

# LIVING COSMOS PANPSYCHISM<sup>1</sup>

*Freya Mathews*

## 1. Introducing Panpsychism

According to the view that I am calling panpsychism, mind is a fundamental aspect of matter. That is to say, although mind cannot exist independently of matter, matter also cannot exist independently of mind. Mind is a part of what matter most fundamentally is. There is in this sense no ‘brute matter’; the purely externalized ‘stuff’ proposed by classical physics has no correlate in reality. Whether the ‘inner’ properties hereby ascribed to matter are characterized in terms of intentionality, agency, teleology or more overtly psychological characteristics, such as consciousness, apperception, phenomenality, sentience, conativity, subjectivity or spirit, they cannot be captured in purely extensional terms. Such a view of the nature of reality may be theorized in a variety of very different ways, from Leibniz’s monads, W. K. Clifford’s ‘mind stuff’, Whitehead’s ‘prehending’ particles and William James’ ‘mind dust’ to the self-active universes of Spinoza, Schelling and David Bohm, to the intelligent life-systems of Gregory Bateson, or the scenario of nature-as-agent adopted by environmental philosophers such as Val Plumwood. (For a review of panpsychist streams in the history of ideas, see Skrbina 2005). All these philosophers argue that mentality, in some sense, is a fundamental aspect of materiality, and that the world around us has a depth dimension, inaccessible to observation, as well as an observable structure: it is a psychically textured terrain of embodied subjects or intelligences rather than a flat manifold of purely externalized entities.

This type of view has a long history, not only in Western thought but in many other traditions as well. In the West it was very much in abeyance throughout the 20th century, as metaphysics itself had fallen into disrepute as an academic discipline. But it has recently started popping up again in a variety of discursive contexts. Although one can distinguish between several different contemporary streams of panpsychist thought, my main aim here is to discuss the significance of panpsychism within environmental philosophy.

## 2. Environmental Philosophy

Over the last four decades, environmental philosophers have argued that the environmental crisis produced by industrial development on a global scale is the result of an anthropocentric outlook that permeates the Western tradition and in particular science and its epochal offshoot, modern civilization. Anthropocentrism is the expression, in the moral sphere, of the dichotomization of categories such as the human and the non-human, or culture and nature, where such dichotomization in turn

rests on a strict dualism of mind and matter: mind is the province of the human; matter *sans* mind is the province of nature. Without mental attributes, material things or systems cannot matter to themselves and therefore it does not matter, morally speaking, what happens to them. If mentality is the exclusive province of humans, then only humans intrinsically matter – only humans are entitled to moral consideration in their own right. The non-human realm – the realm of mere matter – is valuable, and hence morally considerable, only insofar as it serves human purposes. We humans can accordingly use nature as we see fit.

Environmental philosophers mostly agreed that it would be necessary to restore mentality to nature if nature were to become a legitimate object of moral concern and consideration in its own right. They differed however in their various understandings of mind and also in the scope they assigned to the term, *nature*. For some, nature was understood in strictly biological terms; it was considered by others under its cosmological aspect. In the following section I shall review three versions of environmental panpsychism: the new animisms; mind-in-nature type views or panpsychism-without-consciousness; and cosmological or ‘living cosmos’ panpsychism.

### 3. Environmental Versions of Panpsychism

#### 3.1. New Animisms

New animists tend to borrow their ontology from pre-scientific, often Indigenous, worldviews, attributing mental status to biological entities, such as organisms and populations, and to ecological systems, such as vegetation communities, in something like the way pre-scientific cultures often attributed spirit to trees, groves, springs, rivers, forests, animals and such like. In adopting the term animism, however, new animists are sometimes at pains to mark their difference from earlier, colonial conceptions of animism by pointing out that in Indigenous cultures conceptions of mentality were not drawn from a human paradigm but rather included the human as a minor subset of a prior realm of mind construed as co-extensive with nature (Rose 2013). Mind, in other words, was paradigmatically the kind of mentality distributed so variously, with such multi-functionality, right across nature rather than the kind of reflexive, language-centred consciousness we find in ourselves.

Rather than seeking to provide a theoretical account of this prior realm of mind however, new animists are generally happy to leave the actual metaphysical underpinnings of their position relatively unexamined, asserting that their goal is not to explain the world, via appeal to fully theorized metaphysical categories, but to institute new protocols for being in the world. These protocols are, again, generally inspired by modalities exemplified in Indigenous, often hunter-gatherer, societies. In terms used by Graham Harvey (2005), a prominent proponent of the new animism, we are to treat all things in the world as persons. To treat them as persons is not to impute dualistically conceived spirits or souls to them, as 19th-century anthropologists supposed that animists did, though it is indeed to see things as alive. Being alive, however, may be defined more in terms of due protocols than in terms of theoretical conditions that things must satisfy in order to count as alive. To treat things as persons is to treat them personally, where this means negotiating with them in matters that concern them. Harvey compares living in an animist world to walking down a crowded street: one does not simply plough through the crowd, mowing down whomever happens to be in the way; rather, one weaves in and out, giving way to someone here, being given way to by someone else there. One negotiates the crowd instinctively and pragmatically, without needing to deliberate. A principle of respect for the personhood of other people underlies this negotiation, though such respect need not in any way be sentimentalized: to respect the personhood of others in a crowd does not imply that one likes them or is obliged to care for them.

