceive as green (rather than yellow or blue)" (*ibid*.). The features that we consciously perceive, in other words, are never raw 'sense data' since they have *already been formed* by the distinctions and categories of the neural processes that subserve them. Indeed, this is the only way that perceptions appear. Lakoff and Johnson thus conclude that "categorization is a consequence of how we are embodied ... [it] is not a purely intellectual matter, occurring after the fact of experience. Rather, the formation and use of categories is the stuff *of* experience" (1999, 18f.). While the map may not be the territory, *our world* is unavoidably a mapped world.

This 'mapped world' takes on its most familiar features, though, with the advent of reflexive awareness and language, which are associated in classical Buddhist analyses with the sixth cognitive mode: mental cognitive awareness (*mano-vijñāna*). Like the five forms of sensory consciousness, mental awareness also has certain, specific conditions: it arises on the basis of the mental faculty, mind (*manas*), and two distinct kinds of instigating stimuli. First, when a sensory cognitive awareness occurs, it is often followed "at one remove, at it were," by an awareness *of* that awareness, an awareness *that* such and such a sensory awareness has occurred. This reflexivity is closely related to the second condition for the arising of mental cognitive awareness: non-sensory 'objects' such as thinking, reflection, or ideas. These are considered formations of speech (P. *vacīsańkhārā*), which are closely associated in the early texts with the mental faculty itself, mind (SN 834; S I 207).

Despite this reflexivity, though, mind is not 'cognizing itself.' Mental cognitive awareness no more 'cognizes' thoughts than sensory cognitive awareness 'cognizes' objects, since neither of them are agents or faculties, nor, for that matter, actions. In the causal syntax of dependent arising *cognitive awareness does not cognize anything*—it simply *is* the awareness that arises when requisite conditions come together. Failure to appreciate this—to interpret consciousness as an act rather than an event, as watching rather than seeing—is to miss the most distinctive feature of early Buddhist thought: its radically depersonalized model of mind, its analysis of experience without a subject. For if cognitive awareness is not an act which one does but an event which occurs, then there is no need, indeed no place in cognition for an active agent or a substantive subject.

In this respect, Buddhist and scientific analyses of consciousness share a certain formal similarity. They both ask how things *occur*, not what they *are*—a question that is answered by causes and conditions, not by essences or entities. They therefore both dismiss the idea of a substantive self (*ātman*) and for much the same reason: their modes of analysis preclude a *causal role* for unchanging entities on methodological grounds. How, after all, could something that does not itself change cause something else to change? An unmoving billiard ball does not make another ball move. Similarly, a *truly* unchanging self could neither act nor experience the result of actions (i.e. *karma*), since both actions and experience are specific, discrete, temporal *events*. If the purpose of understanding mind is to discover how and why suffering arises in order to eliminate its causes and ameliorate its pain, as it is for Buddhism, then unchanging entities, like unmoving billiard balls, are simply beside the point. They have no role in a world of becoming.

The Persistence of Sentience

This does not mean, though, that consciousness has no continuity or coherence, quite the contrary. Early Buddhists saw consciousness as continuously arising and flowing like a stream, some of whose aspects arise on the surface, while other, deeper currents run beneath the waves. This uninterrupted stream of consciousness (*vijñāna*) was in fact the only aspect of individual existence that was explicitly said to continue from one lifetime to the next. According to the early texts, at the time of conception *vijñāna* 'descends' into the womb from a previous existence, continuously arises throughout this lifetime, and then finally 'departs' the body at death, going on to another life. This stream of *vijñāna* is thought to continue unbrokenly for as long as conditions enable it to continue, and it only comes to a complete cessation (or utter transformation) with the end of *saṃsāra* itself, that is, with *nirvāṇa* (S III 53). The Pāli scholar Wijesekera calls this "*saṃsāric viññāṇa*"—in contrast with 'cognitive-consciousness'—insofar as it is "the basis for all conscious and unconscious psychological manifestations pertaining to individuality as it continued in Saṃsāra or empirical existence" (1964, 259). These characteristics will reappear in the *ālaya-vijñāna* model of mind, which, like Wijesekera did,

explicitly differentiated the transient, surface waves of cognitive awareness from the continuous currents of an underlying sentience.

Although these two aspects of *vijñāna* were not *conceptually* distinguished in the early texts, they are discussed in distinct contexts and are dependent upon distinct conditions. This is most evident in the twelve-limb formula of dependent arising where *vijñāna*, as the second limb of the series, arises not in dependence upon transient cognitive objects but upon the 'karmic formations' (*saṃskārā*), the enduring psychological and physiological structures, such as sense organs, faculties, dispositions, traits, etc., that subserve all forms of consciousness. This distinction is clearly illustrated in the two formulations for the arising of *vijñāna* noted above (S II 2, S II 73).

This has led some scholars, most notably the psychologist Rune Johansson, to conclude that the early Buddhist texts depict "two layers of consciousness: what we called the momentary surface processes, and the background consciousness. The latter is an habitual state... *always there*" (1970, 106; emphasis added). In other words, like Wijesekera's "*saṃsāric viñīnāṇa*," this "background consciousness" would seem to provide—though the texts do not explicitly say so—the uninterrupted basis or precondition upon or from which the "momentary surface processes" arise. Something quite similar has recently been suggested by philosopher of mind, John Searle. "Perception...," he states, "does not create consciousness but modifies a preexisting conscious field.... the field was there before you had the perceptions. You had to be already conscious before you had the perceptual experience" (Searle, 2005, 37).

This analysis into two kinds of *vijñāna* also intimates—but again does not explicate their mutual interdependence (M III 260). By arising in dependence upon the *saṃskārās* (our sense faculties, cognitive schemas, etc.), the "background consciousness" presumably preconditions the way perceptual cognitive awareness arises—suggesting, for example, how the *saṃskārās* of language might influence mental cognitive awareness. And the continuous occurrence of perceptual cognitive awareness, for its part, continuously conditions this underlying "background" or "*saṃsāric viññāṇa*" by modifying the physiological and psychological *saṃskārās* that support it. As a result of all this, the texts say, *vijñāna* "matures, grows, develops and increases" (S III 53, D III 228). And these changes, in turn, influence the subsequent arising of perceptual consciousness, and so on. This feedback relationship is implicit in the cyclic pattern of the twelve-limbed formula of dependent arising itself, as is seen in such short-term processes as learning and memory, and it is explicit in the very term, *saṃsāra*, literally a 'going around,' as is seen in the long-term processes of growth and development over multiple generations (which in the Buddhist view includes rebirth).

Although the distinction, as well as the interdependence, between these two aspects of consciousness was largely implicit in the early Buddhist texts, later Yogācārin Buddhists would explicitly distinguish two "layers" of consciousness according to their causal conditions: like the two formulations above (S II 2, S II 73), one would arise in dependence upon our enduring *saṃskārās* and the other in dependence upon the transient objects impinging on our faculties.

