International Journal of Transpersonal Studies

Volume 42 | Issue 2 Article 3

2023

Continuities of Consciousness, Life-Worlds, and Numinous Experience: Cognitive-Phenomenological Foundations for an Empirical Neo-Shamanism

Harry T. Hunt
Brock University, St. Catharines, Ontario, Canada

Recommended Citation

Hunt, H. T. (2023). Continuities of consciousness, life-worlds, and numinous experience: Cognitive-phenomenological foundations for an empirical neo-shamanism. *International Journal of Transpersonal Studies, 42* (2). https://doi.org/https://doi.org/10.24972/ijts.2023.42.2.1

Continuities of Consciousness, Life-Worlds, and Numinous Experience: Cognitive-Phenomenological Foundations for an Empirical Neo-Shamanism

Harry T. Hunt
Brock University
St. Catharines, Ontario, Canada

Numinous experience—as the felt sense of the sacred—evokes feelings of all-one unity, communality, humility, and healing. Its schematization in the absolutes of traditional religion can also be seen as all-encompassing symbolic unifications of an otherwise fragmented human life-world—as more analytically depicted in the life-world phenomenologies of Husserl and Heidegger. In both feeling and concept the numinous would be the semantic amplification of the more concrete organism-surround nonduality of non symbolic organisms—as reflected in a primary consciousness shared across Uexkuell's sentient animal umwelten and Gibson's "envelopes of flow." Husserl's phenomenology of passive synthesis and James on pure experience can be understood as intuiting the implicit forms underlying such a primary transspecies consciousness, as both differentiated into these concrete life-worlds, to the level of the inferably sentient protozoa, and abstractly amplified as the human numinous. The latter, with its original social template in an ethically responsible shamanism, becomes similarly responsible in the contemporary context of a human caused global climate crisis for the care and conservation of that Spirit it both develops as such and accurately intuits as a universal is-like shared with all sentient beings.

Keywords: *numinous, Tremendum, Mysterium, shamanism, phenomenology, life-world, cosmos, psychedelics, formal operations in affect, person-thing intelligences, umwelt, envelopes of flow, phenomenal vs. access consciousness, intentionality, passive synthesis, horizonal openness, kinesthetic charge, new of the now, pure experience, thatness, protozoan behavior, action potential, depolarization, downward control, universal is-like*

What is the larger organismic purpose of the numinous—Rudolf Otto's (1923/1958) term for the felt cognitive-affective core of human spirituality and religion? Otto's phenomenology included the power-energy sense of *Tremendum*, with its sense of awe and the uncanny; a *Mysterium* of wonder, amazement, and gratitude; and feelings of Dependence, "creature feeling," and humility. All this is felt as responsive to the sense of a transcendent "wholly other," which William James in his classic *Varieties of Religious Experience* (1902) described as an ineffable, timeless/eternal sense of an all-one unity of person, society, and physical universe - in more recent terms, the nonduality of self and world (Loy, 2019). While inherently intertwined, Otto's dimensions of this wholeness can also be separated by culture, era, and individual into spiritualities of power, knowledge, and love.

Both Otto and James see this vividly felt numinous as intrinsically cognitive or noetic. One sees a first level of this semantic imbuing in Laski's (1961) quasi-physical "sensations" of ecstasy—expressed in metaphors of soaring heights and depths, spaciousness and light, energies of expansion, heat, and bursting, and the dynamics of flowing wind and water. These are also the expressive synesthetic metaphors central to shamanic mirrorings of nature,

https://doi.org/10.24972/ijts.2023.42.2.1

with their more abstract versions in Emerson and Thoreau—in marked contrast to the straight lines and sharp angles of man made settings (see also Hunt, 2011, 2012a, 2020, 2021). Recent research on awe finds these expressive properties of physical and animate nature as the most immediate triggers of numinous awe and wonder, also associated with increased levels of felt communality, altruism, and humility (Keltner & Haidt, 2003: Bai et al, 2017). On the collective or cultural level, Otto saw a more abstract schematization of the numinous in the all-inclusive cosmos of the world religions—articulated as the various nondualities of Brahman, Tao, Godhead, Spirit, and Being. Here, from a more contructivist perspective not at all rejected by Otto, each culture shapes inherent background dimensions of the numinous into its own schematization of a cosmos or *unus mundus,* uniting personhood, the social collective, and their understanding of nature/physical universe.

The macro sociologists Max Weber (1922/1963) and Pitirim Sorokin (1957) saw such formulations of the sacred as the maximum cultural integrations for each society, but in complex civilizations subject to inevitable periodic secularizations and dissolvings attendant on the more sensate pragmatic effects of historical, economic, and societal change. The first level and originating template for such a unified cosmos has been the shamanic spiritualities more or less common to hunter-gatherer peoples, with their egalitarian sharing of vision trance and animistic use of a spiritualized natural order as nondual mirrorings of the deep structures of self and society (Levi-Strauss, 1966; Hunt, 2011, 2012a, 2020). [1] On the level of the post Axial Age civilizations, with their transcendent spiritualities replacing a more widespread and diverse immanence (Sahlins, 2022), both Weber and Sorokin contrast the prolonged ideational/sacred eras of the Eastern traditions—Hindu, Buddhist, and Taoist-Confucion—with the more periodic secularizations and reformations of a more extraverted West—Christian and Neo-Platonist. For Weber (1905/1958) and Heidegger (1949/2012), a Western originated, now globalized, and hierarchically imposed material capitalist economy, with its hyper-valuation of Weber's "autonomous" individual, has produced an unprecedented and increasingly globalized secularization among its urbanized culture of technological, media, and power elites.

The phenomenologists Martin Heidegger (1935/2014) and his once mentor Edmund Husserl (1936/1970) became centered on the larger implications of this unprecedently sensate modernity. For Heidegger (1949/2012) this becomes the technological and merely utilitarian commodification of humanity and nature, forecast in the 1930's and now culminating in a seemingly unstoppable climate crisis (Hunt, 2021). For Husserl, in his *Crisis of the European Sciences* (1936/1970), a "natural primordial attitude" (p. 281) underlying the unified cosmos of the shamanic and "Oriental philosophies"—their shared "mythical religious attitude" (p. 283)—has been replaced by the radically one-sided materialism first inspired by Galileo. Here the "primary qualities"—the quantifications of the physical (and economic) sciences—define a primary "reality" superseding any traditional and "transcendentally" unifying life-world. Heidegger's (1927/1962) analysis of human existence or *Dasein* as an implicitly unified being-in-the-world was a related attempt to locate and re-vivify such a latent life-world and its still potential cosmos.[2]

What is the Numinous For and Why is it Needed?

What would be the function of the numinous and why would it be at the center of human spirituality and traditional culture? Jung (1973) stressed that it was the numinous impact of his spontaneous archetypal/mythic imagery that was directly transformative and healing. Its felt realization confers an expanded sense of meaning and larger moral purpose, replacing a sense of inner discord, imbalance, and anomie that for Jung (1938/1958) was especially characteristic of the secularized modern West, while also a more general species specific vulnerability. Recent decades of research with psychedelics—now often referred to as entheogens—has supported this immediate healing potential of transcendent mystical experience (Griffiths, et al, 2011). These experiences lead to a larger sense of "design" or "overview" in ones life (Pollan, 2018)—and an expanded communal

concern for society and planet—rather akin to the experiences of astronauts on first seeing the earth from the larger context of space (Yaden & Newberg, 2022).

How is it that the numinous is so directly linked to such an overview? How is it that the schematization of its noetic component goes to these encompassing absolutes? The later Husserl (1936/1970, 1929/1964)—after his initial phenomenology of the intentionality of immediate consciousness—sought what he termed a "transcendental" phenomenology of the constitution of an implicit human life-world—a deep structure of being-human once exteriorized as the sacred cosmos of traditional cultures. Heidegger and Max Scheler (1923/1960) independently concluded that such a transcendental phenomenology of the human condition still existed, metaphorized within the world religions, and so open to modern re-description. The early Heidegger derived his *Daseins*-analysis from just such a naturalization of Christianity (Kisiel, 1993; Van Buren, 1994)—with its fallenness, forgiveness, and redemption in eternity as Dasein's care, shared concern, and potential acceptance of the ontological anxiety of a temporality opening ahead toward the known/unknown of death. This for Heidegger opened a larger sense of wonder and amazement at Being-as-such, whose experience the later Heidegger (1938/1994) would describe in more mystical terms of awe, humility, and gratitude. By implication then the ineffable and all-encompassing felt sense of the numinous confers its own incipient phenomenology and natural completion of an integrative human life-world—an incipient overview so lacking in the narrower pragmatics of an everyday reality (Schutz, 1962).

A neuro-phenomenological reflection of such an integrative function has emerged in current psychedelic/entheogen therapy, with numinous states directly ameliorative of syndromes as diverse as depression, obsessionality, schizoid detachment, and post-traumatic stress disorders (Griffiths, et al, 2011)—with these disorders perhaps themselves emblemic exaggerations of "normality" amidst the more widespread loss of meaning of such concern to Jung, Weber, and Heidegger. Carhart-Harris and Friston (2019) view the effect of psychedelics as dissolving and decentering the fixated emotional patterns of the forebrain self network and so allowing a new level of emergent neo cortical integration—indexed by measurable increases in front-back and inter-hemispheric EEG connectivity and coherence. These long lasting effects—also reflected in meditation practices (Dietrich & Al-Shawaf, 2018) and even in the shorter term impact of awe in nature (Van Elk et al, 2019)—replace the more average shifting neo cortical mosaic of neural activation. Here would be the neural echo of the re-integration sought by Husserl and Heidegger on a more cognitive level.

That the numinous is the healing and re-integration—in feeling and concept—of a broader and intrinsically human imbalance would be further indicated by the ubiquity of these healing practices in traditional shamanism—that ur-spirituality characteristic of these maximally egalitarian of all societies (Mauss, 1966; Hunt, 2020), with their accounts of vision trance and its healings of possession states, schizoid-like soul loss, and emotional trauma (Tedlock, 2005). The numinous emerges as our potential species specific "design" or semantic "plan" for the amelioration of a longer term individual and cultural imbalance and instability inherent to the human condition—an imbalance separating us from a more concrete and directly lived nonduality that would define the life-worlds of non symbolic animals.

An Intrinsic Human Imbalance and Incompleteness

To see what the numinous—as implicit life-world "design"—would be integrating requires its own overview of an emergent human symbolic capacity as both unique strength and intrinsic vulnerability. As elaborated elsewhere by the present author (Hunt, 1995, 2005, 2009), the creative capacity of the human mind would seem to rest in the neo-cortical cross-modal, and incipiently synesthetic, translations between audition/vocalization, visual imagery, and kinesthetic (gestural and motor) patterns that enable language (Geschwind, 1965), and as more recently understood (Mithen, 1998; Hunt, 2009), a concomitant crossing of the

symbolic domains of social-personal and causal-physical intelligences—which seem to have remained concrete and separate in the higher apes and early hominids (Mithen, 1998). First, an emergent and inherently open ended translation across the very different spatial-temporal patterns of the separate senses would enable that "turning around on," "disassembling," and "recombination" of the perceptual and affective schemata that are more or less common across complex non-symbolic organisms. For Neisser (1976) and Bartlett (1932) this allows the symbolic creativity of the human mind. It would be this reflexive "turning around" that enables the extraction/abstraction of what Lakoff and Johnson (1999) have termed the "kinesthetic" and "cross-modal" "image schemas" which are equally basic to both causal-mechanical thought *and* the metaphoric expression of emotional feeling in language, art, and music (as also in Arnheim, 1969; Langer, 1942). These most basic patterns, common to both intelligences, include: container-contained, path and link, force/energy, and the contrastive opposites of center-periphery, up-down, front-back, and moving-still. Thought and feeling are equally impossible without these symbolic forms.