The new animist viewpoint provides a rich basis for ecological practice, and has been widely embraced by pagans, wiccans and other practitioners of nature spirituality. It has also inspired

ecological philosophers and theorists such as David Abram, Patrick Curry and Deborah Bird Rose. Personally, I also find this new animism appealing and I acknowledge its contribution to ecological ethics in a contemporary context. I am happy to adopt and follow its protocols. However, from within the reference frame of the Western episteme, such animism does leave certain philosophical questions unaddressed: which entities can count as alive, in the animist sense? In many animist cultures rocks, for example, may count as inspirited but human artifacts, such as tables or cars, do not. Why so? And how can entities, such as hills, mountains, woods, streams or springs, which are often invested with an animist principle, count as living things when their identity is clearly nominal? Such things are often part of other, more extensive landforms or systems rather than clearly individuated entities or systems in their own right. In any case, what is it about animate things that entitles them to be treated with respect, as persons? Moreover, in animism there does seem to be a localism that, though a healthy counterpoint to the tendency of Western colonial thought to universalize its own self-serving assumptions, nevertheless perhaps overlooks the spiritual significance of the larger universe – a question to which I shall return later.

### 3.2. *Mind-in-Nature Views or Panpsychism-Without-Consciousness*

Not all environmental philosophers are content merely to borrow Indigenous protocols in the manner of the new animists. Some have tried to provide theoretical analyses of mind that could address the kinds of questions animism sets aside. While at least one of these philosophers, namely Val Plumwood (2009), does describe herself as a philosophical animist, others eschew both animism and panpsychism as labels while nevertheless developing outlooks that infuse nature with mind. The form of mentality attributed to nature however is often distinguished from consciousness, if consciousness is defined as experience in the inner, subjective, introspectively accessible or phenomenal mode that is the distinctive mode of mind in humans and certain animals.

I shall call such a view of mind-in-nature, *panpsychism-without-consciousness*, and in this section I shall examine Plumwood's version of it.<sup>2</sup>

Plumwood's panpsychism revolves around the logical category of intentionality. The roots of her account lie in a work she partly (though cryptically) co-authored with her then husband, Richard Routley, entitled *Exploring Meinong's Jungle and Beyond*, a thousand-page tome addressing the riddle of intentionality in logic.<sup>3</sup>

To track Plumwood's view, let us start with an explanation of this riddle. There are aspects of nature that, while not indicative of mind in the sense of consciousness, nevertheless express properties that are not, and cannot be, manifest to observers. These aspects are not, in other words, part of the extensional order of nature, accessible to ordinary empiricism; they cannot be fixed by ostensive reference. Such aspects include the causal powers and dispositions of things, where a disposition is the tendency of a thing to behave in a particular way in particular circumstances. Powers or dispositions cannot be observed in the way that ordinary empirical properties, such as shape, size and colour, can. At the level of appearance all that indicates the presence of a causal power is the fact that whenever event E1 occurs in certain specified circumstances, it is followed by event E2. It may be inferred from observations of this type that there is something in the first event – a certain power – that causes the second, since otherwise why would the second event invariably be predictable or even occur? This power itself however is not observable; it is not manifest in the appearances but is hidden and can only ever be inferred from the appearances, just as the presence of mind in sentient beings is hidden to observers and can only ever be inferred from appearances. Whatever is hidden but ascribable to things in this way, whether it pertains to thought or merely to matter, logically belongs to the realm of the intensional.

Intensionality is puzzling to logicians because it does not fit the extensionality of their semantical model, a semantics designed to corroborate an empiricist epistemology and a reductive materialist

or mechanistic metaphysic. The semantical model in question is extensional in the sense that the meaning of a term is generally given by its extension, the class of referents the term picks out. So, for instance, the meaning of the term 'red' is given by the class of all red things. We learn what 'red' means by having red things pointed out to us. We cannot however learn what the expression 'the causal power of billiard balls to move other billiard balls' means by having such causal powers pointed out to us. Causal powers cannot be pointed out because they are not empirically manifest. Even the class of all instances of billiard balls moving other billiard balls does not constitute the extension of the expression, 'the causal power of billiard balls to move other billiard balls', because causality presumably involves an element of necessity: billiard balls do not just happen to set other billiard balls in motion; there is, or at least seems to be, a certain necessity in such causal sequences. Necessity, together with other modal properties, such as possibility and contingency, categorically goes beyond the appearances: we cannot directly observe the necessities, contingencies or possibilities of a thing's nature. The meaning of modal terms accordingly also cannot be given extensionally.

In order to explain how modal terms can be meaningful, given that they do not conform to the extensional approach, logicians resort to the apparatus of possible world theory. The meaning of modal concepts is then explained by reference to events not only in the actual world but also in possible worlds. So, to revert to billiard balls, when we say that billiard ball A possesses the causal power to move billiard ball B in specified circumstances, we mean that in all possible worlds in which A strikes B in the circumstances in question, B will be set in motion. It is the holding of this particular sequence of events across all worlds, or across all worlds in which the first event occurs, that indicates the presence of necessity. This is an example of the lengths to which logicians have to go to provide a semantical analysis of intensional concepts: the meaning of such concepts cannot be 'read off' the appearances in the way the meaning of straightforwardly empirical concepts can.