Cyclic Causality between Actions and their Results

The dynamic relationship between these two layers of consciousness then is by no means self-contained. Consciousness does not arise apart from the enduring *saṃskārās* that support it: one's physiological sense faculties, engrained cognitive schemas, and affective dispositions. But these *saṃskārās* did not come fully formed from the head of Zeus, they were themselves brought together—'con-structed'—through the accumulated effects of one's own past activities, one's karma: "This body is not yours, nor does it belong to others," the Buddha declared, "it should be seen as [the product of] past karma, generated and fashioned by volition, and something to be felt" (S II 64). The way these come about, according to the Buddha, is through the feedback relationship between our embodied cognitive schemas (*saṃskārā*), the forms of consciousness (*vijñāna*) and feeling they facilitate, the emotional responses these evoke, and the actions (*karma*) these instigate—which in turn reinforce the very *saṃskārā*s that influenced them in the first place.

This pattern is seen in something we all know well: habit-formation. When we do something enjoyable, like drinking tea or eating sweets, it affects our bodies and minds in certain, mostly pleasurable, ways. These experiences create and/or reinforce specific neural pathways in the brain and body which conduce to their being used again, just as rain water erodes away the earth, attracting yet further rain water until, with time and repetition, a constant stream may develop (*Milinda*, 1969, 79f; I. vii. 57). Similarly, we come to experience physiological and psychological cravings (S. *tṛṣṇā*; P. *taṇha*) for the sensations that these actions provide, and thus tend to repeat them over and over again. In this way, actions gradually reinforce the conditions

that conduce to their own repetition, resulting in the psycho-physiological complexes called dispositions, in Pāli, *anusaya* (S. *anuśaya*), underlying tendencies.

The tendencies that are most important for Buddhist analysis are the underlying tendencies toward the 'afflictive' emotions (P. *kilesa*; S. *kleśa*), such as greed, hatred and ignorance, since *kleśa*s are what make actions *karmically* consequential, that is, which lead to effects in the future. They "are called *anusaya*, underlying tendencies," one Pāli commentary explains, "in the sense that they have not been abandoned in the mental continuum to which they belong and because they are capable of arising when a suitable cause presents itself" (M 1995, 1241, n. 473).

What happens when a "suitable cause presents itself" is the core of Buddhist motivational psychology. Whenever some kind of feeling or sensation (*vedanā*) occurs, through contact (S. *sparśa*) with sense objects, for example, it tends to evoke one of these dispositions; that is, we *tend* to respond to pleasure with greed, to pain with aversion, and to neutral feeling with ignorance or indifference. We do this, the texts state somewhat tautologically, because, "underlying a pleasant feeling is the underlying tendency to greed. Underlying an unpleasant feeling is the underlying tendency to aversion," etc. (M I 303). These overtly afflictive responses in turn *tend* to evoke certain actions (*karma*), such as grasping or repulsion, whose effects reinforce the very conditions, both the *saṃskārā*s and the dispositions, that supported their arising in the first place. As these patterns are repeated, they gradually become, like furrows in the earth, entrenched habits increasingly impossible to eradicate.

These cyclic patterns at the psychological level are paralleled in cyclic patterns at the metaphysical level, as seen in the dynamic patterns driving repeated rebirth:

If, monks, one does not intend, and one does not plan, but one still has a tendency towards (*anuseti*) something, this becomes a basis for the maintenance of consciousness. When there is a basis, there is a support for the establishing of consciousness. When consciousness is established and has come to growth, there is inclination. When there is inclination, there is coming and going. When there is coming and going, there is passing away and being reborn... Such is the origin of this whole mass of suffering. (S II 67)

Since these underlying dispositions persist, even when "one does not intend or plan," they must continue relatively independently of the changing contents of conscious awareness. And so long as they "have not been abandoned in the mental continuum," the commentary reminds us, they remain ever-ready to reoccur "when a suitable cause presents itself."

Chief among the underlying tendencies "that have not been abandoned," and that are crucially important to the continued perpetuation of these cyclic patterns, are the tendency "I am" (*asmīti-anusaya*) and the "view of self-existence" (P. *sakkāyadiţthi*; S. *satkāyadrşţi*). These refer to the sense we have of ourselves as enduring entities, agents of our actions, subjects of our experiences, and objects, of course, of intense emotional attachment. These dispositions not only prolong *saṃsāric* life: for as long as "that view of self-existence has become habitual and is not eradicated," the Buddha declares, so long will it remain a fetter tying one to this world (*orambhāgiyaṃ saṃyojanaṃ*). But they are also the most intractable, persisting until far along the path: "even though a noble disciple (*ariyasāvaka*) has abandoned the five lower fetters, still.... there lingers in him a residual conceit 'I am,' a desire 'I am,' an underlying tendencies persist, so does their potential to instigate the afflicted actions that "tie one to this world." But how or where these dispositions persisted, and how they were related to conscious awareness, was never systematically spelled out at this stage of Buddhist thought.

On Unconscious Processes in Early Buddhism

We can, nevertheless, discern some similarities between the latent dispositions and the consciousness that depends on karmic formations (*saṃskārā*): they both serve as continuing conditions for the arising of new afflictive emotions or new forms of cognitive awareness. And both of them remain latent or implicit, what we might call *descriptively* unconscious. They also play important roles in the feedback cycle of action, results and afflictive responses that constitutes *saṃsāric* existence. For this cycle persists not just through overtly afflictive actions and manifest cognitive processes, but also—even more intractably albeit indirectly—through the ongoing, underlying dispositions and "background consciousness" that support such actions. Inasmuch as these underlying processes persist throughout one's existences, they effectively constitute, as Wijeskera characterized *saṃsāric viññāṇa*: "the basis for all conscious and unconscious psychological manifestations pertaining to individuality as it continued in Saṃsāra

or empirical existence." And as the deepest strata of psychological life they are also the last to be transformed on the path toward liberation.

But while early Buddhists clearly recognized the persisting presence and influence of these underlying conditions, they never *systematically* contrasted them with their manifest counterparts. This only began in the Abhidharma era, when the Yogācārin Buddhists eventually conceptualized this "basis" of all *saṃsāric* existence as a distinct *ālaya*, 'base' or 'home,' consciousness, which is also closely associated with self-centered dispositions. Their point of departure for this conception remained, nevertheless, the penetrating analyses of mind and experience found in early Buddhist teachings:

- Our experienced world both depends upon and is correlative with our cognitive faculties, which themselves only respond to temporally and contextually discrete stimuli.
- Our receptivity to such stimuli is determined by the structure of our faculties and our physiological and psychological complexes (*saṃskārā*), both of which serve as *constitutive* conditions for the formation of our 'experienced world.'
- These structures are themselves con-structed through reciprocally reinforcing interactions between actions, their results, and the afflictions,
- amongst which, the continuous, underlying dispositions, particularly the sense "I am," are crucial for instigating afflicted actions.
- Finally, it is the persistence of these latent afflictions, as well as *saṃsāric viññāṇa*, that effectively defines *saṃsāric* existence and whose cessation is concomitant with liberation.