While the crossing of the social-personal and causal-manipulative domains will allow their *partial* integrations as our various multiple intelligences (aesthetic, mathematical, mechanical, political, bodily-athletic, as in Gardner, 1983), it also creates an intrinsic collision, incommensurability, and tension at the heart of the human symbolic capacity (Hunt, 2009). Despite their sharing of these metaphoric structures, persons are not things and things are not persons. As also attested by Sorokin's (1957) contrast between ideational/sacred and sensate/material eras, the intelligences of personhood/meaning and physical causation must also pull in opposite directions. At the one extreme there is an inherent pull toward a physical domination and abstract mechanization—a kind of economic and now digital slavery—a thingification of personhood, and at the other, the extension of the social-personal into the metaphoric mirrors of a natural cosmos, one by definition abstractly anthropic and animistic (Sahlins, 2022)—a personalization of world (Hunt, 2009, 2020).

Perhaps the most immediate manifestation of this inner collision comes with uncanny emotion, with Freud (1919/1959) the immediate experience of persons as thing-like, mechanical, and/or physically mutilated and physical things as suddenly animated and intentional. For Sullivan (1953) the persistent uncanny is the characteristic emotion of psychotic onset—and so further reminding of the widely replicated research on the overlap of creativity and psychoticism (Ludwig, 1995; Michalica & Hunt, 2013). The uncanny—as Otto's most primitive seed of the numinous—stands poised between its psychotic contraction into schizoid loss of feeling—soul-loss in the shamanic traditions—and a fuller numinous expansion outward into an all-one of an inclusive spiritual meaning.[3]

This healing integration of the fuller numinous would have two conjoined aspects—moral-affective and unitive-cognitive. Numinous experience, as attested by the cross cultural importance of adolescent vision quests and adult spiritual retreats, helps to complete a decentering from personal egocentrism toward, in Piagetian terms, a formal operations in affect—in other words "spirituality"—which would match that of representational and logical operations. Such a process of numinously inspired unselfing—with its communality, altruism, and humility—would allow affect to fill in and assimilate the reversibility of perspective and continual reorganization of voice already part of linguistic syntax (Hunt, 2016). Piaget (1962), and the developmentalist Feffer (1970), held that any full formal operations in affect would be held back by the traumata and imaginatively driven emotional fixations attendant on the vulnerabilities of a long childhood. In addition, there will be the cross domain collision of others reduced to opaque physical objects—the actual blockage of empathy attendant on the child's version of the rather schizoid philosophical "problem" of "other minds." For Sullivan (1953) their "discovery" will finally be motivated by the actual loneliness of a fixated egocentrism. Here the social side of a numinous nonduality—its communality and existential regard for others—can complete an otherwise tenuous moral development only potential to human consciousness—and now well illustrated in the

effects of recent psychedelic research (Yaden & Newberg, 2023).

On the more cognitive side of a self-world nonduality (Hunt, 1995, 2005, 2009, 2011), the chakra/lataif states in the meditative traditions, as abstract versions of traditional animism, realize the essences or inner forms of will, strength, compassion, love, and joy by means of their synesthetic translation into the expressive physical properties of colors, geometric mandalas, gestural mudras, and auditorally evocative mantras—both in formal spiritual traditions (Almaas, 1986, 2004) and more spontaneously in the feeling side of Laski's (1961) quasi-physical "sensations" of ecstasy. On a still more abstract level, in the experiences of the classical mysticisms, these metaphorically enhanced expansions of felt meaning enable a synesthetic cross-translation of the kinesthetic and personal sense of self with the openness of light and spaciousness, such that the separate self dissolves into a light and silence semantically and cross-modally imbued with the meaning of an all-one—into a light that is *loving* (Hunt, 1984, 1995). Lest these felt "animistic" nondualities, potentially schematized into cosmos, seem a mere "cosmic narcissism" intrinsically opposed to modern science, the underlying metaphors of its semantic imbuing are the same that Lakoff and Johnson locate within science and mathematics. The potential thus always remains for the periodic and culturally specific cross translation between the numinous and physical cosmos, as a felt nonduality of wonder and identification with a universe so understood.[4]

The Nondual Life-Worlds of Sentient Organisms

The numinous—however tenuous its fuller realization—becomes the human "design-specific" nondual "answer" to an equally species specific imbalance and instability—one now globally maximized. It would be the abstract re-creation of a more concrete and directly lived nonduality of nonsymbolic organisms—semantically amplifying a consciousness they more directly embody. The same symbolic self reference both fragments human experience and allows its numinous circumspection, which the life-worlds of these other organisms must lack,[5] but at the same time do not need, since they directly live a concrete version of that nonduality—although one not usually understood in that light. Their concrete life-worlds are based on a species specific unity of anatomy, sensory specialization, patterns of motility, and environmental surround—a lived nonduality as long as the larger equilibrium of their survival is maintained. It would be this perfect completion of organism-world interface that would have been part of their fascination to shamanic peoples, allowing them to be understood as the gods and spirits of mythic subworlds within a visionary cosmos.

Jacob von Uexkuell (1926; 1934/2010) was perhaps the first to systematically contrast the phenomenal openness of human consciousness with the radically circumscribed life-worlds of simpler organisms—the latter "encircled" within a "bubble of perception" pre-attuned to the precise "functional tones" needed to maintain self-regulation.

> The number of objects which an animal can distinguish in its own world equals the number of functions it can carry out. If, along with few functions, it possesses few functional images, its world too, will consist of few objects. As a result its world is indeed poorer, but all the more certain, for orientation is much easier among few objects than among many. (Uexkuell, 1934/2010, p. 49)

Each species has "…only so much world as is subjectively accessible to it" (Uexkuell, 1926, p. 354). All objects and qualities outside that circle become "inadequate stimuli" whose intensified intrusion can only disrupt its "perpetually reshaping" equilibrium (Uexkuell, 1926, p. 353). This he understands in terms of a "design" or "plan" specific to each organism. While each species and its specific lived environment or *Umwelt* will have evolved and stabilized on broadly Darwinian principles, what becomes of interest for Uexkuell is this "design" or concretely lived dynamic gestalt.

What he terms the perceived "functional tones" of organismic relevance are attuned to its specific anatomy, size, speed, and the medium of its motility. This he famously illustrated by the separate and distinct "circle" of receptor-effector tones for

"tree" in the *umwelten* of the wood tick burrowing beetle, bird, fox, and squirrel. These *umwelt* designs, especially in the simpler organisms can entail a kind of collapsing of the relevant physical surround into their very anatomy, as in the "point counter point" harmony of fish shapes and their swimming motions with the flow properties of water, or the flower-like proboscis of the bee specific to its blossom and the bee-like structural receptivity of the blossom for just that species of bee. Amplified to the level of human instrumentality, this becomes the hand-like shaping of the coffee cup handle and the liquid-attuned concavity of its cup.

It is important to note the similarity between Uexkuell's (1926) critique of a modern subordination of this "world-as-sensed"—the primacy of a subjectively lived *umwelt*—to the supposedly greater "reality" of the abstract space, time, and causality of the physical sciences, and Husserl's (1936/1970) own attempt to re-establish a transcendental phenomenology of the human life-world as the larger lived context for Galileo's "primary qualities." Husserl (below) will have his own similar "coffee cup" attunement between each moment of immediate consciousness and the inner "self" of its intentional object.

Uexkuell distinguished between function cycles based on organismic needs and those related to the medium of actual motility and navigation. It is with respect to the latter that James Gibson (1979) independently developed his own account of a "direct perception"—based on the primacy of movement for all perception, and a species specific attunement between motile organisms and their surround or "ambient array." This becomes its own kind of lived nonduality. It is movement itself that will generate the sensed gradients of looming surfaces, laminations of surfaces flowing past, and occlusions as objects are covered and uncovered by other surfaces and then recede behind. These become the constantly shifting "affordances" for the movements open to a creature of that particular size, shape, speed, and sensory specializations—and these same principles will hold whether the medium of movement is air, water, ground, or burrow.[6] Each such movement creates its own "envelope of flow" or "streaming perspective" (Gibson, 1979), specific to each species but based on the same whence-whither dimension of horizonal expansion ahead and contraction behind, and its co-creation of a here-there interface which precisely mirrors back the self-location of the organism within that array—the key function of perception for survival.

For Gibson, as for Uexkuell, the relation of sentient organism and its surround is not that between adjacent physical objects, but is uniquely ambient and conjoined—close to what Husserl (1913/1931) will term intentionality.

> The mutuality of animal and environment is not implied by physics and the physical sciences. The basic concepts of space, time, matter, and energy do not lead naturally to the organism—environment concept or to the concept of the species and its habitat. (Gibson, 1979, p. 8)

The "ecological array" of each species—whose here-there, whence-whither unities undercut any subject-object dichotomy—can be understood as the totality of its specific "envelopes of flow" or "family of melon shaped curves" that define its life-world. Similarly for Uexkuell (1926), the "life path" of each species is its organism-*umwelt* "tunnel of indications" (p. 307). For both, each nonsymbolic animal species, and human beings in terms of physical capacity alone, becomes its own "design" of reciprocal attunement—a kind of primary or concrete nonduality shared by all motile organisms that swim, fly, run, or burrow.[7]

Levels and Forms of Consciousness

So what kind of consciousness would this be? Here Block's (1995) discussion of a continuum between a fuller "phenomenal" consciousness, including sensation as such, and a more transitional or "access" consciousness, feeding directly into functional and representational performance, becomes of major importance. On the human level, it is well illustrated in the difference for Freud (1926/1961) between "primary" and "signal" anxiety, with the former attenuated by the buffering mechanisms of defence immediately triggered by the latter. Phenomenal sensations of color, surface, roundedness, and angularity, as such, are better seen as aspects of a human aesthetic abstraction, rather than as the

supposed "primitives" of a traditional perceptual psychology. They would not be part of the more access or functional sentience of the life-worlds of nonsymbolic organisms. The function cycles of von Uexkuell and the direct perception of loomings and laminations for Gibson are forms of such an access consciousness, since they are based on pre-set affector cues that release sequences of movement too rapid to permit any separate realization of each transitional step. Block likens such an access consciousness to human tachistoscopic research on backward masking (Neisser, 1967), such that a behaviorally detectable sentient cue will not reach full phenomenal completion, owing to its masking by the next and next stimulus, until a more fully experienced completion of the entire sequence. Both the phenomenal states of molar satisfaction/dissatisfaction and the function-cycle access phases of Uexkuell and Gibson would be sentient, but the latter will have "no time" for anything other than this "streaming"—felt but not figural as such.

On the human level, Kurt Goldstein (1934/2000, 1963) understood the adult development of an abstract symbolic capacity as co-creating a more spontaneous and directly given phenomenal "sphere of immediacy," with its potential to be "involved in our totality" as "experiences of being" in moments of creativity, friendship. love, and religion, "but also failure, sorrow, and anxiety" (Goldstein, 1963, p. xi–xii). In the present context the numinous becomes the maximally complete development of these "states of being," with their "genuine unity with the other and with the world" (Goldstein, 1934/2000, p. 21). Maslow's (1962) accounts of peak experience were influenced by Goldstein's version of this explicitly human phenomenal consciousness, whose normative developmental emergence would be jointly marked around the ages of eleven and twelve by the capacity to both understand the abstract verbal metaphors of feeling and fully respond to techniques of hypnotic induction and meditation (see Asch, 1961; Hunt, 2011)[8]

By contrast, nonsymbolic creatures, their consciousness tied to concrete sequences of function, would have neither the time nor the potential supporting neural structures to allow these more inclusive "moods of existence." Similarly, Heidegger (1930/1995), in his extended commentary on Uexkuell, distinguishes between the "worldlessness" of physical things, the world "poverty" or "encapsulation" of the animal *umwelt*, and the radically open "world formation" of human beings. The animal *umwelt*, despite and because of its species specific specializations in perceptual sensitivity, is a kind of "captivation," "absorption," or "encirclement" that must curtail phenomenality in service of survival—continually re-enacting to whatever degree possible its "plan" for holding organism and its ecological array together, with all outside that circle "inadequate" to it. By contrast for Heidegger (1930/1995), a human being-in-the-world is based on an open apprehension that—as with Neisser and Bartlett—is a "taking together and a taking apart"—"a gathering or togetherness which both combines and separates" (p. 318). This allows our seemingly infinite metaphoric capacity to take "something as something"—or indeed perhaps 'anything as anything'—which both creates its own potential chaos and the simultaneous need for its encompassing in a unifying context of purpose and meaning.