However, as Richard Routley pointed out, the hidden or non-manifest aspects of the world indicated by intensional terms are not rare and exceptional. Physics is full of them, inasmuch as many of its variables can only be defined dispositionally or via laws of nature which are implicitly modal. When we turn to the sphere of living organisms, the biosphere, such properties abound: telos, purpose and goal directedness; all these properties of living things and systems are hidden in the intensional sense (Routley 1980: 781–9).

Intensionality then afforded a way to affirm hidden aspects of nature that could not be accounted for by reference to the externalities exclusively countenanced by mechanism. But nor could this mysterious aspect of things be equated with full-fledged mentality, insofar as mentality was taken to connote the psychological capacity for consciousness. Intensionality, Routley argued, was an 'intermediate' category, situated in between the two Cartesian categories of mind and matter and permeating thought and nature indifferently (Routley 1980: 768).

Why intensional phenomena ought to be regarded as loci of moral considerability however remained a further question. The fact that sticks and bits of clay and old scraps of plastic are invested with causal powers, for instance, and fall under laws of nature, and that causal powers and laws of nature have modal and hence intensional properties does not on the face of it show why moral significance should attach to them. Plumwood (1993) clarified the argument when she shifted the emphasis from intensionality to intentionality.

Intentionality was a category originally introduced within phenomenology as the indicator of the mental: the occurrence of intentional phenomena served to mark the mental off from the non-mental or purely material. Intentionality was defined by Franz Brentano as the property of directedness, of pointing beyond what was given. This, Brentano explained, was a peculiar logical characteristic of psychological phenomena – they did not exist merely 'in themselves', as a lump of matter does, but were always 'about' something else, something beyond themselves. So in our psychological life we think *about*, say, cats or theories or the future or our own potential; we feel grudges *towards* people; we believe *in* gods or ghosts; we have percepts *of* sticks or stars.

For Brentano, it was this mysterious ‘aboutness’ or directedness-towards-something-beyond-itself, rather than awareness or consciousness per se, that distinguished the mental from the merely material. Intentionality is clearly an instance of intensionality, inasmuch as it shares in the hiddenness, the crypticness and the ungivenness, of the intensional, but it was understood by Brentano only to occur in mental contexts.

As a concept which is explicitly invoked as a marker of mind but which marks mind in a non-psychological way, intentionality served Plumwood’s purpose very well. She pointed out that research in logic had attempted, by applying the test of intentionality, to demonstrate a categorical distinction between mental and merely material phenomena but had consistently failed to do so: intentional phenomena persistently turned up in nature as well. Properties such as growth, flourishing, function and self-directedness, for example, possess the quality of pointing beyond the given that Brentano had characterised as intentional; hence, they cannot be extensionally defined, any more than psychological phenomena can. In other words, the properties that characterise mind also turn up in nature, and these properties cannot be reductively analysed in terms of the purely extensional – despite the best efforts of logicians. The attempt to restrict analysis to extensional forms of discourse was, Plumwood observed – in line with Richard Routley’s earlier argument – the corollary, in logic, of mechanism in science, and the failure of this program signaled the failure of mechanism. The mind-like cannot be dispelled from nature.

This argument, which delivered what Plumwood (1993) explicitly described as a weak form of panpsychism (weak in that it eschewed consciousness), went some way towards answering the question why intensional phenomena ought to be regarded as morally significant. Since intentional phenomena, as markers of mind, were morally significant, and since intentional phenomena could no longer be sharply distinguished from intensional ones, intensional phenomena might be seen as sharing in the moral significance of the intentional. But Plumwood strengthened the case for moral considerability by selecting a particular subset of the intentional, namely, the teleological – properties such as growth, flourishing, function and self-directedness – as the marker of moral status. All beings and systems with such teleological properties may be said to possess a good or interest of their own and a capacity to direct their own unfolding in response to the conditions of their life.

In finding a basis for moral significance in the teleological aspects of nature, Plumwood joined what was by then a host of other environmental philosophers (Taylor 1986; Johnson 1993; Rodman 1983). What made her approach distinctive was the way she arrived at teleology through intentionality, an argument for teleology more subtle and less dubious than most.

I have detailed Plumwood’s argument here because it offers a careful account of how forms of mentality without consciousness are dispersed throughout nature. She insisted that panpsychism *must* take this ‘weak’ form based on intentionality rather than consciousness because ‘strong’ panpsychism, by which she meant the kinds of panpsychism that ascribe consciousness to everything, is still captive to mind-matter dualism (Plumwood 1993 and personal communication). It is captive to dualism, she thought, inasmuch as it uncritically accepts as universal the human-derived phenomenal notion of mind defined by dualism, and merely extends that outward into the rest of nature.

*Teleocentric* versions of panpsychism, such as Plumwood’s, do indeed go a long way towards establishing strong foundations for environmental ethics. They generally emanate in a kind of multi-species ethic with which I personally am deeply in sympathy. But I am not sure that panpsychism-without-consciousness is as far as we can go in our investigation of mind in nature. When Plumwood points out that there is more even to basic physics than sheer externality, she is suggesting that the categories of physics are already more mysterious than a purely extensional approach allows. But she is not suggesting that our knowledge of reality can exceed physics. In this respect, her account of mind in nature, like versions of panpsychism found in contemporary philosophy of consciousness, fails ultimately to challenge the exclusive authority of Western science to set the parameters of our understanding of reality.

For a position that seeks to preserve consistency with science while nevertheless exceeding both the explanatory reach of science and the horizons of possible experience staked out by science, we need to move up to the cosmological level.