II. Abhidharma as Phenomenology of Experience

These incisive analyses of mind may have sufficed for the pragmatic aims of early Buddhist practice—were no further questions asked. But in the critical and inquisitive context of Indian culture questions quickly did arise. The Buddha, moreover, left a large body of diverse doctrines and practices from forty-five years of teaching, which his disciples hastened to organize, classify and systematize by topic, audience, and internal consistency. This process, which brought about the era of Abhidharma scholasticism (3^{rd} c. BCE – 6^{th} c. CE), turned Buddhist thought toward a productive but often problematic direction that in one way or another influenced nearly all forms of Buddhism to this day. It was within this Abhidharmic milieu that the concept of *ālaya-vijñāna* originated and developed, and in whose terms its most systematic treatments were couched.

The most important of these terms, which invited its own host of problems, was undoubtedly the allusive concept of *dharma*, the basic factors seen to influence each moment of mind. Although this term was interpreted differently by different Abhidharma schools, each following their own ontological assumptions—the *Sarvāstivādins* leaned toward pluralistic realism, the *Sautrāntikas* toward nominalism, and the Mahāyāna school of *Yogācāra* toward a kind of mentalism—they all nevertheless couched their analyses of experience in terms of *dharmas*. This 'dharmic discourse' provided contemporaneous Buddhists with a common aim, a common vocabulary, a common analytic framework, and, as we shall see, a common set of problems.

Their common aim was, as with earlier Buddhists, the eradication of the afflictions. the maleficent motives by which actions accrue karmic consequences. As the great 5th century Buddhist, Vasubandhu, states at the start of his classic Abhidharmakośa: "it is by reason of the afflictions that the world wanders in the ocean of existence," and "there is no means to extinguish the afflictions other than by the discernment of dharmas" (AKBh I 3). In order to discern these *dharmas*, Abhidharmists developed systematic methods of observing and analyzing the contents and conditions of each moment of mind. The great Pali translator, Bhikkhu Bodhi, therefore calls Abhidharma a "phenomenological psychology" since it focuses on "conscious reality, the world as given in experience" (Compendium, 1993, 4). Abhidharmists developed their analyses of "conscious reality" conceptually by systematically defining the basic terms found in earlier Buddhism and specifying the various relationships between them. This analysis necessarily focused on those factors that could be discretely identified as influencing "the world as given in experience" from one moment to the next. And it was these momentary factors-and these alone-they claimed, that are ultimately real (paramārtha-satya) and exclusively effective in influencing one's ongoing experience. Whatever could not be analyzed in terms of these dharmas, discretely identifiable factors which "carry their own mark" (AKBh ad I 2b; svalaksanadhāranād dharma),² was considered only conventionally real.

This analysis of experience in terms of *dharmas* has several essential characteristics: it is a *phenomenological* analysis of the totality of experience couched in *systemic* terms, wherein each significant factor of experience is mutually defined and distinguished from one another. That is, *dharmic* analysis is a system of mapping experience into discrete units that, like spaces on a chessboard, are formally distinct from each other, and, like phonemes of language, represent the totality of 'differences that make a difference'—at least for that system. It is therefore also *metapsychological*, insofar as it self-consciously "deals with the various concepts and categories of consciousness as the primary objects of investigation" (Piatigorsky, 1984, 8). Finally, analysis in *dharmic* terms is considered an *ultimate* account of 'how things actually are' (*yathābhūta*). All these characteristics are similar enough in intent and content to merit comparison with the modern study of psychology.

In conjunction with concerted meditative practice, this *dharmic* analysis of conscious experience provides a powerful tool for discerning one's present states of mind and the patterns of behavior and experience that constitute our ongoing existence. If the strictures of this analysis are strictly adhered to, however, they also create serious conceptual problems. For promoting the exclusive reality of those factors that identifiably affect one's momentary conscious experience simultaneously demotes other, more subtle or enduring factors to mere conventionalities (*samvṛti-satya*). Moreover, if *dharmic* analysis were limited to what we are or can be consciously aware of, and these were the *only* factors considered real and effective, then it could not provide a full account—in 'real' terms—of the very thing it set out to discern: the persistence of the afflictions until they are finally extinguished at advanced stages on the path. This engendered what we may call the Abhidharma Problematic.

The Abhidharma Problematic

The problem that *dharmic* discourse creates for analyzing both the dispositions and karma is relatively straightforward. As with early Buddhism, the afflictions are thought to continue in the mental stream until they finally and irrevocably come to an end at the time of liberation. But how could these afflictions exist in each moment of mind if, given the strictures of *dharmic* analysis, the only real and effective factors of existence must always be present and accounted for? For if the afflictions were present and *active* in each and every moment then there would be no possibility for non-afflicted states to arise, and hence no possibility for liberation.

But they cannot be both present and *inactive* at the same time because *dharmic* analysis only discerns what identifiably affects "conscious reality," and we cannot discern what is merely latent. Nor could the afflictions be *completely absent* during non-afflicted states, for once the continuity of the afflictions in the mental stream is severed they would no longer have any real existence (following the stricture that what is not present is not real), and this would be tantamount to liberation. All these problems arise from the difficulties *dharmic* analysis has in conceptualizing latency—the persistence of dispositions as present yet ineffective—in a way that is consistent with both common sense and their own Buddhist traditions.

The same kind of problems arose concerning the accumulation of karmic potential (*karmopacaya*), the potential for karmic results to come to fruition at some point in the future. Like the dispositions, the *potentiality* for karmic results must continuously exist from the time of its origination until its ultimate fruition. But how could these potentialities be present and *active* in one's mental stream without influencing one's conscious experience? And if these potentials were *inactive* and not discernibly affecting one's conscious experience, how could they be considered real or present? How, in short, could they be *dharmas*? This leads to several, equally unacceptable consequences: *either* karmic potentials are not actually real, in which case they would have no real causal power and karmic theory would be effectively invalidated; *or* they are real but inexpressible in *dharmic* terms, in which case *dharmas* cannot be the only real phenomena. In sum, the problem of latent dispositions and karmic potentialities, as well as the underlying sentience that must persist during meditative states in which all overt mental activities came to a halt (*nirodha-samāpatti*), challenged Abhidharmists to find ways to conceive of influences that are present but indiscernible.

Abhidharmists responded to these challenges in various ways. One of the schools, the *Sarvāstivādin*s, postulated a new kind of *dharma*, the "possession" (*prāpti*) of a potential karmic result which continuously exists (*asti*)—as their name suggests—in one's mental stream in all (*sarva*) three times, the past, present and future. This ongoing potentiality only becomes manifest, though, when it is presently "activated" (*kāritra*), a difference in condition (*avasthā*) that distinguishes it from its past and future states. This was criticized as an *ad hoc* solution, as following the letter but not the spirit of *dharmic* analysis.

The *Sautrāntika* school took a different tack, sidestepping *dharmic* analysis altogether by using metaphors to connote what *dharmas* could not denote. In the *Abhidharmakośa*, Vasubandhu borrowed from the early texts the metaphors of seeds (*bīja*) and 'perfumations' (or 'impressions, predispositions,' *vāsanā*) to suggest how karmic potentialities and latent dispositions might persist in one's mental stream without directly and discernibly affecting the moment-to-moment arising of mind. But he considered these merely nominal entities (*prajñaptisat*; AKBh II 36), not real *dharmas*—a tacit admission of the limitations of *dharmic* analysis.