Alfred Schutz (1962), in developing Husserl's concept of the human life-world, locates the similarly limited *umwelt*-like encirlements of absorption and self-enclosure in the multiple subworlds of our potentially separate intelligences—in the semi-enclosed realities of business, science, athletics, the arts, and academia. At the same time there is for Schutz always the potential "shock of awakening" out of each of these "finite provinces of meaning" through the transformative "irruption of the transcendent" into these circumscribed pragmatics of the everyday life-world (p. 338). This is Heidegger's related numinous wonder, awe, and amazement at Being-as-such. As the phenomenal completion of our being-in-the world, it can also be seen, in Uexkuell's terms, as the latent "plan" or "design" of a human nonduality.

While differences in forms and levels of consciousness between symbolic and nonsymbolic organisms would seem clear (see also Hunt, 1995), the further question of a potential underlying continuity must also arise. Block's phenomenal vs. access consciousness is after all a continuum. Here

consciousness becomes the "conjoin" of organism and world, and as such constitutes a nonduality intrinsic to all life-worlds. The numinous becomes the human semantic imbuement of the inner form of that consciousness potentially shared by all sentient beings.

Continuities of a Primary Consciousness and the Numinous as its Semantically Imbued Amplification

Edmund Husserl's phenomenology of consciousness—its early and later forms (1913/1931, 1926/2001) so deeply resonant with William James on the "stream of thought" (1890, 1892/1961)—identified forms or "inborn aprioris" of a "pure consciousness" implicit in all experience. Through a radical "bracketing" or suspension of the "natural" interpretive attitude of the everyday life-world, they are seen as open to direct intuition within all levels of human cognition and feeling. For Husserl (1936/1970), although he did not develop the notion further, these forms are also inferable as an "inner being" or "psychic life" extending through "the animal kingdom" and "the whole series of organic being," to the extent that there are "grounds for saying that every organic being has its psychic side" (pp. 246-247). By implication then, Uexkuell's organismic life-worlds would be their own instantiations of Husserl's embodied flow of intentionality. Husserl would also have not been unaware of Gustav Fechner's widely known speculations on a background sentience for plants (Lowrie, Ed., 1946). It is also worth noting Husserl's congruity here with a Darwinian evolutionary continuity for all basic life functions, since for Husserl consciousness was anything but epi-phenomenal, and so would be inferable "as far as the analogy reaches" (1936/1970, p. 228).

Especially given the similarities between Husserl's representational/analytic phenomenology and the more presentational states of the Eastern meditative traditions, in both their techniques of detachment and realized "pure consciousness"—and as noted by both transpersonal psychologists (Hanna, 1995) and phenomenologists (Louchakova-Schwartz, 2017, 2019), it is not surprising that the later Heidegger, William James, and the contemporary phenomenologists Michel Henry (2008, 2009) and Jean-Luc Marion (2002) have in very different ways understood numinous experience as its own spontaneous version "in feeling" of a more primary phenomenology of all consciousness.

For Husserl himself, however, this risks confusing his "actual intuition" of an intrinsically "apriori" or implied deep structure informing all empirical experience with the "real" of occurring states of consciousness (1931/1964, 1936/1970).[9] It will remain below to understand how such ostensibly "form near" numinous states would be possible in these terms. Nonetheless, given the parallels between his phenomenology and numinous states, one can also wonder to what degree Husserl's "analytic" would have been implicitly guided by a nascent potential for the numinous in all people—as well as by its diverse schematizations in the metaphysics of an all-one in the world religions. One also notes Husserl's personal sense of "wonder" that what he was doing—"a new kind and an endless sphere of being"—could be possible at all (Husserl, 1929/1964, p. 11; Moran, 2012).

Husserl and James on a Primary Consciousness

Both Husserl and James moved from similar early phenomenologies of the intentionality of a streaming consciousness to a more primary form of immediate "givenness" that for both also becomes its own opening to the numinous.

James: The Stream and Pure Experience

The early Husserl, busy establishing his broader phenomenological movement, was less interested in the descriptive phenomenology of a streaming consciousness because he held it to have been already done by William James (Spiegelberg, 1965). James (1890, 1892/1961), less interested at that point in a systematic philosophy, described ongoing consciousness as a "streaming," always ahead of itself in its sense of an aboutness or directionality that Husserl would term "intentionality." Within this continuous onflow, James distinguished slower moving "substantive" or imagistic phases from its more rapid and impalpable "transitive" processes. The latter include senses of harmony and discord, "feelings of tendency," and a "fringe" or "halo" of relations that would be essentially the same as Husserl's later "horizonal openness" (Spiegelberg,

1965). Once so stated, these forms become truistic and obvious, always detectable within the specific thoughts and feeling states they would shape and inform.

It is in its quality of a primary "givenness"—so central to the later Husserl and Heidegger—that James' "stream" approaches the more form-near aspects of the continuum of numinous and altered state experience. James stresses that thought simply "goes on" independent of our active volition. There is no central source of self other than this imposed streaming—a view congruent with Husserl's later all-constitutive "transcendental ego." While for James our consciousness feels "personal" and "mine," phenomenologically it does us, rather than we doing it. James says it would be more descriptively accurate, if normatively anomalous, to say "it thinks" or "it feels" in the same way we say 'it rains" (1890, pp. 224–225). Empirically this fundamental "givenness" is also what stands out in both deep meditation (Kapleau, 1965) and the "muse" experiences of creativity—as in Nietzsche's "a thought comes when 'it' wishes, and not when 'I' wish" (1885/1954, p. 398). It also emerges in the unintended introspective hyper-sensitizations of schizophrenia (Hunt, 1984, 1995; Sass, 1992)—where a phenomenological detachment takes the form of a painful interpersonal withdrawal, and patients complain of otherwise normal mental content being felt as the external intrusions of "made thoughts," "made feelings," and "made impulses." This same phenomenon—uncanny and soon inviting delusions—is for James and his "it thinks" what goes unnoticed and so is immediately "owned" in the more active pragmatics of an everyday life-world. Consciousness, normally seen through, when seen as such creates its own phenomenology of an incipient numinous-uncanny otherness (see Hunt, 1984, 1986, 1995; Hunt & Chefurka, 1976).

James' own approach to a primary consciousness, which in the present discussion would both reflect its nondual "conjoining" function in the life-worlds of potentially all sentient beings and at the same time open to human amplification as the numinous, emerges most clearly in his later writings on the "thatness" of a "pure experience" underlying his earlier more cognitively formulated stream (James, 1911/1996, 1912/1971). Here James describes a sensed "thatness," not yet ready to become any specific "whatness" of world or "thisness" of self—a nondual "prima materia" that can later become more a "fact of consciousness" or of "physical reality" (James, 1912/1971, pp. 50, 72, 230)—its pure onflow punctuated only by its "pulses," "drops,"and "buds." James (1890, p. 273) had earlier cited something very like its empirical manifestation in experiences of emerging from deep sleep and anaesthetics—already minimally semantically imbued as a "limitless, infinite feeling of *existence in general* without the least trace of distinction between the me and not me." He made similar accounts from nitrous oxide part of his understanding of the all-one of mystical experience:

> [It evokes] the Open Secret of Being revealed as the Inevitable Vortex of Continuity…by which the "now" keeps exfoliating out of itself, yet never escapes….It inspires exuberance rather than fear….The lession is one of central safety…. The sane center of the universe—at once the wonder and assurance of the soul. (James, 1902, pp. 351–352)

James' evocations of this nondual "thatness" are indeed reminiscent of meditative accounts of "pure consciousness"—in both states of waking concentration (Woods, Windt, & Carter, 2022a) and experiences during deep dreamless sleep (Alcaraz-Sanchez, 2021). In both settings there are descriptions of a pure duration—felt as an eternal stillness, peace, and clarity. While there is a loss of any ordinary sense of self, there can also be a background of formless vibratory and kinesthetic energy. Robert K.C. Forman (1999, 2011), in his own accounts of a meditative "pure consciousness," similarly describes an inchoate sense of eternity/timelessness in terms of directly lived semantic metaphors and synesthesias of a "spacious silence" and a kind of formless embodiment in which "the silence becomes me" (1999, pp. 62, 87, 142).

While such accounts of a "pure consciousness" and its primary "thatness" are schematized differently in separate traditions (Woods, Windt, & Carter, 2022b), they have in common this culturally variable semantic

amplification of the inner forms of all consciousness as understood by both James and Husserl. The later Heidegger (1938/1994, 1941/1993) similarly sees the most basic schematizations of the numinous as a stillness, wonder, and awe at Being-as-such, while for James (1911/1996) it is "the wonder…not only that *anything* should be, but that *this* very thing should be" (p. 39)—his primary thatness as meaning.

Husserl: Horizonal Openness of an Eternal Now

Husserl's (1913/1931) first phenomenology of consciousness centered on the active directedness of a cognitive intentionality. Similar to James' stream, each moment of consciousness is the conjoined unity of its noesis—or transitive act, hyle of substantive sensory-imagistic expression, and noema of its aboutness—with noema as the immanent object to its act and not to be confused with the "real" of "representation" in subsequent cognitive psychology (Zahavi, 2003). Like James on pure experience, his later accounts of a more immediately given "passive synthesis" became the still more inward form or essence of that intentionality, and the basis of his "transcendental constitution" of life-world (Husserl, 1926/2001, 1929/1964, 1931/1964).

This later understanding located an intrinsic nonduality within each moment of consciousness, with noema conjoined to its constituting noesis as a "self of the object." Thus each moment, regardless of its later falsity or validity and very much anticipating Gendlin (1978) on "felt meaning," is a "self-givenness" based on "both the self giving of the self of the object on the part of the subject as a noetic process and the self-giving of the self of the object from the object" (Husserl, 1926/2001, p. liii). This inner conjoining of subject-object is carried by kinesthetic-affective "rays of force" as "an allure that awakens" (P. 196) and "an invitation to be" (p. liii) in a moment of complete clarity" and "fulfillment" (p. 257). All this becomes the inner nonduality of any felt moment of understanding—the "is like" of immediate thought and feeling.[10]

Passive synthesis is inseparable from its own form of ur-temporality which is simultaneously flowing and still. Within the felt now of each moment there is the dynamic of an always receding "comets tail" of retention and a futural protention into the horizonal openness ahead. For Husserl (1910/1964) what appears "ever and again" as the "now" has its own intrinsic "newness" (p. 93). It is "the living source-point of being" in which "every new primal being…wells up" (Brough, 1993, transl., p. 514). Later he will say that what is present is, in its inner form, intrinsically new. Each such now is also an "enduring" that is "immortal," "being ever newly fulfilled" (Husserl, 1926/2001, p. 466–467). This for Husserl is a transcendental, ever renewed consciousness that "does not die and does not arise; it is an eternal being in the process of becoming" (p. 471).[11]

From this inner eternity and nonduality of a primary consciousness in the later Husserl, the distance is not that great to the traditions of mysticism and meditative realization of "pure consciousness." It would not be for nothing that Husserl once commented that whole sections of Meister Eckhart—presumably related to an inner Godhead of perpetual creation—could have been written by himself (Cairns, 1976, p. 91).[12] Although Forman (2011), in his own phenomenology of a meditative "pure consciousness," rejected any relation to the early Husserl on intentionality—since a contentless eternal openness would not refer beyond itself—he missed the more obvious connection to a primary passive synthesis. Forman's "contentless fullness"—the very image of Husserl's now of horizonal openness—is described as perpetually "pending" (p. 63), while simultaneously "still," "silent," and "motionless" (p. 162). Its "bottomless" depth gives rise to a sense of "mystery" that comes in "flashes" (p. 60, 162). Over time Forman's meditative experience assumed a more explicit nonduality in which there was no inner "here" or outer "over there," and his surroundings came to have the same velvety, translucent stillness as his consciousness, which now "ran right through" a world made of "the same stuff as me" (p. 122)—an explicit realization of Husserl's "self of the object" in its perpetually renewed eternity.[13]

Intuitions of a Primary Consciousness

One understanding of numinous experience in its *Tremendum*, *Mysterium*, and Dependence is to see it as the semantic amplification of something more basic—the

intuited inner forms of all sentience. Husserl's passive synthesis would describe its separate phases, James' thatness, prior to any thisness or whatness, captures its quality of nondual conjoining, and Gibson's here-there, whence-whither envelope of horizonal onflow describes its larger gestalt or pattern. Following Uexkuell the inner forms of such a primary consciousness will stand out most clearly at its most concrete, in the simplest organisms whose life-worlds are the least differentiated out of its basic patterning. It will also stand forth directly in the maximally inclusive human numinous, as the integrative nonduality of the human life-world, otherwise so fragmented in its hyper-differentiated symbolic functions. In the numinous it reappears as the hierarchic integration of a phenomenal consciousness whose inner form has finally become its semantically imbued content. The numinous becomes the tenuous semantic expression of a unified human life-world, lived out on a more concrete level in the *umwelten* of non symbolic organisms.