### 3.3. *Cosmological or Living-Cosmos Panpsychism*

The primary question addressed by cosmological panpsychism is simply the foundational question of metaphysics itself: what is the nature of reality at large and what is our relation to it – where this is arguably the primordial question of all philosophy. The history of cosmological panpsychism is thus interwoven, albeit in a minor key, with the entire history of philosophy. It is beyond the scope of the present chapter to detail this history; suffice it to say that the most notable exponents of the kind of tendency I am associating with cosmological panpsychism in the Western tradition include pre-Socratics such as Empedocles and Parmenides, and, in the modern era, Spinoza and certain of the German Romantics, such as Fichte, Schelling and Schopenhauer as well as 19th-century thinkers such as C. S. Peirce. One prominent cosmological panpsychist of the 20th century is David Bohm.

Philosophy in this grand style – addressed to ultimate questions about the nature of reality and our own place in the larger scheme of things – was radically out of fashion throughout much of the 20th century, both in analytical philosophy and in continental philosophy. If I may be permitted a quick personal aside, I can provide firsthand testimony to this historical fact. As a student in the 1970s, I was drawn to philosophy by a deep sense of affinity with Spinoza; I wanted to become a philosopher in the Spinozist tradition. But when it came time to embark on a doctoral thesis at the University of London, I found that my keenness to tackle the kinds of questions Spinoza had explored had to be filtered through an elaborate lens of logic and semantics. My thesis became a study of the metaphysical foundations of modal logic – the logic of possibility, contingency and necessity – and took the form of a critique of possible world theory, the then-fashionable semantic apparatus for the analysis of modal statements. (Shades of the Routleys' focus on the riddle of intensionality here!) Eventually I found a home for my metaphysical speculations in the new and still quite marginal discourse of environmental philosophy, in which, as I have mentioned, panpsychist tendencies were already in evidence.

Now that metaphysics has regained a certain respectability however, one can perhaps pursue the idea of cosmological panpsychism with a little more confidence. Excitingly, several new versions of this view have recently appeared within the context of philosophy of consciousness (Shani 2015; Jaskolla and Buck 2012; Nagasawa and Wager 2016). Here however I would like to outline and extend the view developed in my own earlier work as its implications for environmental thought were always core to its purpose: my premise was always that the malaise of modern civilization, as manifested in the environmental crisis, is, *au font*, a metaphysical one.

Cosmological panpsychism, as I understand it then, is a response to basic questions of metaphysics, including the following. Why does the universe – the observable world, as represented by physics – exist? Why is it a universe, a unity, i.e. why does it cohere, hang together, in the way that it does? Why is space – the frame of physics – unbounded yet unbroken, an indivisible wholeness, a field-like manifold? Why does it not break up, granulate, fragment, and hence cease to be the field that it is, the ground for physical existence?<sup>4</sup> Why is the frame of physics space? To such questions, physics of course has no answers. It cannot explain why there are laws that hold physical structures together and thereby guarantee the overall cohering of things. From the viewpoint of physics, this cohering is ad hoc, contingent; there is nothing in the nature of physicality per se that appears to underpin it.

Cosmological panpsychism, however, offers answers to these questions. As soon as an inner, subjectival dimension – the sense of self-presence accessible to introspection – is seen as integral to the nature not merely of matter but of physicality per se, which is to say, the entire field of spatio-temporal existence in its totality, then the necessity of this cohering of physical existence into a unity,

a *universe*, an indivisible manifold such as that of space-in-time, is explained.<sup>5</sup> Subjectivity is itself, by its very nature, field-like, holistic, internally interpermeating, indivisible, unbounded. One's subjectivity cannot plausibly be constituted atomistically, as an aggregate of discrete units of experience or even as a continuum of point-like experiences. If mind is as primal as physicality in the overall scheme of things then, if it is immanent in physicality per se, and mind is understood as the innerness, the sense of self-presence or subjectivity subtending consciousness, then physicality must reflect the indivisible nature of mind. Physicality must exhibit the same field-like structure as mind.

Of course, the question might be pushed further back: we might ask why mind, in turn, is necessarily indivisible and field-like. Granted, if reality has an inner, subjectival dimension and subjectivity is field-like then reality must itself be field-like, but why is indivisibility or field-likeness inherent in the nature of subjectivity in the first place? In answer to this question, I would suggest that the field-likeness of mind is tied up with the self-evident field-likeness of *meaning* – the intrinsically interleaving and over-layering and interpermeating nature of meaning – and thereby with the constitution of experience through meaning. The kind of holistic internal indivisibility that confers unity on mind, in other words, is tied up with the necessary indivisibility of meaning. Subjectivity is the medium for a tissue of meanings that cannot be pulled apart without ceasing to be meaning – and without subjectivity thereby ceasing to exist. To the extent that meaning is the very stuff of mind then, the structure of mind must partake of the interpermeation and indivisibility that is characteristic of meaning. This is not to say that we might not identify or describe individual experiences by abstracting them from the field of experience – as this sense datum or that itch, this moment of elation or that insight into the nature of, say, number. It is just that such experiences cannot actually exist in isolation from the entire field of the subject's experience, and this field-like structure of subjectivity is a function of meaning.