Rather than adjusting or avoiding the properties of *dharmas*, the *Theravādin* tradition posited a new model of mind, one centered on the *bhavanga-citta*, the "life-continuum mind." Although this bears comparison with both *ālaya-vijñāna* and modern notions of the unconscious (Nyantiloka, 1977, 27-28; Cousins, 1981, 28-30), it also differs from them significantly. *Bhavanga-citta* is similar to the underlying sentience we saw in early Buddhism in that it continues on from one lifetime to the next driven by one's karma. At the time of rebirth, this "life-continuum mind" takes on certain characteristics—it is associated with specific mental factors (*sampayutta-dhammā*) and cognitive objects (*ārammaṇa*), for example—which remain the same throughout that lifetime and to which the mind naturally and repeatedly reverts whenever active, cognitive processes stop, even for a moment (*Visuddhimagga*, XIV 115). In this sense, the subliminal *bhavanga-citta* constitutes a baseline, default consciousness. As such, it also serves as the basis or condition (*pațicca*) for the arising of each new moment of cognitive awareness (XV 39). These qualities, as we shall see, are similar to the Yogācāra notion of *ālaya-vijñāna*.

The similarities stop here, though, because as soon as objects impinge upon the sense fields and instigate overt forms of cognitive awareness, the *bhavanga-citta* itself stops (XIV 115). The *bhavanga-citta* is therefore *not* a separate or continuous stream of mind that underlies or accompanies active cognitive processes. As the translator of the early medieval Theravāda compendium, *Abhidhammattaha-sangaha*, Shwe Zan Aung, warns:

it must not be supposed that the stream of being [*bhavanga-citta*] is a subplane from which thoughts rise to the surface. There is juxtaposition of momentary states of consciousness, subliminal and supraliminal, throughout a life-time and from existence to existence. But there is no superposition of such states. (*Compendium*, 1979, 11-12)

Bhavanga-citta and overt cognitive awareness are mutually exclusive forms of mind: the former stops when the latter starts. This is in sharp contrast with *ālaya-vijñāna*, which arises continuously and simultaneously with all forms of cognitive awareness.

Moreover, since the *bhavanga-citta* is intermittent, occurring only when other cognitive processes are inactive, it cannot—in and of itself—afford unbroken continuity of either the latent dispositions or karmic potentials. Rather, as Steven Collins rightly notes, karmic potentials in the Theravāda tradition continue through a succession of mental states, "some of which are moments of conscious functioning, some of which are 'unconscious' *bhavanga* mind," but there is "no underlying connecting thread, save the overall force of *karma* which creates them" (1982, 248). The Yogācāra school would soon challenge this notion, claiming that the simple succession of intermittent and distinct forms of cognitive awareness—each of which depends upon its respective sense faculty and sense objects—cannot provide the continuous and stable basis necessary for such potentialities to persist uninterruptedly.

Although these problems seem more theoretical than practical, they disclosed two problematic assumptions in the Abhidharmic approach. First, Abhidharmic analysis treats the contents of consciousness as if they had to be homogeneous, as if mutually contradictory factors—such as latent afflictive dispositions and manifest non-afflicted states—could not co-exist in the same 'mental stream' at the same time. If the disposition to the conceit "I am," for example, persists until far along the path, then how, Vasubandhu asks, could virtuous states such as giving ever arise? (AKBh ad V 19). This assumption is obviously untenable, as both Buddhist theory and practice demonstrated. More crucial, though, is the idea that all the factors relevant to understanding one's mind are transparent to *dharmic* analysis in the first place. As Piatigorsky observes: "the Abhidhamma does not deal with what is non-conscious, because the Abhidhamma is a 'theory of consciousness', and the rest simply does not exist in the sense of the Abhidhamma" (1988, 202, n.17).

By revealing their shortcomings, the Abhidharma Problematic undermined these assumptions of homogeneity and transparency, and shifted attention from "a theory of consciousness" to the recognition that "the great obstacles to the ascetic and contemplative life arose from the activity of the unconscious" (Eliade, 1973, xvii). The Yogācārin Buddhists for their part responded to this challenge by, in effect, combining the responses of the other schools: they conceived of an underlying, subliminal stream of sentience that carries along in it the seeds $(b\bar{i}ja)$ and perfumations $(v\bar{a}san\bar{a})$ of karmic potentials and latent dispositions.

III. The Yogācāra Conception of Unconscious Mind

Unlike the other responses, though, the *ālaya-vijñāna* model was a *systemic* solution to the Abhidharma Problematic. It reworked the entire Buddhist model of mind around the very issues that had become problematic in Abhidharma—the continuities of latent dispositions and karmic potential—and gradually incorporated them into the larger framework, and the specific terminology, of *dharmic* analysis. The basic features of this model occur as early as the 3rd c. CE text, the *Samdhinirmocana Sūtra*, but were only fully elaborated in the 4-5th century by the illustrious half-brothers, Asanga and Vasubandhu, whose works effectively define classical Indian Yogācāra. We will trace this evolution by examining key passages from several core texts, concluding with intriguing parallels found in modern science.

Aspects of Vijñāna Recombined

The first use of the term '*ālaya-vijňāna*,' according to Lambert Schmithausen (1987, 12, 18, n. 146), appears in an early strata of the *Yogācārabhūmi*, a voluminous 3-5th century text attributed to Asanga. It is portrayed there as a kind of basal consciousness which persists uninterruptedly in the material sense-faculties during a meditative state in which all overt mental processes cease (*nirodha-samāpatti*). When these processes begin again, they cannot arise based on immediately preceding manifest mental processes, since these have completely stopped; rather, they arise from previously existing causes, persisting as 'seeds' 'embraced' or upheld (*parigrhīta*) throughout the meditation by the underlying *ālaya* consciousness. The text thus distinguishes two kinds of cognitive process. The first are the traditional six forms of cognitive awareness, which are now collectively called 'arising,' 'functioning' or manifest consciousness (*pravṛtti-vijñāna*), insofar as they arise in conjunction with specific cognitive objects. These are contrasted with an uninterrupted stream of sentience (*vijñāna*) called '*ālaya*,' a multivalent term which means 'home,' 'base,' or 'store,' as well as 'clinging.'³ What was merely implicit in the early Pāli texts is now made explicit in the *Yogācāra* texts: a distinction between discrete, discontinuous forms of cognitive awareness and a continuous, underlying sentience.

It is in the fifth chapter of the *Samdhinirmocana Sūtra*, though, that we find an outline of a wholly new model of mind centered on this underlying *ālaya* awareness. Introduced as the "mind with all the seeds" (*sarvabījaka-citta*), *ālaya-vijñāna* is said—like *samsāric viññāna* in the Pāli texts—to descend into the womb at conception and then to "mature, grow, develop and increase" in dependence upon certain enduring conditions. It arises, the *Sūtra* says (V.2), depending upon the material sense faculties and "the predispositions toward proliferation of conventional images, names, and concepts" (*nimitta-nāma-vikalpa-vyavahāra-vāsanā*; reconstructed from Tibetan). In other words, this mind which 'stores' all the seeds, the potentialities for future experiences, arises conditioned by complex cognitive schemas and the sense faculties that subserve them—both of which, of course, are constructed from past experiences.