How would such a level of ur-consciousness, potentially identical in all sentient organisms, become available as such to the human mind? If with Neisser and Bartlett (as above) thought is the turning around on, disassembling, and symbolic re-use of the patterns of a motile perception, then in so doing it will also extract the core metaphors of Lakoff and Johnson: container-contained, source-path-goal, and force-link. These, conceptually abstracted, become the Kantian physical categories of space, time, and causality. At the same time, if we assume with Uexkuell and Gibson that these patterns of concrete perception manifested across multiple species are themselves sentient, then this higher metaphoric capacity, as itself sentient, will in Husserl's terms (Cairns, 1976, p. 31) "take up" the inner sentient forms of that perception as the more primary "lived" aprioris of horizonal openness, onflow of the new nows, and a kinesthetically charged givenness.

There would be three forms of such a primary "intuited" phenomenology of this inner nonduality of consciousness—the referential analysis of Husserl, the spontaneous presentational experience of the numinous, and the behavioral indications of this sentience in non symbolic organisms. The latter would be embedded within the complexly differentiated behavior and sensory specializations (Yong, 2022) of organisms as diverse as eagle, bee, and octopus, but they will have their most direct instantiations in the simplest of all organisms—the motile single-cell protozoans. It would be their inferably sentient behaviors, now studied in such detail in both observation and physiology, that would show the most basic patterns of life-world and its inner conjoining. It would be these most concrete behavioral instantiations that would help establish both the deep continuity of all living consciousness and its humanly distinct development.

Continuities of Consciousness and its Protozoan Emergence

While Husserl holds that his passive synthesis can be "actually intuited" from within our phenomenal consciousness—having been "taken up" into our symbolic capacity—and to the extent that with Darwin all basic organismic functions will have their own evolutionary continuity, these same ur-forms should be intuited-implied in the behavior of at least all motile organisms. Husserl appears to have thought so, at least in principle, speaking of a primary intentionality in "every organic being" (1936/1970, p. 247), and a "primordial unity of animate organism and psyche," with its implied "psychological phylogenesis" (1931/1964, pp. 142, 143). This would mean, as Husserl himself apparently held (Cairns, 1976, p. 74), that a human empathy, informed by careful behavioral observation, can infer/feel something of the "is-like" of other species.

It has more recently seemed to many in comparative psychology most parsimonious to posit a basic consciousness in other organisms on a "need to know" basis (Miller, 1981; Hunt, 1995; Sheets-Johnson, 1998): A creature moving rapidly enough in its environmental array to endanger its survival will need a capacity for a self- or proprio- location that would be the here-there, whence-whither core of a functional sentience. Before the advent of a reductive behaviorist ideology in psychology, a consensus of Darwin-inspired early observers—including Romanes (1883/1977), Binet (1888/1970), Jennings (1904, 1906) and Washburn (1917)—was

to locate this point of sentient emergence in the motile protozoa. They agreed that the surprising diversity and selectivity of their life-world behaviors went beyond any explanation in terms of a purely physical "tropism." Jennings (1904, 1906), who started as a skeptic (1899), finally concluded on the basis of his detailed observations that if an amoeba were the size of a dog, we would have no problem seeing its behaviors as fully sentient, and indeed if it were the size of a whale and we were swimming nearby, one would need to make that assumption in the interest of one's very survival (1906, pp. 336, 337).

While contemporary comparative psychology now has less problem in attributing a basic consciousness to metazoan mammals, birds, reptiles, fish, and octopi/squid (Griffin, 1978, 1984; Reber, 2019; Yong, 2022), this continuity has only gradually been extended back to the protozoa (Hunt, 1995, 2001; Cook, 2008; Baluska & Reber, 2019). Yet if the so-called "hard problem" of consciousness is indeed a major dilemma of contemporary science, its place of evolutionary emergence becomes potentially critical to any solution. While the methodological limitations are obvious, parsimony is also central to scientific theory, and, as will become clear, it has proven increasingly hard to explain why and how protozoan behavior would not be sentient, while appearing to be so to its most experienced observers. If it is present in its most basic form in single celled protozoa then its explanation must finally rest more with a holistic biology, as Husserl also thought, than with a neuro-science that charts not its creation but further differentiation.[14]

Alfred Binet (1888/1970), also a pioneer of early hypnosis and intelligence research, had originally suggested that just as stomach cells can be considered as protozoa specialized for digestion, so neurons would be protozoans specialized for the "psychical attributes" of sentience-motility. This idea lay dormant until physiological research (Eckert, Randall, & Augustine, 1988) showed essentially the same electro-chemical processes of depolarization and hyper-polarization in the neuron action-potential to be present during protozoan discriminative behaviors. It would appear Binet had been correct. These findings have been variously taken to suggest that the pulse and flow of the membranal action potential during protozoan movement would be the template for an emergent sentience, a view further strengthened by findings that human anaesthestics inhibit both these depolarizations and their accompanying protozoan behaviors (Hunt, 1995; Cook, 2008; Cook, Carvalho & Damasio, 2014; Reber & Balusko, 2021; Sacks, et al, 2015).[15] The central nervous systems of metazoans would not so much cause consciousness, as gather, differentiate, and focus it into patterns of greater and greater environmental sensitization.[16]

While motility in some protozoans is based on flagella and cilia, whose microtubular structures seem automatically driven by the central energy metabolism of the cell itself—and which has entailed its own debates about sentient emergence[17]—the more discriminative protozoan behaviors seem to rest instead on this neuron-like action potential and its gradiations. This is well illustrated in the Euglena (Jennings, 1904, 1906), moving automatically forward via its frontal flagellum in the direction of the optimal levels of light needed for sustaining its vegetal chloroplast, with less illumination forcing a shift into a more animal-like predation. Accordingly it is especially sensitive to momentary changes in light intensity and direction. In response to such novelty, which like the Weber-Fechner law in human sensory psychophysics, it detects proportionally to its initial level (Jennings, 1906), it ceases its automatized movement and begins a circular "wobble," as its proprio reorientation toward more optimal light, before re-newing its flagellar forward motion. Jennings understands this as an orientation response to comparative novelty, with the "wobble" involving the same bodily twisting and reshaping seen in amoeba, and which are now understood as its gel to liquid depolarizations. In short, the Euglena enacts its own sensitive integration of the here-there, whence-whither horizonal flow of Gibson—and James' flow-pulse-flow within the larger context of its umwelt of guiding light.

What is remarkable is the way in which the actual use of depolarization in different protozoan species varies in terms of its "downward control" by the larger plan or design of its life-world, rather than as some ubiquitous bottom-up causation

identical across these numerous species. These will vary in terms of whether their action potential is all or none and gradiated, and both hyperpolarizing and depolarizing. Euglena, Stentor, and Amoeba predominantly depolarize, although the Amoeba in its internal protoplasm rather than outer membrane, while the more widely studied paramecium shows hyperpolarizing avoidance behavior to posterior stimulation, depolarization and cilia reversal to aversive frontal stimuli, and gradiated depolarizations in slower moving exploratory behaviors (Eckert et al, 1988; Van Houton, 1998). Thus it is the larger life-world that determines the differential use of the neuron-like action potential in service of its organism-environment equilibrium. Binet is again correct in saying that the complexity of "psychic life" in each protozoan species

> Transcends the limits of cellular irritability [now understood as action potential]….These movements are not explained by the simple phenomenon of cellular irritability. (Binet, 1888/1970, pp. 64, 109)

Here Binet speaks of "selection" and "choice" and Jennings of "trial and error" responses based on the "internal factors" of a larger "regulation."

The slower moving Amoeba has provided some of the best examples of this here-there, whence-whiles patterning. Jennings (1904, 1906) observed their self locating response when separated from the surfaces on which they normally move: pseudo-pods go out in all directions, star like, until one touches a new surface, on which the Amoeba then re-assembles its normal shape and moves ahead. Similarly, while Gibson described the way in which organismic movement in a visual array generates patterns that specifically self-locate the creature making them—making echo-location in bats an exemplar of all perception—Washburn (1917) described Amoeba ostensibly changing direction based on the bounce-back from the currents generated by their own movements.

Jennings most striking observation was of a mutual learning in two Amoeba. The larger one having ingested the smaller, left a small gap in its surrounding protoplasm through which the smaller immediately escaped—something Jennings had never seen before. The larger Amoeba then pursued and re-ingested the smaller, this time leaving no gap, but to Jennings amazement, when, as the larger one moved on, it left a thinner membrane near its ingested captive, the latter suddenly broke through and escaped again—utterly unprecedented in Jennings observation before or since. The sequence was then repeated, after which they both moved away in separate directions. In Husserl's terms the larger one was left with its receding "comets tail" of an habituated defeat, while the smaller had now been sensitized to a new now of a potential horizonal openness.

Numinous Experience as the Semantic Amplification of a Universal Is-Like of All Consciousness

Husserl had proposed "passive synthesis"—kinesthetic "lines of force," perpetual onflow, now of the new, and horizonal openness—as the inner form or universal is-like of all consciousness—human and nonhuman—and echoed in its various aspects in James on "pure experience" and Gibson's "envelope of flow." As the "intuited" or directly implied deep structure of all consciousness it will be variously instantiated, differentiated, and "taken up" in and as the life-worlds of all sentient species. This becomes part of Husserl's suggestion that passive synthesis also constitutes a kind of "psychological phylogenesis" (1931/1964, p. 142), as with Gibson's "envelope of flow" as an underlying form equally applicable to sentient motility in flying birds, single cell protozoa, and James' "stream." The function of such a consciousness—at all levels of its life-world differentiations—would be the continuous nondual conjoining of organism and environmental array in a unified design or life-world—a conjoined self of the world and world of/for the self.

The maximally form-near instantiations of this consciousness-as-such would be found in the least differentiated life-worlds of motile protozoa and the maximally abstract experiences of the human numinous—both showing on their *very* different levels the same forms of a *Tremendum* of pure kinesthetic energy, *Mysterium* of an eternally new openness, and the Dependence of a resulting existential self-location in the face this Wholly Other encompassing. True for all sentient life-worlds, it is

almost the entire content of the protozoan *umwelt* and the semantic point and understanding of the human numinous.

Note that on this understanding, and contrary to some formulations (Maclean, 1990; Stevens, 2003), the numinous in itself is not any sort of "phylogenetic regression." Indeed quite the contrary, since Husserl's passive synthesis would be "taken up" as the inner form of *all* differentiated life-worlds and forms of human symbolic intelligence. Contrary to any notion of separate forms of consciousness in the different levels of a supposedly "triune" human brain (Maclean, 1990)—which is more plausibly seen as one single interrelated system (Cesario et al, 2020)—the same deep structure would inform sentience on the thalamic-reticular, limbic, and neo-cortical levels. The most basic metaphoric and synesthetic expressions of the numinous in fact rest on cross-modal right hemisphere areas of the human neocortex (Hunt, 2011; Ramachandran & Hubbard, 2001).