In speaking of the field-like structure of subjectivity as a function of meaning, I am using the term 'meaning' not technically in a semantic or symbolic sense but in a more fundamental sense, to indicate the basic condition of things mattering – of things having relevance, significance, value. In other words, I am using 'meaning' in the sense of meaningfulness, the meaningfulness that we impute to life itself when we ponder 'the meaning of life'. And meaningfulness in this sense must ultimately be referenced to beings with an interest in their own existence. In my book, *The Ecological Self*, I termed such beings *selves*: a self is any entity, human or otherwise, that is systemically organised to maintain itself in existence by its own reflexive efforts.<sup>6</sup> Selves are thus defined by such interests: they have a constitutive interest in self-maintenance and self-increase. It is relative to the interests of such selves that things in the environment – particular objects, circumstances – assume significance, relevance, value. If there were no selves in the world, everything would just be what it is – nothing that occurred would matter more or less than anything else, so nothing would be meaningful. Specific meanings – the meanings of specific words or gestures, for instance – develop out of this underlying meaningfulness: 'I', 'you', 'dog', 'run', 'red' all develop, as discriminations, against this background of interests. If nothing mattered to us, there would be no reason to make the semantic discriminations we do make – or indeed any semantic or perceptual discriminations – in the first place. In the absence of beings with interests, it is hard to see how reality could be considered determinately differentiated in itself at all, since all possible discriminations would co-exist in a kind of *singularity*: in the absence of selves, and hence in the absence of discrimination, there could be no determinable entities nor hence could there be any fixed spatio-temporal intervals between entities. Without fixed spatio-temporal intervals, no metric for either space or time could even in principle be defined. It would follow that no extension in either space or time would exist. Might not then such a state of non-discrimination in fact be what the term 'singularity' implies? Not so much an originary state of infinite compression as simply reality considered logically under its undiscriminated aspect? But here I am jumping ahead – I shall return to this point later.

To see the universe as a whole as having a subjectival aspect inextricable from its physical aspect, then, is to see it as structured by meaning or meaningfulness in the present underlying sense. And to see it as structured by meaningfulness is to regard it as mattering to itself – as constituting a self-realizing system in its own right, with an interest in its own self-existence and indeed its self-increase. To regard the universe in this way is thus to view it too as a kind of self – a very special, *sui generis* self, indeed, but a self nonetheless, self-actualizing, self-preserving and self-expanding – a Self. (It is not hard to appreciate that a view of the universe as self-actualizing, self-preserving and self-expanding is by no means incongruent with contemporary cosmology.)

From the viewpoint of such a cosmological version of panpsychism, the empirical world, as charted by physics, is the outward appearance of an inner field of subjectivity, indeed of conativity, where by ‘conativity’ I mean precisely the will or impulse of a self to realize and increase its own existence.<sup>7</sup> Such a cosmological Self, being essentially conative, will be self-creating and in this sense its existence will be necessary. Panpsychism on a cosmological scale thus offers an answer to the question of why a universe exists. And, as a cosmological subject imbued with an inner, subjective sense of itself, this universe will, as I have already explained, cohere as an indivisible unity, where such unity and indivisibility will be manifested in the lawlikeness that ensures the spatiotemporal coherence of reality under its outer, physical aspect. However, although the universe, under both its outer and inner aspects, coheres as a unity, it also undergoes self-differentiation. In Spinozist and Einsteinian style, its field-like fabric ripples and folds locally to form a dynamic manifold of ever-changing, finite ‘modes’; viewed from the outside, these modes appear as the empirical particulars observable by ourselves and described by physics; viewed from the inside, they constitute a texture of ever-unfolding impulse, will, felt force. This universe is thus both a psychophysical unity and a manifold of psychophysical differentia. Amongst its differentia, there are some which are themselves organized as nested self-realizing systems or selves. These include organisms and perhaps higher-order living systems, such as ecosystems and biospheres. This set of finite selves represents a tiny but significant subset of the wider, ever-changing set of differentia. Selves are significant, amidst the vast array of other differentia, because they represent real (because self-realizing) though relative (because not substantively discrete) loci of subjectivity and conativity in their own right. It is from the perspective of such finite selves that reality can be said to present an ‘outward’ appearance.

In sum, cosmological panpsychism may be articulated via a cluster of core categories: *selfhood*, defined as the status possessed by self-realizing systems; *conativity*, the impulse towards self-existence and self-increase that informs the self; *reflexivity*, the capacity of a system to reference itself; *subjectivity*, the felt sense of self-presence that underlies consciousness; and *meaningfulness*, the basis for making the discriminations that organize experience, where such discriminations in turn become the basis for thought and language in selves with the capacity for such modalities of consciousness. Selves are always relationally configured through ceaseless exchange with other selves and systems, up through indefinite levels of organization. In this sense, the impulse to reach out for ‘the other’ (where such reaching out may take the form of appetite, desire or communicativity) is always the flip side of the conative drive towards self-existence and self-increase.

Relative to the universe as a whole, qua ultimate Self or Self-realizing system, there are of course no exterior selves or systems via exchange with which it can relationally configure itself. It is this which occasions the need for cosmic Self-differentiation. Interaction with (real though relative) finite selves constellated through Self-differentiation on the part of the cosmic Self offers the only opportunity of exchange for such a Self. Since communication represents an essential horizon of self-realization and self-increase for any system structured *ab initio*, as this universe is, by meaning, exchange with finite selves may take communicative form. The cosmos as Self then is seen as capable of and as actively seeking communicative engagement with its finite modes, or at any rate with those of them capable of such engagement. It is the cosmos under this communicative aspect that I call the ‘living cosmos’.