They are constructed, the text explains (V.3), in large part through the reciprocal relationship between these two kinds of consciousness. First, $\bar{a}laya$ awareness is said to be "heaped up ($\bar{a}cita$) and accumulated (*upacita*) by visual forms, sounds, smells," etc., that is, by the objects of the six 'functioning' consciousnesses. And these functioning consciousnesses, in turn, arise not just in dependence upon the sense faculties and their respective objects, as in the earlier model, but also "supported by and depending upon" this basal awareness, this $\bar{a}laya$ consciousness (V.4). Moreover, and also unlike earlier models, all forms of *vijñāna—ālaya* as well as the six 'functioning' consciousnesses—are now thought to occur simultaneously. The *Sūtra* compares this to waves arising on a stream: "If the conditions for the arising of two or many waves are present, then many waves arise, but the stream of water is neither interrupted nor exhausted in its current" (V. 5). What the text is depicting, in short, is an *intrapsychic* feedback process in which manifest cognitive processes continuously modify the underlying subliminal processes that support them—by implanting seeds ($b\bar{t}ja$) or impressions (*vāsanā*) into *ālaya* awareness, as the texts put it—which then, duly modified, support the arising of further forms of cognition, and so on.

This model presents several significant innovations in Buddhist theories of mind and cognition. Perception is now *explicitly* constructivist in a way it could not be in early Buddhism. For the contents of perception are now structured not only by the specific sense faculties that subserve them, as in early Buddhism, but also by an underlying strata of specifically mental processes, that is *ālaya-vijñāna*—which is itself structured by cognitive schemas derived from

past sensory and conceptual experience. These complex constructive processes take place not only continuously and simultaneously, they also occur mostly unconsciously.

The second innovation is thus the recognition that underlying (that is, unconscious) mental processes have cognitive functions in their own right. These occur in much the same way that manifest cognitive processes do: with the concomitance of specific causes and conditions. But since these conditions are subtle the cognitive processes they give rise to are subliminal, beyond the ken of ordinary awareness. The conditions for the arising of *ālaya* awareness are the sense faculties, the "predispositions of images, names and concepts" (to which we will return later) and, correlative with these, subliminal stimuli of various kinds. Since the body is the basis for the sense of touch as well as the other sense faculties, it is constantly being stimulated in multiple, mostly imperceptible ways-our respiratory, circulatory and digestive systems alone insure that—and these in turn constantly instigate various subtle mental processes. *Ālaya* awareness is therefore said to arise throughout the *entire* body, unlike the manifest forms of sensory cognition which only occur in connection with a single sense faculty. And correlative with these, *ālava* awareness arises with equally subtle external objects: it arises as a "perception" of an indiscernible, stable, surrounding world" (VIII.37.1; asamvidita-sthira-bhājana-vijñapti). Even without our knowing it, there are always stimuli impinging upon our faculties, stimulating subliminal processes that give rise to subtle awarenesses of our embodied existence within and "indiscernible worlds" without.

And it is these enduring and embodied conditions that provide that sense of stable identity that we unwittingly think is real. $\bar{A}laya$ awareness, the $S\bar{u}tra$ says, "flows with all the seeds, like a strong current, profound and subtle," but the Buddha dared not teach "it to the ignorant, lest they should imagine it as a self" (V. 7).

An Abhidharmic Unconscious

It is in later portions of the *Yogācārabhūmi* that these two aspects of *vijñāna* are most systematically brought together. In a text portion called the *Ālaya Treatise* (following Schmithausen's nomenclature), the *ālaya-vijñāna* complex is fully described in *dharmic* terms, using the analytic categories of classic Abhidharma—but the discussion is framed in terms of the 'samsāric' aspects of (*ālaya-*) *vijñāna* we saw in the Pāli texts, that is, insofar as *ālaya-vijñāna* either persists (*pravṛtti*) or desists (*nivṛtti*). This is patently clear in the structure of text. The first

four sections describe in full Abhidharmic detail how *ālaya-vijñāna* continuously arises (*pravrtti*) due to specific causes and conditions, while the last section discusses its eradication and ultimate cessation (*nivrtti*) on the way to nirvana. It is worth examining this in some detail.

This text analyzes the cognitive functions of *ālaya-vijñāna* more systematically, more 'abhidharmically,' than any other in the Yogācāra corpus. *Ālaya* awareness is said to arise accompanied by the same five "omnipresent factors associated with mind" (*citta-samprayukta-sarvatraga*) that Yogācārins contend co-occur in every moment of waking consciousness: attention (*manaskāra*), sense-impression (*sparśa*), feeling (*vedanā*), apperception (*samjñā*), and volitional impulse (*cetanā*). The difference here is that all these processes are said to be "subtle (*sukşma*)... hard to perceive, even for the wise" (*Ālaya Treatise*, 1.b)B.1, following Hakamaya's outline). They are also similar to their conscious counterparts in that they all arise "in the same manner regarding a single object (*ekālambana*)."

The object they are directed towards is, as in the *Sūtra*, both correlative with and appropriate to the subtlety of the faculties and mental processes accompanying *ālaya* awareness: "an outward perception of the stable surrounding world whose aspects are indistinct." How this occurs is spelled out more clearly here. This perception, the text explains, is

a continuous, uninterrupted perception of the continuity of the surrounding world based upon that very *ālaya-vijñāna* which has inner appropriation as an objective support. (*Ālaya Treatise*, 1.b)A.2).

Our subtle "perception of the stable surrounding world," in other words, arises as a mode of subliminal awareness that is at the same time conditioned by its own "inner bases" or "appropriations" (*adhyātmam upādāna*), that is, the material sense faculties and, in this text, the "predispositions of attachment to the falsely discriminated" (*parikalpita-svabhāvābhiniveśa-vāsanā*). This process is tellingly compared "to a burning flame which arises inwardly while it emits light outwardly on the basis of the wick and oil" (1.b)A.3). That is, our subliminal perception of the surrounding world depends upon the 'wick' of our cognitive faculties, and the 'oil' or fuel of our cognitive categories, the "predispositions, etc."⁴ And what provides this 'fuel' here, as in the *Sūtra*, is the continuous interaction between *ālaya* awareness and the manifest cognitive processes.