Instead, the numinous becomes the maximum hierarchic integration and semantic amplification of the most basic forms of all consciousness—reconciling on the human level our species specific instability, imbalance, and incompleteness. It becomes the abstract, if historically and personally tenuous, realization of the nonduality implicit in all animate life-worlds.

Conclusions

1) **Continuities of Consciousness**

Husserl's apriori forms of consciousness—as "actually intuited" within all human experience and inferred/intuited in other species-specific life-worlds—can be understood as a universal "is-like" for all sentient beings—at least as knowable on this planet. Damasio (1999) hints at this level of generality in defining consciousness as "the sense of something happening," and Koch (2019), despite restricting its range, as "the feeling of life itself." Thus Nagel (1974) in his widely cited statement that there is something it is like to be a bat, but we cannot know it for ourselves, would be partly and obviously right, but in an important sense wrong. We cannot know what it is like to echo-locate or catch insects at night in midair. However, to the extent the life-world of the bat differentiates out of Husserl's passive synthesis, James' pure experience, and Gibson's closely related here-there, whence-whither envelope of flow, we do know—on the level of that shared and primary is-like. It becomes its own specification of that universal presence-openness.[18]

With Uexkuell, Gibson, Heidegger, and the later Husserl all consciousness is attuned in its ur-intentionality to an encompassing life-world as its "being-in" and nondual "being-as." Each life-world, from paramecium to human, is differentiated out of this same immediately felt sentience—whether in the continuously re-constituted concrete nondualities of the myriad life-worlds of non symbolic organisms or on the more tenuous human level of an abstract numinous rebalancing of a more intrinsic instability.

If it is one consciousness all the way up—as such in the human numinous—and all the way down in the sentient-motile protozoan life-worlds, it also becomes uniquely open to humanity to *know* that and to articulate its larger meaning. Multiple traditions have converged on such an underlying continuity. Husserl's own intuition here is fully consistent with a broader Darwinian evolutionary continuity in all basic organismic functions. In addition, trance centered shamanic cultures, with their traditions of close hunter-gatherer observations of animals, seem to have intuited this same continuity. Viveiros de Castro (2015) summarizes an indigenous Amazonian world-view deeply resonant with both Husserl and Uexkuell on life-world:

> The world is peopled by different types of subjective agencies, human as well as non human, each endowed with the same generic type of soul….What changes passing from one species of subject to another is the…referent of these concepts….Where we see a muddy salt-lick on a river bank, tapirs see their big ceremonial house, and so on. Such difference of perspective—not a plurality of views of a single world, but

> a single view of different worlds—cannot derive from the soul, since the latter is the common original ground of being. Rather, such difference is located in the bodily differences between species, for the body… is the site and instrument of ontological differentiation….(pp. 58–59)

The Buddhist traditions see this same animating spirit of a shared sentient being through all of life, along with the specifically human potential for its realization and fruition. For both Buddhism and shamanism this confers a human responsibility for its development and nurturance as an incipiently sacred presence (Guenther, 1976).

2) **Responsibility of the Numinous**

What is the function of the numinous? It is the full coming forward into phenomenal consciousness of the encompassing "design" or species-specific nonduality of the human life-world—a spontaneous version of Husserl's cosmos and Heidegger's Dasein. As the abstract expression of the basic structure of all consciousness it does for us what that consciousness does for all sentient organisms—uniting organism and world in one inwardly conjoined pattern. As the transcending circumspection of a larger meaning and purpose, it is the semantic version of the concretely lived nondual *umwelten* of nonsymbolic organisms. Whatever the limitations of its metaphysical and cultural schematizations, it is not per se a cosmic narcissism, any more than the sophisticated applied physics of animal motility entailed by Gibson's envelope of navigational flow. The primary metaphors of the numinous are the same as those underlying mathematics and physics for Lakoff and Johnson (1999). Thus in cultural eras of maximal ideational integration (Sorokin, 1957), the numinous becomes a collective cosmos co-mirroring humanity and the physical order. Individually and collectively it confers a sense of "at homeness" in the universe, otherwise curtailed by the more driven pragmatics of our separate applied intelligences and emotional egocentricities, much as Uexkuell's rapid function cycles abbreviate a fuller concrete sentience in the interest of immediate need. Schutz's (1962) everyday human life-world thus both applies and holds back the symbolic capacity whose phenomenal completion provides the orienting context of a numinous reconciliation and balance.

The broader effects of numinous experience—its communality, humility, and existential responsibility—will have further implications in an era of global, human caused climate crisis—and what might be seen increasingly as its "ontological shame" (Hunt, 2021). A universality of all consciousness and the human self-awarenesses of that continuity confers a moral responsibility for the multiple species and planet thus threatened. The numinous—as the amplification of the form of that shared consciousness—is in fact sacred, not only in its phenomenology thereof, but in light of the possibility that our symbolic consciousness—with its potential realization as the numinous—may in fact be unique in the universe. As far as we presently know, it is. The physicist Paul Davies (2011) has suggested that even if there are other intelligent galactic civilizations out there, their rarity, limited life cycles, and distance may make them permanently unknowable. Pragmatically, at the least, that makes humanity—and the planet-wide consciousness we share—the developmental "point of Being." Humanity would be its maximum system complexity and its growth-point of self awareness—once a very traditional view. As embarrassing as such a thought must seem under the present circumstances, its factual possibility, even pragmatic probability, places a present globalized humanity in a position not so different from the traditional shaman—morally responsible to and for the spiritual integrity of social group, supporting land, and the living species whose consciousness we share.

Notes

1. While all societies have shaped a common visionary potential for the numinous in their own ways, which will in turn guide its direct

experience, there would seem to be a more intrinsic link between the shamanic sanction for widespread participation in trance, archetypal dreams, and vision quest, on the one hand, and a social structure, in these more or less single class societies, based on the "regenerative reciprocity" of gift giving, personal respect based on totemic and vision quest identity, communal sharing of resources, and values of humility and gratitude (Kimmerer, 2013; Mauss, 1966). The parallels between the altruism, communality, and humility consequent on modern experience of awe (Keltner & Haidt, 2003), and the importance of these values in the template of hunter-gatherer social structure, and especially given the centrality of the numinous in its maintenance, may imply that this was a moment in our collective history reflecting something close to an optimal "plan" for the balancing of person, group, and spirit, soon to be displaced and narrowed by the rigid class structures of primitive kingships (Trigger, 2003), and even at its primary level, according to Mauss (1966), already fragile and difficult to sustain in the face of envy and individual competition (see also Hunt, 2020, 2021).

2. There were indeed major differences between Husserl and Heidegger that occasioned their mutual split, too complex for present discussion (Zahavi, 2003; Luft, 2005; Spiegelberg, 1965). In hindsight, and despite Heidegger's eschewing of any language of "consciousness" for that of Being and Event, the later developments of Husserlian phenomenology by Henry (2008, 2009, 2015) and Marion (2002, 2008) show not only the parallels between life-world and Dasein, but the same inherency of spirituality to the structure of human consciousness that Heidegger had developed in terms of a primordial Being-experience and its numinosity.
3. W. R. Bion (1962, 1967), Harold Searles (1960), and Louis Sass (1992) have variously understood the deep inner withdrawal of schizophrenia as a kind of extreme thingification of personhood, an uncanny transformation indexed by a physical literalization of the intrinsic metaphors of emotion that creates its own often delusional mechano-world.
4. Some would now see, at least on the conceptual level, the promise of a new cosmos of the future—a potentially mystical panpsychism in the consciousness-like features of quantum field effects, cosmological expansion out of singularity, dark energy, and the relativity of time and space (Bohm, 1980; Capra, 1975; Goswami, 1993; Hameroff, 2014). It is true that the contemplation of these new realities can evoke a numinous sense of immense forces and energies (*Tremendum*), the mystery, wonder, and unknown of origin and end (*Mysterium*), and a sense of human smallness and humility at the allowance/affordance/gift of a universe whose "constants" allow our being-here (Dependence). Yet it would require a settling of that cosmology into a longer term scientific consensus, and its sustained metaphoric mediation into popular culture and early education, before it could have enough "quasi sensory" metaphoric "grain" to schematize for the collectivity the numinous sense of cosmos present in the earlier traditions of neo-Platonism, Taoism, or Christian-Aristotelian metaphysics.
5. There may indeed be a nidus of the human capacity for awe in the spontaneous aesthetic resonance behaviors of chimpanzees to flowing water (Bering, 2002) and sudden downpour (Goodall, 1986), as well as uncanny terror at the totally unexpected (i.e. a severed chimpanzee head, Hebb & Thompson, 1968). However, none of this undergoes any further systematic shaping. There are no ape proto-shamans who appear to enact either individual or group trance behaviors. Recent studies of deliberate plant intoxication in diverse species (Siegel, 2005) would seem part of a broader non semantic novelty-curiosity capacity than anything numinous in terms of further trance-like or ritualized behaviors contingent on these intoxications.
6. While Uexkuell's "bubble of perception" and his agreement with Gibson on the separately lived "ecological array" for each species life-world emphasizes what could be taken as a kind of narcissistic self-enclosure, Gibson's navigating loomings, laminations, and occlusions

also imply a necessarily precise "applied physics" at the heart of each ambient-motile *umwelt*. It thus becomes more understandable how a human self-referential "turning around" on and abstracting the patterns of this dynamic array would also form a basis for the core physics of a mechanical-instrumental intelligence.

7. Perhaps impacted by a now outdated behaviorist ideology of their times, neither Uexkuell nor Gibson specifically addressed the "consciousness" so directly implied by their ambient life-worlds—a consciousness in motile organisms now well supported by both neuroscience (Koch, 2019) and a wide range of behavioral-observational research (Griffin, 1978, 1984; Mitchell, Thompson, & Mileles, Eds., 1997; Reber, 2019).
8. A self-referential or "introspective" phenomenal consciousness develops very slowly through childhood. Flavell and Green (1993) demonstrate that children as old as four or five have no access to an immediate first person consciousness, appearing only after the capacity for "inner speech" (Vygotsky, 1965). Spontaneous transpersonal states before the age of eleven or twelve seem more parsimoniously understood as developmental precocities in a social-spiritual intelligence than any "romantic" model of a normative early capacity otherwise lost (Hunt, 2011; Hunt, et al. 1992). This is not to deny that intense pre-egoic sentient imprints may get taken up later into phenomenal self awareness as symbols of the numinous.
9. Husserl's term for "intuition" was *Anschauung*, which in contrast to the English "intuitive" also has the meaning of perceiving or contemplating—having a view of the clear, evident, and obvious (Spiegelberg, 1965; Betteridge, 1958). Husserl's "actually intuited" means what is directly implied and obvious within consciousness as its underlying form or apriori, and that neither in the sense of the abstracted or "idealized" laws of science, nor as the instantiated "real" events of empirical experience, which by implication could be at most form-near (Husserl, 1936/1970, p. 260). Later, Binswanger (1963), in relation to both Heidegger and Husserl, would suggest the term "existential aprioris" as the lived underpinnings to go with Kant's purely physical categories of space, time, and causality—the latter now secondarily derived from a primacy of life-world.
10. There are multiple "real" levels of Husserl's "self of the object" as the inner form of all immediate consciousness. On the level of perception there is Uexkuell's and Gibson's conjoined nonduality of flower and bee, ambient array and body position. On the level of the development of human inter-subjectivity there is the creation of personal self through the mother's mirroring of the baby as its "self-object" (Kohut, 1984). It's later developmental internalization becomes the inner basis on the level of symbolic cognition for Werner and Kaplan's (1963) "reciprocal rotation" and mutual reciprocity between metaphoric vehicle and its referent. In this regard a more contemporary understanding of Husserl's hyle in his phenomenology of human cognition might center on the incipient synesthetic qualities of "felt meaning" (Gendlin, 1978), as reflecting the cross-modal synthesis also central to metaphoricity (see Hunt, 1985, 2005, 2011; Ramachandran & Hubbard, 2001).
11. With the now of consciousness as perpetually renewed into an horizonal openness always ahead as the sense of a next, Husserl, according to his student Dorion Cairns (1976, pp. 33-35), had apparently concluded that the inner form of that consciousness would be inwardly immortal. As long as this not yet carrying forward is at all, it can have no directly felt cessation. This has its own implications for both near-death experience and spiritual intuitions of an after-life (see Hunt, 1995, 2012b; Ehlman, 2020).
12. The later French phenomenologists Michel Henry (2008, 2009, 2015) and Jean-Luc Marion (2002) sought this direct extension of Husserl's phenomenology into spirituality and theology in terms of their own understanding of a primary "givenness" of immediate consciousness.