Though the living cosmos appears to its finite modes as extended in observable space, it does not experience itself as so extended. In itself, reality is prior to the discriminations of finite selves that select out from the flux of its self-actualizing activity those determinations that allow for metrics of both space and time to be established. Since this self-activity of reality is an expression of its conativity, it will be purposeful rather than arbitrary or merely chaotic in its felt form – its felt dynamics will cohere seamlessly around primal purpose. But from the perspectives of finite selves constellating within those felt dynamics – selves shaped by their own specific conativities but not necessarily attuned to the enfolding purpose of the whole – the self-activity of reality will appear vastly variegated and differentiated. Spinoza's distinction between *natura naturans* (nature as self-active and self-realizing, viewed under its undifferentiated, unitive, pre-spatially-extended aspect) and *natura naturata* (nature as the order of causally related finite modes organized deterministically in space) may serve to clarify this point. *Natura* is of course in both these instances one and the same; it is just nature viewed, in the case of *natura naturans*, from the perspective of itself as a whole; while in the case of *natura naturata*, it is nature viewed from the perspective of a finite mode. Spinoza illustrates this distinction by analogy with a circle also viewed under two different aspects (*The Ethics*, Part 2, Note to Prop VIII). Any circle formally contains an infinite number of equal rectangles. From the perspective of the figure as a whole, the set of infinite rectangles would appear as a simple unity – the circle: the rectangles would blend and cancel one another to describe a circumference. But if the figure is viewed from within, from the perspective of any one of the internal rectangles, it will appear not as a simple unity – which is to say, as a circle – but as a very large set of pointy particulars, because the rectangle from which the figure is viewed will not be observable to itself and hence the set of rectangles required for that figure to resolve into a circle will not be complete.

Similarly, from the viewpoint of the living cosmos itself, its own self-activity will be transparently suffused with its conative purpose, but from the viewpoint of finite modes this primal purpose may have become scattered, like light, into millions of points of individual conativity.

As a wellspring of the felt force of experience, unbounded and field-like in its quality, fired into coherence by self-purpose though in no way in itself located or extended in space, the living cosmos may be potentially subjectively present in its diffuse entirety to each of its finite modes. It may be for this reason that the universe can manifest locally, in instances of communicative engagement with individuals, wherever individuals with the capacity and inclination so to engage occur.

To see reality from this perspective is to take a step not merely from the descriptive realm of science but even from the realm of ethics (the province of teleocentric philosophies) to that of spirituality: as a responsive presence enfolding us, reality invites us not merely to recognize our moral obligation to all selves or life-systems but also to configure our existence in accordance with the larger meanings congruent with its own conativity. In other words, we may expect to discover in the fabric of reality a normative grain or intimation of how to live. Since reality owes its overall make-up to its conative ends – those pertaining to its self-realization and self-increase – patterns expressive of those ends will inevitably recur throughout the externalized realm of causally conditioned nature (*natura naturata*). In the context of life on earth, we find such patterns in the inexhaustible regenerativity and renewability of life, but also in a tendency towards ever-increasing differentiation and communicativity across and within all forms of life. Elsewhere I have identified the principle discernible in these patterns as that of conativity *modulated by a logic of least resistance*, where the latter may be understood as a logic of accommodation to our life-environment (Mathews 2011). If our own destinies are to be consistent with the primal conativity of the cosmos, we need to conform to these patterns of accommodation, regenerativity and communicativity.<sup>8</sup>

In pre-agrarian societies, in which peoples lived by hunting and gathering in close association with and attunement to ecological systems, this normative grain in the fabric of reality was readily discerned and enshrined as Law. Law was explicitly acknowledged – and is still acknowledged today

by peoples who have managed to preserve Indigenous ways of life – as inhering in the land. As Hobbes Danaiyarri, a Mudbura man of Yarralin in the Northern Territory of Australia explained it to anthropologist, Deborah Bird Rose: ‘Everything come up out of ground – language, people, emu, kangaroo, grass. That’s Law’ (1996: 9).

This Law is not merely the result of blind or mechanical natural selection, but emanates from the meanings, the stories, that underlie those natural processes. Aboriginal people refer to this meaning dimension that inheres in the manifest or empirical world as Dreaming, and stories that translate those meanings into the language of humans, as Dreamings. As another of Rose’s informants, Mus-solini Harvey, a Yanyuwa man from the Gulf of Carpentaria, told her:

The Dreamings made our Law or narnu-Yuwa. This Law is the way we live, our rules. This Law is our ceremonies, our songs, our stories; all of these things came from the Dreaming . . . our Law is not like European [l]aw which is always changing – new government, new laws; but our Law cannot change, we did not make it. The Law was made by the Dreamings many, many years ago and given to our ancestors and they gave it to us. . . . The Dreamings are our ancestors, no matter if they are fish, birds, men, women, animals, wind or rain. It was these Dreamings that made our Law. All things in our country have Law, they have ceremony and song.

(1996: 26)

Just as Law in this sense does not equate to man-made European laws so it in no way equates to the descriptive, quantitative ‘laws of nature’ encoded in science and strictly formulated on the ‘fact’ side of the presumed fact-value dichotomy in terms of which science so emphatically defines itself. Rather, Law consists of adaptive and prescriptive guidelines derived from close collaboration with living systems together with poetic attunement to narratives immanent, as Dreamings or as the very Dreaming itself, in the realm of matter.