More explicitly than the $S\bar{u}tra$, these two kinds of cognitive processes are now said to be continuous, simultaneous (sahabhava) and reciprocal conditions (anvonva-pratvavatā) of each other. That is, *ālaya* awareness is said to support the arising of the manifest cognitions by "being their seed and providing their support" (3.b)A), while the manifest cognitions "nurture" or "fatten" (*paripusti*) those seeds and propel the continuous flow of *ālaya* awareness into the future (3.b)B). Following the analogy of waves on a stream, we could say that the underlying currents of *ālava* awareness support the 'waves' of perceptual consciousness by mediating the embodied structures of the material sense faculties and the current of cognitive schemas, on the one hand, and by 'holding' the seeds, the causal potentials, for more waves to arise in the future, on the other. The surface waves of perceptual consciousness for their part incessantly "infuse the impressions" or seeds (*vāsanā-bhāvayati*) for their future arising into the stream of *ālaya* awareness, developing and "fattening" those potentialities so they gradually become "well nurtured, well-tempered and quite distinct" (3.b)B.1). These two processes occur simultaneously since each wave that arises—supported by the underlying currents of *samskārās* from the past and buffeted by the intermittent winds of sensual stimuli in the present—is always and unavoidably a transformation of the stream itself.

This multi-tiered and interactive model of mind is compatible with the terminology, if not the tenor, of contemporaneous Abhidharmic analyses of mind. It attempts to articulate in *dharmic* terms the continuous yet subliminal processes that could not be readily expressed in standard Abhidharmic analysis: subtle bodily awareness and subliminal perception, the persistence of karmic potentialities and latent dispositions, and the implicit influences all these impart on ordinary cognition. But just because these processes are multifarious and complex, they do not and cannot refer to any singular entity, any acting agent or experiencing subject, much less to an '*ātman* in disguise' as *ālaya-vijñāna* was often caricatured. The *pravrtti* section of the *Ālaya Treatise* clearly warns that "although *ālaya-vijñāna* is momentary regarding its object, and even though it arises continuously in a stream of instants, it is not singular (or 'unitary': S. **na ekatva*; Tib. *gcig pa nyid ni ma yin no*)" (1.b)B.3). We ought not to reify it.

The Affliction of "I am" Revisited

But, as the *Saṃdhinirmocana Sūtra* warned, this is exactly what we are wont to do. Since *ālaya* awareness has the most continuity and consistency of any of our mental processes (like the *bhavaṇga-citta*, it is said to "arise with a single flavor" (*ekarasa*) throughout one's life; 1.b)B.2.), and since it is so closely associated with our embodied existence, our persisting dispositions and accumulating experiences–our bodies, emotions and biographies–it is precisely this underlying awareness we most identify with, hold onto and consider our 'self.' This self-grasping and self-view is so strong and so persistent that Yogācārins treat it as a specific kind of 'mentation' (*manas*), one

whose mode is conceiving (*manyanā*) 'I-making' (*ahaņkāra*) [and] the conceit 'I am' (*asmimāna*), [and which] always arises and functions simultaneously with *ālaya awareness* taking *ālaya awareness* as an object, conceiving [it] as 'I am [this]' (*asmīti*) and '[this is] I' (*aham iti*)'' (*Ālaya Treatise*, 4.b) A.1.(a).

But this raises the age-old problem. As we have seen in early Buddhism, the sense of 'I am' persisted even in "a noble disciple" (*ariyasāvaka*) until far along the path, and accounting for its continuity through all states of mind, even virtuous ones, vexed Abhidharma theorists. Yogācārins addressed this problem in the same way they did the accumulation of karmic potential and the continuity of '*saṃsāric viññāṇa*': by conceptualizing a distinct, continuous yet subliminal locus of self-centered thoughts and feelings that are *karmically* neutral and that may therefore occur simultaneously with, but not contradictory to, *supra*liminal processes of various kinds. The text explains:

Know that until it is completely destroyed [this mentation] is always associated with the four afflictions that by nature arise innately (*sahaja*) and simultaneously: a view of self-existence (*satkāyadṛṣți*), the conceit "I am" (*asmimāna*), self-love (*ātmasneha*), and ignorance (*avidyā*).... These afflictions arise without impeding (*avirodha*) the [karmic quality] of skillfulness, etc. in states of meditative collectedness (*samāhita*) or non-collectedness (*Ālaya Treatise*, 4.b)B.4).

These distinct subliminal processes that take the underlying and ongoing *ālaya* awareness as their object of self-grasping, etc., will be designated "afflictive mentation" (*kliṣṭa-manas*) in Asaṅga's *Mahāyāna-saṃgraha*. When added to the traditional six forms of cognitive awareness, they will be enumerated, especially in East Asia, as a seventh kind of consciousness, with *ālaya-vijñāna* then counted the eighth.

These latent dispositions, however, remain just that: latent and inactive. To perpetuate cyclic existence they have to be rendered into afflictive, karmic activity. This occurs by means of mental cognitive awareness (*mano-vijñāna*), the traditional sixth form of consciousness. As long as mental cognitive awareness arises "based upon [afflicted] mentation," the text states, it will "not be freed from the bondage of perception in regard to phenomena (*nimitta*)" (4.b)A.2.). In other words, as long as our conscious awareness is influenced by the deep-seated and subliminal view of self, love of self, etc., we will never stop seeing the world in terms of 'I' and 'mine,' self and other, entailing all the maleficent and misguided actions such self-centeredness typically involves. And this, Yogācārins agree with other Buddhists, persists even in Arhats who are far along the path toward liberation, on the Path of Seeing (ASBh 62.3ff).

Unconscious Structuring of Intersubjective Worlds through Evolutionary Actions

With the addition of afflictive mentation (*klista-manas*), the Yogācārins have formulated a model of mind in which *sub*liminal cognitive and affective processes interact with and reinforce *supra*liminal processes. Together, these constitute the conditions whereby a 'world' (*loka*) comes into being—not an external, objective world independent *of* experience, as modern science tends to assume, but a world interdependent *with* experience, one which, as in early Buddhism, is necessarily correlative with our sense faculties and cognitive capacities. But how can this be? How can our misconstruals of reality, our misplaced sense of self, and the actions these elicit, actually bring forth a 'world of experience'? Isn't this the epitome of idealism, as critics both ancient and modern have commonly construed Yogācāra? Not necessarily. There are other ways to consider this, ways both inspired and paralleled by the modern perspectives of science.

Evolved Worlds

As discussed above, Indian Buddhists held that our 'world' gradually comes into being through the feedback relationship between our embodied *saṃskārās* (i.e. our sense faculties, cognitive schemas, etc.), the forms of experience these give rise to, and the afflicted actions (*karma*) that such experience typically elicits—which in turn reinforce those very *saṃskārās*. This is more than just a theory of habit formation, however. It is also a theory of evolutionary development in which the cognitive faculties evolve with through constant repetition and reinforcement over 'countless lifetimes,' as the Buddhists put it, until they become "progressively more well nurtured, well-tempered and quite distinct" (*Ālaya Treatise*, 3.b)B.1). In other words, the cognitive schemas that structure human cognition—the embodied *saṃskārās* and entrenched dispositions—have themselves played an indispensable role in the very activities that, over the long term, have helped shape human existence and the 'worlds' we experience. How we see and think and feel and act has been instrumental in making us who we are.