    Henry posited a basic ur-consciousness based on the imposed force of a motor-kinesthetic intentionality and an "auto-affectivity" of life itself—separate from Husserl's cognitive

intentionality but not as obviously from his later passive synthesis. Life becomes the core of the sacred through the realization that we are "carried" by its sheer givenness—outside our will and so phenomenally from a beyond. Resonant with the life-philosophies of Nietzsche, Bergson, and Reich, this amplification of an already transcendent force of life becomes the sense of the sacred.

For Marion it is experiences of "saturation" which, in a way similar to Keltner and Haidt (2003) on awe, exceed the Kantian categories of ordinary understanding by their excess and non-comparability and so elicit wonder, fascination, and bedazzlement, along with a witnessing detachment which thereby intuits the constituting forms of all consciousness—its pure "givenness" that phenomenally "comes to it…from elsewhere" (2002, p. 176). This has the form of a Revelation at the limits of a consciousness which can only be represented in correspondingly inclusive concepts of Source, Eternity, God.

In both Henry and Marion the "it has you" of Otto's numinous emerges as a kind of amplification of that same phenomenal givenness in the presence-openness of all consciousness.

13. It would not be a coincidence that the early 20th century, as the post-Nietzschean era of a dawning secularization of traditional religion and loss of a larger sense of meaning in a unified cosmos, saw both the first systematic attempts in philosophy and psychology at an empirical understanding of ongoing consciousness *and* for a naturalistic understanding of mystical and transpersonal states—with James (1890, 1902) and Henri Bergson (1907/1944) central to both developments of this inward turn. Louchakova-Schwartz (2017, 2019) suggests that there are two ways of "bracketing" the "natural attitude" to reveal the same normally implicit forms of human consciousness—one being Husserl's analytic, and the other the spontaneous suspension of an everyday life-world in mystical and altered states of consciousness. Hunt (1984, 1986, 1995; Hunt & Chefurka, 1976) has shown how early psychological research on introspection spontaneously and unintentionally elicited the initial patterns of altered and psychedelic states. Consciousness looked at, rather than through, changes itself and so reveals at least something of its otherwise latent process.
14. A more philosophical aspect of the "hard problem" of relating consciousness and materiality comes with the dilemma of how to conceive of an ostensible emergence of consciousness within the natural order—which in the present approach first appears with life itself. While the "seeds" of consciousness—in terms of some of its system organizing principles—could indeed be present throughout physical reality (Hunt, 1995, 2001), that does not make them any "is-like" of actual sentience (Jonas, 1996). Meanwhile such an "emergence," while seeming to be the most parsimonious and factual view, has proven so difficult to *conceive*—thus pushing most theorists to either a purely physical reductionism (traditional) or an originary panpsychism (as in Goff, 2019; Strawson, 2006)—because in the present author's view (Hunt, 2001, 2009) of an epistemological barrier based on the ultimate cognitive incommensurability between the social-personal and thing-causation modules of human intelligence. So the ontology of an ostensible emergence, colliding with a limiting cognitive dualism of mind vs. matter, has recently pushed many within consciousness studies towards a panpsychism once removed but equally difficult to conceive. The difficulty in conceptualizing an ostensible and maximally parsimonious empirical fact of emergence does not justify its avoidance—no matter how erudite, and especially if it *is* the "hard problem" of modern science.
15. Recent demonstrations of action potentials in the movements of the prokoryotid bacteria might push such a sentient emergence still further back (Prindle, et al, 2015; Lee, et al, 2017), as also supported by Lyon (2015) on the "cognitive" properties of bacterial movement. This individual bacteria spiking, spreading across bacterial bio-film surfaces, has the function of expelling outward accumulating toxins, and so

may lack both the separation and attunement of organism and array that would require the continual proprio-location of a fuller sentience. Nonetheless, it would support Cook's (2008) model of a depolarized "irritability" as in its initial form an aversive response to organismic threat.

With respect to an ur-sentience in plants, while Bergson (1907/1944) had suggested its vestigial latency, action potentials do accompany the predatory movements of Mimosa and Drosera (Higinbotham, 1973). More recently depolarizations have been detected in plants and trees, specifically associated with root growth, tissue damage, and budding—and with these also suppressed by human anesthetic agents (Baluska, et al, 2006; Reber and Baluska, 2001; Volkov & Ranatunga, 2006). Here it would be a comparative novelty of movement itself calling forth an ur-sentience, rather than proprio-location within a shifting navigational array—as even in the Mimosa. Given his views of an ur-consciousness across the "corporality" of "the whole series of organic beings" (1936/1970, pp. 247, 271), Husserl might not have been that surprised.

16. The notion of the central nervous system as a pooling, gathering, and integration of separate neuronal sentience, as Binet (1888/1970) originally suggested, has met considerable resistance: First in James' (1890) rejection of a "mind dust" hypothesis as lacking any system principle to hold it together, and more recently in Cristof Koch's (2019) view of complex nervous systems containing largely automatized regions (the cerebellum) lacking the self sentient feedback that must then be provided by more integrative regions. In contemporary neuroscience only Sevush (2006) has argued in detail for a separate sentience in the single neuron. On the other hand, Hofstader (1979) had already suggested insects as the potential model for a neuronal group collectivity, with whole sections of a nest at any point in time not participating in its otherwise collective activities, and Pockett (2012) posits emergent electro-magnetic fields as the organizing patterns for human neural integrations. Meanwhile, individual amoeboid slimemolds—Mxamoeba—when merged together as a collective mass can solve simple mazes (Jabr, F., 2012), and the Volvox, in their collective phase, can then synchronize their outwardly turned flagella to move as a single organism (Anderson, 1988). Perhaps we should ask them how they do it—or at least take better note of the fact that they so do.

17. Given the centrality of motility as the basis for a self-locating sentience, and the microtubular structure of the automatically moving flagella and cilia of many protozoans—with microtubules as the channels for protein and energy transmission in all cellular functions (Eckert, et al,, 1988)—it has seemed plausible to some to locate a core background sentience here, rather than in a more immediately responsive membranal depolarization (Baluska & Reber, 2019). This can seem further supported by the specific sensitivity of neuronal membrane microtubules to anaesthesia (Craddock, et al., 2015).

Part of the appeal of this model has been the possibility that microtubules would be small and insulated enough to maintain quantum physical processes as the ultimate basis for sentience (Hameroff, 2014). Bohr (1934) had originally likened quantum indeterminacy, spontaneity, and complementarity to James' stream of consciousness—leading to subsequent attempts to understand consciousness as a kind of bio-amplification of quantum processes. See Hunt (2001) for specific limitations in these approaches, but the fact that microtubules are the key protein energy channels for cellular ATP—adrenosine triphosphate—the molecular engine for *all* cell metabolism, and so also for an *automatized* ciliate and flagella motility (Eckert et al, 1988)—may make positing them as the source of a proprio-locating sentience like confusing the gasoline that fuels the engine of the car with its steering and travel itinerary. It seems most parsimonious to suggest that motility, however achieved, sets up the necessity for a *discrimination* of the changes so induced in the resulting ambient array—and so indexed by these neuron-like action potentials.

18. It can remain an open question whether and how to relate this basic consciousness conjoining organism and *umwelt* to the self regulating metabolic processes of life itself—already "transcendent" in its relation to the inorganic. Hans Jonas (1966/2001), in introducing a holistic biology further developed by Varela, Thompson, and Rosch (1991; Thompson, 2011), stressed a teleology implicit in cell metabolism itself, necessarily preferential and selective in terms of what furthers or impedes, and so implying a valuative component impossible to separate from a language of affectivity then intrinsic to life itself (Prokop, 2022). Such an implicit inseparability of consciousness and biological process is also illustrated in the increasing use of a language of "cognition" and "communication" in reference to metabolic processes in bacteria, fungi, and tree roots (Lyon, 2015; Wohlleben, 2016). On the other hand, the ur-consciousness of Husserl, James, and Gibson—as a navigational conjoining of organism and *umwelt* entailing some degree of an ambient novelty—would be something more than—transcendent to—an emergent biological self regulation. In itself a zombie (non conscious) life process, despite a maximum system complexity (Kelso, 1995) that would make it worthy of scientific curiosity, would also lack the moral value intrinsic to affect and its necessary consciousness of a whole-body navigational conjoining. The numinous—as the abstract expression of that conjoining—would be, contrary to Nietzsche, Bergson, and Henry, more than the amplification of a metabolic life energy, unless a still more primary sentience—without outward behavioral criteria—does precede the navigational one located herein. However, since a broad understanding of a molar navigational responsivity can even include the novelty of plant budding and root expansion, it seems the more parsimonious and behaviorally indexed understanding. Again, it would be the steering of the car and not its internal motor that would be the better analogy.

Acknowledgements

The author thanks Linda Pidduck for her editorial assistance over these many years, and my son Nathan Hunt and daughter Amanda Hunt for helpful discussions.

References

Alcaraz-Sanchez, A. (2021). Awareness of the void: A micro-phenomenological exploration of conscious dreamless sleep. *Phenomenology and the Cognitive Sciences, 21*, https://doi.org/10.1007s11097-021-09743-0

Almaas, A. H. (1986). *Essence*. Shambhala.

Almaas, A. H. (2004). *The inner journey home*. Shambhala.

Anderson. O. R. (1988). *Comparative Protozoology: Ecology, physiology, life history*. Springer Science.

Arnheim, R. (1969). *Visual thinking*. University of California Press.

Asch, S. (1961). The metaphor: A psychological inquiry. In M. Henle, (Ed.), *Documents of Gestalt psychology* (pp. 324–333). University of California Press. https://doi.org/10.1525/9780520313514-021

Bai, Y., Maruskin, L., Chen, S., Gordon, A., Stellar, J., McNeil, G., Pena, K., & Keltner, D. (2017). Awe, the diminished self, and collective engagement: Universals and cultural variations in the small self. *Journal of Personality and Social Psychology, 113*(2), 185–209. https://doi.org/10.1037/pspa0000087

Baluska, F., Volkmann, D., Hlavacka, A., Mancuso, S., & Barlow, P. (2006). Neurobiological view of plants and their body plan. In F. Baluska, S. Mancuso, & D. Volkman (Eds.), *Communication in plants* (pp. 1–64). Springer. https://doi.org/10.1007/978-3-540-28516-8_2

Baluska, F. & Reber, A. (2019). Sentience and consciousness in single cells: How the first minds emerged in unicellular species. *BioEssays, 41*(3), 1800229. https://doi.org/10.1002/bies.201800229

Bartlett, F. (1932). *Remembering*. Cambridge University Press.

Bergson, H. (1944). *Creative evolution*. Modern Library. (Original work published 1907)

Bering, J. (2002). The existential theory of mind. *Review of General Psychology, 6*(1), 3–24. https://doi.org/10.1037/1089-2680.6.1.3

Betteridge, H. (Ed.), (1958). *The new Cassell's German dictionary*. Funk & Wagnall's.

Binet, A. (1970). *The psychic life of micro-organisms: A study in experimental psychology*. Albert Saifer. (Original work published 1888) https://doi.org/10.1037/11058-000

Binswanger, L. (1963). *Being-in-the-world*. Basic Books.

Bion, W. R. (1962). *Learning from experience*. Heinemann.

Bion, W. R. (1967). *Second thoughts*. Heinemann.

Block, N. (1995). On a confusion about a function of consciousness. *Behavioral and Brain Sciences, 18,* 227–247. https://doi.org/10.1017/S0140525X00038188

Bohm, D. (1980). *Wholeness and the implicate order*. Routledge.

Bohr, N. (1934). *Atomic theory and the description of nature*. Cambridge University Press.