In the context of Law, understood not as a rational postulate, in the manner of ethics, but as a palpable, enfolding normativity that makes itself felt to us as the very meaning of our existence, inextricable from our deepest attachments, ‘environmental ethics’ is transformed from a rational duty, external to our own interests, to a whole-hearted inclination to take care of the cosmos. Indeed it becomes our deepest taproot, a new dimension of love that turns us definitively on our metaphysical and motivational axis.

The religions that accompanied the rise of agrarian civilizations retain a memory of Law in this original sense – a law of accommodation to the needs of others in the interests of a larger whole. ‘Do unto others’ remains the moral touchstone of all major religions. But agrarianism, setting society as it did at a remove from nature, led to a new, ever-increasing reliance on human artifice and a new ethos of domestication and dominion with respect to the rest of life. The ‘others’ intended by the injunction, ‘do unto others’, progressively contracted to the exclusively human, till most religions eventually became arch vehicles of anthropocentrism. However, living-cosmos panpsychism, with its recognition of normativity in the fabric of reality, may be seen as a metaphysical underpinning for the centrality of this law of accommodation – whether in the form of Dharma, Covenant, Dao (Way) or Sharia (also Way) – in the configuration of religion, while also insisting upon its application to *all* living things.

The communicativity of reality, according to living-cosmos panpsychism, is not necessarily a given of our experience but may need to be activated via practices of address or invocation. Responses to such address may be manifested through serendipitous conjunctions or synchronistic arrangements of circumstances. From this perspective, the ‘language’ the world speaks, when it does speak, is a poetic – concretised and particularized – one. For example, in relevant invocational settings, it may

take the form of a bush burning on a mountain, a raven participating discreetly in a funeral ceremony, a butterfly alighting on a dead woman's breast, a message bird appearing out of nowhere to show the way, lightning punctuating a ritual performance with apposite displays. All such 'signs', whether occurring in religious contexts or not, may be seen as instances of a vast poetic repertory, a repertory of imagery, of meaning conveyed through the symbolic resonance of things. It is in such language then that our invocations may need to be couched, since it is in such language that the world is able to respond: it is able to *speak things*. For things to acquire poetic resonance however, they generally need to be framed within a narrative context, which is why religious and spiritual traditions, and the liturgies which express them, generally rest on and are defined by founding narratives. In Indigenous societies, invocations are likewise shaped by Dreaming stories. But the efficacy of invocation need not necessarily be confined to either religious or Indigenous contexts.

When the living cosmos responds, in person as it were, to our poetic address, in terms referenced to the particular idiom of our invocation, we feel so intimately and extravagantly blessed, so moved and shaken on our metaphysical moorings, that our allegiance henceforth will be first and foremost to this cosmos itself, generally under its local aspect, the place or physical context which provides the lexicon of revelation. Love of world in this sense becomes our deepest attachment. It replaces self-love as the root of our motivation.

Wherever communicative engagement with reality is activated in this way, we might speak of a 'poetic order' – an order of poetic revelation – unfolding alongside the causal order ordained by science. Such a poetic order, or order of meaning, will exceed the causal order but in no way contradict it. We may call this poetic order, and the practice of participating in it, *ontopoetics*. Ontopoetics opens up a world of potential new meaning and experience hidden within the world already so familiar to us from science (Mathews 2017).

In closing, I would like to suggest that living-cosmos panpsychism makes sense of much religious experience without either acquiescing in supernatural ontologies on the one hand or contradicting science on the other. Indeed, it explains both the normative core of religion while also throwing light on certain of the questions that challenge the ultimacy of science. Why space? Why coherence? Why unity? Nonetheless, the prime affinity of living-cosmos panpsychism lies with neither religion nor science but with those Indigenous ontologies of Law and Land that religion and science left behind. In Australian Aboriginal thought, mind is, as it is in living-cosmos panpsychism, primordial; human consciousness is just a single mode of this universally distributed and diversely embodied mind (Viveiros de Castro 1998; Rose 2013; Mathews 2003). This stands in stark contrast to the way in which, in Western scientific and religious thought, mind has been seen as paradigmatically instantiated in humans, other entities being either devoid of it or attributed with it only to the degree they are perceived as resembling us (Rose 2013). From the viewpoint of living-cosmos panpsychism, the latter view gets things not merely wrong but precisely back to front, for this very property we claim so exclusively for ourselves is in fact the condition for spatiotemporal existence per se. In the form of primordial conativity, mind is the first property reality must possess if physics itself is to be possible. And in possessing it, the living cosmos also grounds a normative Law which is as immanent in its fabric as are space and time.

Although Kant has in no way figured in the development of the present account of living-cosmos panpsychism and does not usually find himself in the company of Indigenous thinkers, he may have approved. The quest of his life, etched on his tombstone, was to reconcile 'the starry heavens above' with 'the moral law within'. He intuited that the two were somehow fused at the root (along with beauty, figured in his *Third Critique* as forms of coherence). But his philosophical system allowed for no exploration of this mystery. Perhaps the 'singularity' I have here called the living cosmos is the noumenon in which the starry heavens and the moral law, and indeed the beauty that emanates from coherence, intelligibly inhere.