In Darwinian theory, evolution occurs through differential reproductive success whereby, through natural selection, organisms who reproduce more prolifically pass on more of their heritable characteristics. Over multiple generations this gradually reinforces whatever physiological or psychological characteristics lead to more reproductively successful interactions between individuals of that species and their natural and social environments. As they develop, these characteristics reinforce the very behaviors that lead to further reproductive success, and so on—a pattern widely recognized as "a circle of positive feedback" (Carrithers, 1992, 48). For human beings this prominently includes whatever activities preserve one's personal existence and result in reproductive success, as well as the desire for and defense of the means to achieve these ends. In other words, a sense of personal existence (*satkāyadṛṣți*), as well as the dispositions toward lust and aggression, have exerted crucial *causal* influences in the evolution of our species—and by extension the evolution of our 'world.' As the 5th c. CE Buddhist, Vasubandhu, notes: "the afflictive dispositions [are] the root of existence" (AKBh ad V 1a; *mūlaṃ bhavasya anuśayāḥ*).

The means whereby this takes place in Buddhism and biology—through the feedback cycles of rebirth or of natural selection, respectively—differ radically, of course. But their basic

causal patterns are analogous, as are the causal influences they ascribe to our embodied and afflictive cognitive schemas.

The most important nexus of these cognitive schemas for human beings, one that is not only embodied in our various *saṃskārā*s but also gives rise to our most entrenched affliction—our anxious sense of self-existence (*satkāyadṛṣți*)—is language, or, more precisely, linguistic forms of symbolic representation used in human communication.

Language is instrumental in the arising of our distinctively human world in two ways. From the day we are born (and even a bit before), language learning affects the neurological structures of our developing brains, creating the physiological and psychological complexes (*saṃskārās*) and categorical distinctions that facilitate distinctively human forms of consciousness. These linguistic influences are so strong, neurophysiologist Terrance Deacon argues, that "we cannot help but see the world in…symbolic [i.e. linguistic] categorical terms, dividing it up according to opposed features and organizing our lives according to themes and narratives" (1997, 416).

Our species did not start off this way, though, we evolved into it. Just as our cognitive faculties evolved along with our species-specific cognitive 'worlds,' so too, by most accounts, did our uniquely human brain structures *co-evolve* along with our linguistic/cultural worlds, reciprocally reinforcing each other until they radically and irrevocably transformed both the structures and the processes of human cognition. "The physical changes that make us human... evolved in response to the use of something as abstract and virtual as the power of words," (332) Deacon argues. As a result, "brain-language co-evolution has significantly restructured cognition from the top-down," so that it has come "to influence the whole of human cognition... even when our linguistic abilities are uninvolved" (417). As Lakoff and Johnson also noted above, such categories are not something simply added on to human consciousness, after the fact; they are *constitutive* of it. We are thus no longer naked apes living in trees on the savannah, but denizens of cognitive domains of our own devising, both empowered and impaired by the now indispensable prostheses of language and culture.

For our distinctively human modes of consciousness—that is, our linguistically informed⁵ consciousness—depend upon much broader, but much less stable, bases than the sense faculties of any single individual, since language is by its very nature inescapably intersubjective. But for this very reason it also affords modes of awareness that supersede the individual: "We live our lives in [a] *shared virtual world*" (22), Deacon declares, because "the evolution of... [linguistic] communication... created a mode of extrabiological inheritance... [that] is intrinsically social", one that evolved, he continues, "*neither inside nor outside brains, but at the interface where cultural evolutionary processes affect biological evolutionary processes*" (409f; emphasis added).

This suggests a radically different view of that most precious by-product of our "shared virtual world": our special, specious sense of self. It is only through conceptual categorization that we are able to fully objectify ourselves in contrast to others and in relation to remembered pasts and anticipated futures—contextual and temporal relationships that *belie the very autonomy they appear to affirm*. "It is a final irony," Deacon concludes, "that it is the virtual, not actual, reference that [linguistic] symbols provide, which gives rise to this experience of self. This most undeniably real experience is a *virtual* reality" (452).

Most of this, though, occurs quite without our knowing it. Our "shared virtual world," which arises in correlation with the common cognitive structures and linguistic categories that inform human consciousness, is so deeply engrained and so utterly habituated that it occurs almost automatically and nearly unconsciously in every moment of mind. We live in a consensually constructed cosmos whose structuring mechanisms, both the mediate and the immediate, are effectively outside our awareness.

Buddhist Worlds

This set of ideas—the role of language in distinctively human consciousness, in the evolution of our species and our species-specific 'world', and in the intersubjectivity of self-awareness itself—are also the most fascinating aspects of the conception of *ālaya* awareness in the classical treatises of Yogācāra. Although these ideas are adumbrated more than developed, their import is clear enough: our conflicted, 'self'-inflicted, 'self'-haunted human worlds are a collective, yet unconscious, construct.

Language, we have seen, is at the basis of the Yogācāra model of mind. In the *Saṃdhinirmocana Sūtra*, *ālaya* awareness arises based upon the sense faculties and "the predispositions toward proliferation of conventional images, names, and concepts," which the *Yogācārabhūmi* repackaged as the "predispositions of attachment to the falsely discriminated." It is Asaṅga's *Mahāyāna-saṃgraha* and its commentaries, though, that draw out the deeper

implications of what they call the "predispositions or impressions of speech" (*abhilāpa-vāsanā*) and their effect on ordinary cognition. When manifest cognitive awareness arises in terms of selves (*ātman*) and 'things' (*dharma*), etc., the commentary explains, it does so due of the *special power* (*śakti-viśeşa*) of the impressions of conventional expressions (*vyavahāra*) informing *ālaya* awareness.⁶ That is, we see and think and feel in terms of 'selves' and 'things' because our overt cognitive processes are subtly conditioned—"even when our linguistic abilities are uninvolved" (Deacon, 416)—by the everyday expressions, the categories and figures of speech, which inform our underlying cognitive structures. And our perceptions of the world in terms of 'selves' and 'things' tend to be similar, the text continues, precisely because our underlying cognitive structures have been "infused" (*paribhāvita*) by the impressions of language, a shared medium that allows us to inhabit a "shared virtual world."

These expansive ideas are introduced in a few terse passages of Asanga's *Mahāyāna-samgraha* (MSg), which are clarified in the commentaries. According to MSg I.60, *ālaya* awareness has both common $(s\bar{a}dh\bar{a}rana)^7$ and uncommon dimensions:

The common [dimension of *ālaya* awareness] is the seed of the shared world (*bhājana-loka*). The uncommon [dimension of *ālaya* awareness] is the seed of the individual sense-spheres (*prātyātmikāyatana*). (MSg I. 60)

To fully appreciate this we must briefly revisit the idea of a 'world.'

Although a common term, the notion of a "shared, surrounding, or receptacle world" (*bhājana-loka*) is usually disregarded or casually dismissed in most accounts of Buddhist thought, since it seems to say that an objective, independent, external world, such as assumed by modern science, has been created by the actions (*karma*) of living beings. But if we examine the idea of 'world' in its context (Collins, 1982, 43-45), it is much closer to an 'environmental niche.'