Brough, J. (1993). Husserl and the deconstruction of time. *Review of Metaphysics, 46*(3), 503–536.

Cairns, D. (1976). *Conversations with Husserl and Fink*. Martinus Nijhoff. https://doi.org/10.1007/978-94-015-6890-6

Capra, F. (1975). *The Tao of physics*. Fontana/Collins.

Carhart-Harris, R., & Friston, K. (2019). REBUS and the anarchic brain: Toward a unified model of the brain action of psychedelics. *Pharmacological Reviews, 71*(3), 316–344. https://doi.org/10.1124/pr.118.017160

Cesario, J., Johnson, D., & Eisthen, H. (2020). Your brain is not an onion with a tiny reptile inside. *Current Directions in Psychological Science, 29*(3), 225–260. https://doi..org/10.1177/0963721420917687.

Cook, N. (2008). The neuron-level phenomena underlying cognition and consciousness: Synaptic activity and the action potential. *Neuroscience, 153,* 556–570. https://doi.org/10.1016/j.neuroscience.2008.02.042

Cook, N., Carvalho, G., & Damasio, A. (2014). From excitable membranes to metazoan psychology. *Trends in Neuroscience, 37*, 698–705. https://doi.org/10.1016/j.tins.2014.07.011

Craddock, T., Hameroff, S., Ayoub, A., Klobukowski, M., & Tuszynski, J. (2015). Anesthetics act in quantum channels in brain microtubules to prevent consciousness. *Current Topics in Medicinal Chemistry, 15,* 523–533. https://doi.org/10.2174/1568026615666150225104543

Damasio, A. (1999). *The feeling of what happens*. Harcourt.

Davies, P. (2011). *The eerie silence: Renewing our search for alien intelligence*. Mariner Books.

Dietrich, A. & Al-Shawaf, L. (2018). The transient hypofrontality theory of altered states of consciousness. *Journal of Consciousness Studies, 25*(11–12), 226–247.

Eckert, R., Randall, D., & Augustine, G. (1988). *Animal physiology: Mechanisms and adaptations*. Freeman.

Ehlman, B. (2020). The theory of a natural eternal consciousness: The psychological basis for a natural afterlife. *Journal of Mind and Behavior, 41*(1), 53–80.

Feffer, M. (1970). Developmental analysis of interpersonal behavior. *Psychological Review, 77*(3), 197–214. https://doi.org/10.1037/h0029171

Flavell, J., & Green, F. (1993). Children's understanding of the stream of consciousness. *Child Development, 64*(2), 387–398. https://doi.org/10.2307/1131257

Forman, R. K. C. (1999). *Mysticism, mind, consciousness*. State University of New York Press.

Forman, R. K. C. (2011). *Enlightenment ain't what it's cracked up to be*. John Hunt.

Freud, S. (1959). The "uncanny." In J. Riviere (Ed.), *Collected papers* (Vol. 4, pp. 368–407). Basic Books. (Original work published 1919)

Freud, S. (1961). *Inhibitions, symptoms, and anxiety*. Hogarth Press. (Original work published 1926)

Gardner, H. (1983). *Frames of mind*. Basic Books.

Gendlin, E. (1978). *Focusing*. Bantam.

Geschwind, N. (1965). Disconnection syndromes in animals and man. *Brain, 88*, 237–294, 585–644. https://doi.org/10.1093/brain/88.3.585

Gibson, J. J. (1979). *The ecological approach to visual perception*. Houghton Mifflin.

Goff, P. (2019). *Galileo's error: Foundations for a new science of consciousness*. Vintage Books.

Goldstein, K. (1963). *Human nature in the light of psychopathology*. Schocken Books.
Goldstein, K. (2000). *The organism*. Zone Books. (Original work published 1934)
Goodall, J. (1986). *The chimpanzees of Gombe: Patterns of behavior*. Harvard University Press.
Goswani, A. (1993). *The self-aware universe*. Putnam.
Griffin, D. (1978). Prospects for a cognitive ethology. *Behavioral and Brain Sciences, 4*, 527–629. https://doi.org/10.1017/S0140525X00076524
Griffin, D. (1984). *Animal thinking*. Harvard University Press.
Griffiths, R., Jonson, M., Richards, W., McCann, U., & Jesse, R. (2011). Psilocybin occasioned mystical-type experiences: Immediate and persisting dose-related effects. *Psychopharmacology*, https://doi.org/10.1007/s00213-011-2358-5.
Guenther, H. (1976). *The Tantric view of life*. Shambhala.
Hameroff, S. (2014). Consciousness, microtubules, & 'Orch OR': A 'space-time oddessy. *Journal of Consciousness Studies, 21*(3/4), 126–153.
Hanna, F. (1995). Husserl on the teachings of the Buddha. *The Humanistic Psychologist, 23*(3), 365–372. https://doi.org/10.1080/08873267.1995.9986837
Hebb, D. O. & Thompson, W. (1968). The social significance of animal studies. In G. Lindzey (Ed.), *Handbook of social psychology, Vol. 2* (pp. 729–774). Addison-Wesley.
Heidegger, M. (1962). *Being and time*. Harper & Row. (Original work published 1927)
Heidegger, M. (1993). *Basic concepts*. Indiana University Press. (Original work 1941)
Heidegger, M. (1994). *Basic questions of philosophy*. Indiana University Press. (Original work 1938) https://doi.org/10.2307/j.ctvt1shwp
Heidegger, M. (1995). *The fundamental concepts of metaphysics: World, finitude, solitude*. Indiana University Press. (Original work 1930) https://doi.org/10.2307/j.ctvswx8mg
Heidegger, M. (2012). *Bremen and Freiburg lectures*. Indiana University Press. (Original work 1949) https://doi.org/10.2307/j.ctt21pxkvh
Heidegger, M. (2014). *Hölderin's hymns "Germania" and "the Rhine."* Indiana University Press. Original work 1935)
Henry, M. (2008). *Material phenomenology*. Fordham University Press.
Henry, M. (2009). *Seeing the invisible*. Continuum.
Henry, M. (2015). *Incarnation*. Northwestern University Press.
Higinbotham, N. (1973). Electropotentials in plant cells. In W. Briggs, P. Green, & R. Jones (Eds.). *Annual Review of Plant Physiology, Vol. 24* (pp. 25–46). Annual Reviews. https://doi.org/10.1146/annurev.pp.24.060173.000325
Hofstader, D. (1979). *Godel, Escher, Bach: An eternal golden braid*. Basic Books.
Hunt, H. (1984). A cognitive psychology of mystical and altered state experience. *Perceptual and Motor Skills, Monograph, 58*, 467–513. https://doi.org/10.2466/pms.1984.58.2.467
Hunt, H. (1985). Relations between the phenomena of religious mysticism and the psychology of thought: A cognitive psychology of states of consciousness and the necessity of subjective states for cognitive theory. *Perceptual and Motor Skills, Monograph, 62*, 911–961. https://doi.org/10.2466/pms.1985.61.3.911
Hunt, H. (1986). A cognitive reinterpretation of classical introspectionism: The relation between introspection and altered states of consciousness and their mutual relevance for a cognitive psychology of metaphor and felt meaning. *Annals of Theoretical Psychology, 4*, 245–313. https://doi.org/10.1007/978-1-4615-6453-9_18
Hunt, H. (1995). On the nature of consciousness: *Cognitive, phenomenological, and transpersonal perspectives*. Yale University Press.
Hunt, H. (2001). Some perils of quantum consciousness: Epistemological pan-experientialism and the emergence-submergence of consciousness. *Journal of Consciousness Studies, 8*(9/10), 35–45.
Hunt, H. (2005). Synaesthesia, metaphor, and consciousness. *Journal of Consciousness Studies, 12*(12), 26–45.
Hunt, H. (2009). A cognitive-developmental theory of human consciousness. *Journal of Consciousness Studies, 16*(9), 27–54.
Hunt, H. (2011). Synesthesias, synesthetic imagination, and metaphor in the context of individual cognitive development and societal collective consciousness. *Intellectica, 1, no. 55*,

95–138. https://doi.org/10.3406/intel.2011.1163
Hunt, H. (2012a). A collective unconscious reconsidered: Jung's archetypal imagination in the light of contemporary psychology and social science. *Journal of Analytical Psychology, 57*(1), 76–98. https://doi.org/10.1111/j.1468-5922.2011.01952.x
Hunt, H. (2012b). Toward an existential and transpersonal understanding of Christianity: Commonalities between phenomenologies of consciousness, psychologies of mysticism, and early gospel accounts, and their significance for the nature of religion. *Journal of Mind and Behavior, 33*, 1–26.
Hunt, H. (2016). "The heart has its reasons:" Transpersonal experience as higher development of social-personal intelligence, and its response to the inner solitude of consciousness. *Journal of Transpersonal Psychology, 48*(1), 1–25.
Hunt, H. (2020). Intimations of a spiritual New Age: IV. Carl Jung's archetypal imagination as futural planetary neo-shamanism. *International Journal of Transpersonal Studies, 39*(1–2), 1–31. https://doi.org/10.24972/ijts.2020.39.1-2.1
Hunt, H. (2021). Intimations of a spiritual New Age: V. Socio-cultural bases of a globalizing shamanism and its relation to climate crisis: Possibilities, inevitabilities, barriers. *International Journal of Transpersonal Studies, 40*(1), 1–29. https://doi.org/10.24972/ijts.2021.40.1.1
Hunt, H., & Chefurka, C. (1976). A test of the psychedelic model of consciousness. *Archives of General Psychiatry, 33*(7), 867–896. https://doi.org/10.1001/archpsyc.1976.01770070097012
Hunt, H., Gervais, A., Shearing-Johns, S., & Travis, F. (1992). Transpersonal experiences in childhood. *Perceptual and Motor Skills, 75*(3), 1135–1153. https://doi.org/10.2466/pms.1992.75.3f.1135
Husserl, E. (1931). *Ideas: General introduction to pure phenomenology*. Macmillan. (Original work published 1913)
Husserl, E. (1964). *The phenomenology of internal time-consciousness*. Indiana University Press. (Original work 1910)
Husserl, E. (1964). *The Paris lectures*. Martinus Nijhoff. (Original work 1929) https://doi.org/10.1007/978-94-017-5926-7
Husserl, E. (1964). *Cartesian meditations*. Martinus Nijhoff. (Original work published 1931)
Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology*. Northwestern University press. (Original work 1936)
Husserl, E. (2001). *Analyses concerning passive and active synthesis*. Springer-Science. (Original work 1926) https://doi.org/10.1007/978-94-010-0846-4
Jabr, F. (2012). How brainless slimemolds redefine intelligence. *Nature, 2012*(7), 1. https://doi.org/10.1038/nature.2012.1181
James, W. (1890). *The principles of psychology, Vol. 1*. Dover. https://doi.org/10.1037/10538-000
James, W. (1902). *The varieties of religious experience*. Dolphin Books. https://doi.org/10.1037/10004-000
James, W. (1961). *Psychology: The briefer course*. Harper Torchbooks. (Original work published 1892) https://doi.org/10.1037/11630-000
James, W. (1971). *Radical empiricism/A pluralistic universe*. (Original work published 1912)
James, W. (1996). *Some problems of philosophy*. University of Nebraska Press. (Original work published 1911)
Jennings, H. S. (1899). The psychology of a protozoan. *American Journal of Psychology, 10*(4), 503–515. https://doi.org/10.2307/1412661
Jennings, H. S. (1904). *Contributions to the study of the behavior of lower organisms*. Carnegie Institution of Washington. https://doi.org/10.5962/bhl.title.11148
Jennings, H. S. (1906). *Behavior of the lower organisms*. Columbia University Press. https://doi.org/10.1037/10817-000
Jonas, H. (1996). *Mortality and morality*. Northwestern University Press.
Jonas, H. (2001). *The phenomenon of life: Towards a philosophical biology*. Northwestern University Press. (Original work published 1966) https://doi.org/10.1093/gmo/9781561592630.article.20622
Jung, C. G. (1958). Psychology and religion. *Collected works of C. G. Jung, vol. 11* (pp. 3–105). Princeton University Press. (Original work published 1938)
Jung, C. G. (1973). *C. G. Jung: Letters, Vol. 1: 1906–1950* (p. 377). Princeton University Press.