## Notes

1. Several passages in this article have been adapted from Mathews (2015) and Mathews (2017).
2. Space forbids discussing a second thinker in this category worth mentioning: Gregory Bateson (see his 1979).
3. At that time Plumwood was writing under the name of Val Routley.
4. There are theories in physics which do ascribe a sub-particle foamlike or granular structure to space. For a recent discussion of these, see Ferreira 2014. But these are not inconsistent with the perfect macro-level cohering of space as the frame for physical processes.
5. I have elsewhere introduced a distinction between the two terms, 'subjective' and 'subjectival' (Mathews 1991). 'Subjective' refers to the felt quality of experience, 'subjectival' to the capacity for having such experience. An example might illustrate why the distinction is important. To speak of 'the subjective nature of reality' implies that reality is mind-dependent i.e. that it is 'in my mind', where this suggests idealism. To speak of 'the subjectival nature of reality', however, implies that reality itself has the capacity for experience, where this suggests panpsychism.
6. Self in this sense can be defined in terms of autopoietic theory, as it is in the work of Humberto Maturana and Francisco Varela; but this notion of self-realization as the essence of self goes back at least as far as Spinoza.
7. The notion of conativity thus represents a further articulation of teleology, but in the present context teleology is defined on a cosmological scale and in terms much more connotative of *feeling* than the versions of teleocentrism examined earlier.
8. To the question, how can finite selves depart from these patterns if they are themselves part of the conative unfolding of the living cosmos?, I would reply that the same faculty of reflexivity which enables us to communicate with reality in the ways I describe in this chapter – where such forms of communicativity do themselves contribute to the self unfolding of the cosmos – inevitably also enables us to reflect upon and hence deviate from our conditioned, ecological responses to life situations, where, in other species, such ecological responses exhibit patterns of cohering.

## References

- Bateson, Gregory (1979). *Mind and Nature: A Necessary Unity*. New York: Dutton.
- Castro, Eduardo Viveiros de (1998). 'Cosmological Deixis and Amerindian Perspectivism'. *The Journal of the Royal Anthropological Institute*, 4 (3): 469–88.
- Ferreira, Pedro G. (2014). *The Perfect Theory: A Century of Geniuses and the Battle Over General Relativity*. London: Little, Brown.
- Harvey, Graham (2005). 'Animist Manifesto'. Accessed August 14, 2017. [www.earthboundpeople.com/wp-content/uploads/2015/03/An-Animist-Manifesto-Graham-Harvey-2012.pdf](http://www.earthboundpeople.com/wp-content/uploads/2015/03/An-Animist-Manifesto-Graham-Harvey-2012.pdf).
- Jaskolla, L. J., and Buck, A. J. (2012). 'Does Panexperiential Holism Solve the Combination Problem?' *Journal of Consciousness Studies*, 19: 190–9.
- Johnson, Lawrence (1993). *A Morally Deep World: An Essay on Moral Significance and Environmental Ethics*. Cambridge: Cambridge University Press.
- Mathews, Freya (1991). *The Ecological Self*. London: Routledge.
- Mathews, Freya (2003). *For Love of Matter: A Contemporary Panpsychism*. Albany: SUNY Press.
- Mathews, Freya (2011). 'Towards a Deeper Philosophy of Biomimicry'. *Organization and Environment*, 24 (4): 364–87.
- Mathews, Freya (2015). 'Environmental Philosophy'. In N. Trakakis and G. Oppie (eds.), *A History of Philosophy in Australia and New Zealand*. Dordrecht: Springer Publishing, pp. 543–91.
- Mathews, Freya (2017). 'Panpsychism: Position Statement', 'First Response' and 'Second Response'. In G. Oppie and N. Trakakis (eds.), *Philosophies of Religions: Multi-Faith Dialogues*. London: Routledge.
- Nagasawa, Y., and Wager, K. (2016). 'Panpsychism and Priority Cosmopsychism'. In G. Brüntrup and L. Jaskola (eds.), *Panpsychism*. Oxford: Oxford University Press.
- Plumwood, Val (1993). *Feminism and the Mastery of Nature*. London and New York: Routledge.
- Plumwood, Val (2009). 'Nature in the Active Voice'. *Australian Humanities Review*, 46: 113–29.
- Rodman, John (1983). 'Four Forms of Ecological Consciousness Reconsidered'. In D. Scherer and T. Attig (eds.), *Ethics and the Environment*. Englewood Cliffs, NJ: Prentice Hall, pp. 82–92.
- Rose, Deborah Bird (1996). *Nourishing Terrains: Australian Aboriginal Views of Landscape and Wilderness*. Canberra: Australian Heritage Commission.
- Rose, Deborah Bird (2013). 'Val Plumwood's Philosophical Animism: Attentive Interactions in the Sentient World'. *Environmental Humanities*, 3: 93–109.

*Living Cosmos Panpsychism*

- Routley, Richard (1980). *Exploring Meinong's Jungle and Beyond*. Departmental Monograph 3. Canberra: Philosophy Department, Research School of Social Sciences, Australian National University.
- Shani, Itay (2015). 'Cosmopsychism: A Holistic Approach to the Metaphysics of Experience'. *Philosophical Papers*, 44 (3): 389–437.
- Skrbina, David (2005). *Panpsychism in the West*. Cambridge, MA: MIT Press.
- Taylor, Paul (1986). *Respect for Nature*. Princeton: Princeton University Press.