In early Buddhism, as we have seen, it is the responsive structures of the sense faculties that determine the contours of the 'worlds,' the cognitive domains, that can be experienced by particular beings. These are not independent worlds in the scientific sense, they are "the world as given in experience" (Bodhi, 1993, 4), correlative with and dependent upon the sense faculties. Thus, as the sense faculties grow and evolve so, too, do the correlative worlds that co-evolve along with them. And since the faculties grow and evolve due to the activities, the karma, of

sentient beings, so, too, do these correlative worlds. Thus, Vasubandhu can reasonably state that "the world in its variety arises from the action (*karma*) of beings" (AKBh *ad* IV 1a).⁸

But why is the 'world' shared? Asanga explains that it is the *common and uncommon actions* of sentient beings that bring about the shared, inanimate (*bhājana-loka*) world and the world of individual beings (*sattva-loka*), respectively.⁹ The commentaries to the MSg explain this and correlate it to the two dimensions of *ālaya* awareness. The first commentary simply notes that there would be no shared world which sentient beings enjoy in common if there were no shared dimension of subliminal *ālaya* awareness,¹⁰ which the second commentary relates to MSg I.60 (just cited):

[The statement:] "The common [dimension of *ālaya* awareness] is the seed of the shared world" means that it is the cause (*kāraṇa-hetu*) of perceptions (*vijñapti*) which appear as the shared world. It is common because *these perceptions appear similarly to all who experience them through the force of maturation* (vipāka) *that is in accordance with their own similar karma*. (U 397c12f; u 267a8-268a1).

Simply put, our 'world' appears to us in similar ways because we have the similar karma to experience it similarly.

But how does our karma, the results of our past actions, make our world similar? And how or why would we have performed similar actions in the first place? The short answer to these large questions is, as with Deacon, the influences imparted by language.

The similarity of our worlds is deeply implicit, and hence largely unstated, in the notion of karma in the classical Indian world-view. In this view, similar actions lead over the long-term to similar results. Since all members of the human species have similar kinds of bodies, the actions, the karma, that brought about their human rebirth are, to that extent at least, similar. And since our similar bodies have similar cognitive structures, which both facilitate and circumscribe what we can normally see and think and feel, we experience a common, correlative world, a species-specific 'world,' that is distinct from, for example, that of cats, bats or gnats. In other words, the contours of our shared human world have evolved in tandem with the evolution of our common cognitive capacities, which result from a common causal history. As the text says, perceptions of our shared world "appear similarly to all who experience them ... in accordance with their own similar karma."

This common, species-specific 'world' of human beings is brought about by the "extrabiological inheritance" which arose "neither inside nor outside brains, but at the interface where cultural evolutionary processes affect biological evolutionary processes," i.e. by language. Lying near the base of our cognitive processes, linguistic categories provide the shared cognitive structures, the "common dimensions" of *ālaya* awareness, that give rise to a "shared, virtual world." And since categories such as "selves and things" provide similar conditions for similar kinds of cognitive awareness to arise, they also tend to provoke similar responses, that, in turn, give rise to similar results. That is, actions that are informed and instigated by similar schemas and similar intentions give rise over the long term to similar faculties that allow us to experience a similar world.

In sum, the feedback relationship between our cognitive structures, our perceptions of the world, and our actions and their results, operate at a number of levels: not only *synchronically*— between *ālaya* awareness and manifest forms of cognitive awareness—but also *diachronically*— between our previous experience as language users and our present dispositions conditioned by those "impressions of language." These two relationships operate both within a single lifetime and, in traditional Buddhist terms, over multiple lifetimes. In addition, the MSg is now describing a third, unconscious yet thoroughly *intersubjective*, feedback system, which, like the other two, continuously perpetuates cyclic existence, but, unlike them, also bridges our individual and collective experiences of the 'world.'

Where then does distinctively human consciousness arise? It could be argued that since the cognitive world that language facilitates is "intrinsically social," and has evolved "neither inside nor outside brains," then our common forms of cognitive awareness—dependent upon our common, linguistified cognitive structures—are ultimately inseparable from our common, shared world—dependent upon our common, species-specific cognitive structures. Deacon, for one, does not evade what this entails. Since

[linguistic] symbolic reference is at once a function of the whole web of inferential relationships and of the whole network of users extended in space and time... a person's symbolic experience of consciousness ... is not within the head ... This [symbolic] self is indeed not bounded within a mind or body... [it] is intersubjective in the most thoroughgoing sense of the term. (Deacon, 1997, 452f)

Much like Deacon's notion, the most systematic Buddhist conception of unconscious mind, *ālaya-vijñāna*, transcends the boundaries of individual minds just as it transcends the boundaries of its originating milieu. The attempt to identify the relevant conditions for the arising of cognitive awareness, the original genius of early Buddhism, eventually led to a recognition of the cultural and social worlds that we collectively, continuously, nearly unavoidably, and mostly unknowingly create, facilitate and perpetuate. And it is our unconscious habits of body, speech, and mind to which we are habituated that give rise, over the long term and in the aggregate, to the habitats we inhabit. And, this, we submit, was as pertinent and obvious to fifth-century Buddhists as it is, or ought to be, to twentieth-first century perspectives.

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- AS Abhidharmasammucaya. T.31.679b24-27; P. 102b6-8.
- ASBh *Abhidharmasammucaya-bhāṣyam*. (1976). (Tatia, N., Ed.). Patna: K. P. Jayaswal Research Institute.
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- bh Mahāyāna-samgraha-bhāṣyam, Tibetan translation of Vasubandhu's commentary on MSg., P.#5551; D.#4050.
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¹ Although the earliest body of Buddhist literature, the Pāli Canon, is preserved not in Sanskrit but in Pāli, for convenience's sake I will use the Sanskrit term throughout. Etymologically, *vijñāna* comprises the prefix '*vi*-,' conveying the sense of 'separation' or 'division' (and related to the Latin '*dis*-'), plus the verbal root '*jña*,' 'to know' (cognate with the Greek 'gnosis,' the Latin '(co)gnitio,' and the English 'know'). It conveys the sense of 'awareness of, or on account of, differences,' a sense that is explicit in later Abhidharma.

² This definition of *dharma* exploits the etymology of *dharma*: '*dhr*' 'to hold, bear, carry, maintain, preserve, keep, possess, place, fix, etc.

³ \overline{A} laya is composed of the prefix ' \overline{a} ,' 'near to, towards,' with the verbal root, ' $l\overline{i}$,' 'to cling or press closely, stick or adhere to, settle upon, etc.' (SED 154; PED 109).

⁴ The term 'base' or 'appropriation' (*upādāna*) also has the sense of "fuel, supply, substratum by means of which an active process is kept alive or going" (PED 149).

⁵ We use 'informed' in the sense of effecting something coming into form, "to give shape to, fashion, impart quality to" (*Concise Oxford Dictionary*).

⁶ Bh. 336c5f; bh. 168b7f; U 397a24-b4; u 266b4-267a1.

⁷ The term *sādhāraņa* here means "having or resting on the same support or basis" (SED, p. 1202).

⁸ AKBh ad IV 1.a: sattvānām karmajam lokavaicitryam; also ad II 56b, 57b.

⁹ AS, T.31.679b24-27; P. 102b6-8.

¹⁰ Bh 337a28ff; bh 169b5.