Kapleau, P. (1965). *The three pillars of Zen*. Beacon Press.
Kelso, J. (1995). *Dynamic patterns: The self-organization of brain and behavior*. MIT Press.
Keltner, D. & Haidt, J. (2003). Approaching awe, a moral, spiritual, and aesthetic emotion. *Cognition and Emotion, 17*, 297–314. https://doi.org/10.1080/02699930302297
Kimmerer, R. (2013). *Braiding sweetgrass*. Milkweed Editions.
Kisiel, T. (1993). *The genesis of Heidegger's* Being and time. University of California Press.
Koch, C. (2019). *The feeling of life itself*. MIT Press. https://doi.org/10.7551/mitpress/11705.001.0001
Kohut, H. (1984). *How does analysis cure?* University of Chicago Press. https://doi.org/10.7208/chicago/9780226006147.001.0001
Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh*. Basic Books.
Langer, S. (1942). *Philosophy in a new key*. Harvard University Press.
Laski, M. (1961). *Ecstasy*. Indiana University Press.
Lee, D., Prindle, A., Liu, J., & Suel, G. (2017). Electrochemical communications in biofilms. *Cell, 170*(1), 214. https://doi.org/10.1016/j.cell.2017.06.026
Levi-Strauss, C. (1966). *The savage mind*. University of Chicago Press.
Louchakova-Schwartz, O. (2017). Qualia of God: Phenomenological materiality in introspection, with a reference to Advaita Vedanta. *Open Theology, 3*, 257–273. https://doi.org/10.1515/opth-2017-0021
Louchakova-Schwartz, O. (Ed.). (2019). *The problem of religious experience: Case studies in phenomenology, with reflections and commentaries*. Springer. https://doi.org/10.1007/978-3-030-21575-0
Lowie, W. (Ed.). (1946). *Religion of a scientist: Works of G. Fechner*. Pantheon.
Loy, D. (2019). *Nonduality: In Buddhism and beyond*. Wisdom.
Ludwig, A. (1995). *The price of greatness: Resolving the creativity and madness controversy*. Guilford Press.
Luft, S. (2005). Husserl's concept of the 'transcendental person:' Another look at the Husserl-Heidegger relationship. *International Journal of Philosophical Studies, 13*(2), 141–177. https://doi.org/10.1080/09672550500080371
Lyon, P. (2015). The cognitive cell: Bacterial behavior reconsidered. *Frontiers in Microbiology, 6*, 264–294. https://doi.org/10.3389/fmicb.2015.00264
Maclean, P. (1990). *The triune brain in evolution: Role in paleocerebral functions*. Plenum Press.
Marion, J. (2002). *Being given: Toward a phenomenology of givenness*. Stanford University Press.
Marion, J. (2008). *The visible and the revealed*. Fordham University Press.
Maslow, A. (1962). *Towards a psychology of being*. Viking. https://doi.org/10.1037/10793-000
Mauss, M. (1966). *The gift: Forms and functions of exchange in archaic societies*. Cohen & West.
Michalica, K., & Hunt, H. (2013). Creativity, schizotypicality, and mystical experience: An empirical study. *Creativity Research Journal, 25*(3), 266–279. https://doi.org/10.1080/10400419.2013.813780
Miller, G. (1981). Trends and debates in cognitive psychology. *Cognition, 10*(3), 215–225. https://doi.org/10.1016/0010-0277(81)90049-4
Mitchell, A., Thompson, N., & Miles, H. (Eds.). (1997). *Anthropomorphism, anecdotes, and animals*. State University of New York Press.
Mithen, S. (1998). A creative explosion? Theory of mind, language, and the disembodied mind of the upper paleolithic. In S. Mithen (Ed.), *Creativity in human evolution and prehistory* (pp. 122–147). Routledge.
Moran, D. (2012). *Husserl's* Crisis of the European sciences and transcendental phenomenology. Cambridge University Press. https://doi.org/10.1017/CBO9781139025935
Nagel, T. (1974). What is it like to be a bat? *Philosophical Review, 83*, 435–450. https://doi.org/10.2307/2183914
Neisser, U. (1967). *Cognitive psychology*. Appleton-Century-Crofts.
Neisser, U. (1976). *Cognition and reality*. Freeman.
Nietzsche, F. (1954). *Beyond good and evil*. In W. Wright (Ed.), *The philosophy of Nietzsche* (pp. 369–616). The Modern Library. (Original work published 1885)
Otto, R. (1958). *The idea of the holy*. Oxford University Press. (Original work published 1923)

Piaget, J. (1962). *Play, dreams, and imitation in childhood*. Norton.

Pocket, S. (2012). The electromagnetic field theory of consciousness. *Journal of Consciousness Studies, 19*(11/12), 191–223.

Pollan, M. (2018). *How to change your mind: What the new science of psychedelics teaches us about consciousness, dying, addiction, depression, and transcendence*. Penguin Press.

Prindle, A., Liu, J., Asally, M., Ly, S., Garcia-Ojalvo, J., & Suel, G. (2015). Ion channels enable electrical communication in bacterial communities. *Nature, 527*(7576), 59–63. https://doi.org/10.1038/nature15709

Prokop, M. (2022). Hans Jonas and the phenomenological continuity of life and mind. *Phenomenology and the Cognitive Sciences*, https://doi.org/10.1007/s11097-022-09863-1.

Ramachandran, V., & Hubbard, E. (2001). Synaesthesia: A window into perception, thought and language. *Journal of Consciousness Studies, 8*(12), 3–34.

Reber, A. (2019). *The first minds: Caterpillars, karyotes, and consciousness*. Oxford University Press. https://doi.org/10.1093/oso/9780190854157.001.0001

Reber, A., & Baluska, F. (2021). Cognition in some surprising places. *Biochemical and Biophysical Research Communications, 564*, 150–157. https://doi.org/10.1016/j.bbrc.2020.08.115

Romanes, G. (1977). *Animal intelligence*. University Publications of America. (Original work published 1883) https://doi.org/10.5962/bhl.title.1046

Sacks, O., Damasio, A., Carvalho, B., Cook, N., Hunt, H., & Koch, C. (2015). Oliver Sacks, Antonio Damasio and others debate Christof Koch on the nature of consciousness. *Scientific American*, Mind Guest Blog, June 17.

Sahlins, M. (2022). *The new science of the enchanted universe: An anthropology of most of humanity*. Princeton University Press. https://doi.org/10.1515/9780691238166

Sass, L. (1992). *Madness and modernism*. Basic Books.

Scheler, M. (1960). *On the eternal in man*. SCM Press. (Original work published 1923)

Schutz, A. (1962). Symbol, reality and society. In *Collected Papers of Alfred Schutz, Vol. 1* (pp. 287–356). Martinus Nijhoff. https://doi.org/10.1007/978-94-010-2851-6_11

Searles, H. (1960). *The nonhuman environment: In normal development and in schizophrenia*. International Universities Press.

Sevush, S. (2006). Single-neuron theory of consciousness. *Journal of Theoretical Biology, 238*, 704–725. https://doi.org/10.1016/j.jtbi.2005.06.018

Sheets-Johnson, M. (1998). Consciousness: A natural history. *Journal of Consciousness Studies, 5*(3), 260–294.

Siegel, S. (2005). *Intoxication: The universal drive for mind-altering substances*. Park Street Press.

Sorokin, P. (1957). *Social and cultural dynamics*. Porter Sargent.

Spiegelberg, H. (1965). *The phenomenological movement: A historical introduction*. Martinus Nijhoff. https://doi.org/10.1007/978-94-015-7394-8

Stevens, A. (2003). Archetypal theory: The evolutionary dimension. In R. Withers (Eds.), *Controversies in analytical psychology* (pp. 252–264). Brunner-Routledge.

Strawson, G. (2006). Realistic monism: Why physicalism entails panpsychism. *Journal of Consciousness Studies, 13*(10/11), 3–31.

Sullivan, H.S. *The interpersonal theory of psychiatry*. Norton.

Tedlock, B. (2005). *The woman in the shaman's body: Reclaiming the feminine in religion and medicine*. Bantam Books.

Thompson, E. (2011). Precis of mind in life: Biology, phenomenology, and sciences of mind. *Journal of Consciousness Studies, 18*(5/6), 10–22.

Trigger, B. (2003). *Understanding early civilizations: A comparative study*. Cambridge University Press. https://doi.org/10.1017/CBO9780511840630

Uexkuell, J. von (1926). *Theoretical biology*. Harcourt, Brace.

Uexkuell, J. von (2010). *A foray into the worlds of animals and humans*. University of Minnesota Press. (Original work published 1934)

Van Buren, J. (1994). *The young Heidegger: Rumor of the hidden king*. Indiana University Press.

Van Elk, M., Gomez, A., Vanderzwaag, U., Schie, H., & Sauter, D. (2019). The neural correlates

of awe experience. Reduced default mode network activity during feelings of awe. *Human Brain Mapping, 40*(12), 3561–3574. https://doi.org/10.1002/hbm.24616

Van Houton, J. (1998). Chemosensory transduction in paramecium. *European Journal of Protistology, 34,* 301–307. https://doi.org/10.1016/S0932-4739(98)80057-6

Varela, F., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. MIT Press. https://doi.org/10.7551/mitpress/6730.001.0001

Viveins de Castro, E. (2015). *The relative native: Essays on indigenous conceptual worlds*. HAU Books.

Volkov, A., & Ranatunga, D. (2006). Plants as environmental biosensors. *Plant Signalling & Behavior, 1*(3), 105–115. https://doi.org/10.4161/psb.1.3.3000

Vygotsky, L.S. (1965). *Thought and language*. MIT Press.

Washburn, M. (1917). *The animal mind: A text-book of comparative psychology*. Macmillan. https://doi.org/10.5962/bhl.title.26851

Weber, M. (1958). *The Protestant ethic and the spirit of capitalism*. Charles Schribner's Sons. (Original work published 1905)

Weber, M. (1963). *The sociology of religion*. Beacon Press. (Original work published 1922)

Werner, H., & Kaplan, B. (1963). *Symbol formation*. Wiley.

Wohlleben, P. (2016). *The hidden life of trees*. Greystone Books.

Woods, T., Windt, J., & Carter, O. (2022a). The path to contentless experience in meditation: An evidence synthesis based on expert texts. *Phenomenology and the Cognitive Sciences*. https://doi.org/10.1007/s11097-022-09812-y

Woods, T., Windt, J., & Carter, O. (2022b). Evidence synthesis indicates contentless experiences in meditation are neither truly contentless nor identical. *Phenomenology and the Cognitive Sciences*. https://doi.org/10.1007/s11097-022-09811-z

Yaden, D., & Newberg, A. (2022). *The varieties of spiritual experience*. Oxford University Press. https://doi.org/10.1093/oso/9780190665678.001.0001

Yong, E. (2022). *An immense world: How animal senses reveal the hidden realms around us*. Random House.

Zahavi, D. (2003). *Husserl's phenomenology*. Stanford University Press.

About the Author

Harry T. Hunt, PhD, is professor emeritus in psychology at Brock University, St. Catharines, Ontario, Canada (hhunt@brocku.ca), and received his PhD from Brandeis University. He is the author of *The Multiplicity of Dreams* (1989), *On the Nature of Consciousness* (1995), and *Lives in Spirit* (2003). He has published empirical studies on lucid dreaming, dream bizarreness, meditative states, creativity and metaphor, imaginative absorption, and transpersonal experiences in childhood, and theoretical papers on the cognitive psychology of mystical states, synesthesia, and the conceptual foundations of psychology.

About the Journal

The *International Journal of Transpersonal Studies* is a Scopus listed peer-reviewed academic journal, and the largest and most accessible scholarly periodical in the transpersonal field. IJTS has been in print since 1981, is published by Floraglades Foundation, sponsored in part by Attention Strategies, and serves as the official publication of the International Transpersonal Association. The journal is available online at www.transpersonalstudies.org, and in print through www.lulu.com (search for IJTS).