Primacy of Consciousness and Enactive Imagination

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> **Upshot** • This interdisciplinary work draws on phenomenology, Indian philosophy, Tibetan Buddhism, cognitive neurosciences and a variety of personal and literary examples of conscious phenomena. Thompson proposes a view of consciousness and self as dynamic embodied processes, co-dependent with the world. According to this view, dreaming is a process of spontaneous imagination and not a delusional hallucination. This work aims at laying the ground for systematic neurophenomenological investigation of first-person experience.

In his new book *Waking, Dreaming, Being: Self and Consciousness in Neuroscience, Meditation and Philosophy*, Evan Thompson offers the reader a rich, thought-provoking and poetic tour of a wide variety of phenomena of consciousness, from meditative states of pure awareness through a number of sleep- and dream-related mentation and, finally, to near death experiences. Using evidence and insights from neuroscience, phenomenology, philosophy of mind, Indian philosophy and Tibetan Buddhist sources, Thompson creates a picture of human subjectivity where the dynamic and dependent self is in a constant process of sense-making, self-specifying its subjectivity through a variety of spontaneous and intentional experiences grounded in sensation and imagination. Consciousness is seen from an enactive approach, as a dependent autopoietic system that can be investigated through a combination of neuroscientific approaches and disciplined first-person methods.

In addition to being a remarkable intellectual *tour de force*, masterfully weaved from diverse traditions and approaches, *Waking, Dreaming, Being* is also a much welcome socio-political statement, urging the reader to think beyond the well-entrenched science/reason vs. religion/spirituality divide, reminding us of the importance of leveled, informed and systematic dialogue. Indeed, a truly rigorous scholarship of phenomena of consciousness and of human experience needs to rely on all available evidence in order to make sense of subjectivity and our relationship to the world and to others.

Continuing his previous work, started in collaboration with Francisco Varela, Thompson promotes neurophenomenology (Lutz & Thompson 2003; Varela 1999) as a method for systematic empirical and interdisciplinary investigation of conscious phenomena. Neurophenomenology consists of combining state-of-the-art neurophysiological measures with detailed first-person reports of the corresponding experience. Both methods are mutually constraining and co-informing, not simply correlative. Committed to his mission, while presenting detailed philosophical and neuroscientific accounts of conscious phenomena, Thompson supplements theory with ample variety of first-person examples, from his own dream and meditative experiences to examples from literature and religious texts.

**Waking and the primacy of consciousness**

What is consciousness? Alongside the Indian yogic philosophers, Thompson views consciousness as “that which is luminous, knowing and reflexive” (17). This view makes clear the activities of consciousness: illuminating the world, both outer and inner, all the while making itself manifest and bringing forth the subjective self. In this way, Thompson bridges Indian philosophy and phenomenological tradition in an elegant way, including the pre-reflexive and self-reflexive qualities of consciousness. Furthermore, consciousness is not something that we have or an epiphenomenon of brain activity. Rather, it is a process, “consciousness is something that we live,” and it has an existential, “irreducible primacy” (100) for any possibility of a lived experience. Thompson’s non-dualist approach holds that while consciousness depends on material conditions for its emergence and support, consciousness also has a very direct power to change these very same material conditions, and one cannot therefore be reduced to or explained solely by examining the other. He writes:

> **Since consciousness by nature is experiential, and experience is primary and ineliminable,**

http://www.univie.ac.at/constructivism/journal/10/2/267/solomonova
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Consciousness cannot be reductively explained in terms of what is fundamentally or essentially nonexperiential. (103)

What is a self then? Thompson adopts a middle-way phenomenological enactive approach between the determinist and the (neuro-) nihilist accounts. Based on the theory of autopoiesis (Maturana & Varela 1980), the self is a self-specifying system that is "brought forth or enacted in the process of living" (324). The self is also strongly embodied, and is engaged in the process of "sense-making in precarious conditions" (329). The kind of body that the self may inhabit in a certain kind of world creates the constraints as to the kinds of experiences one may have: subjectivity is operating within its biological, social and sensorimotor constraints. Thompson further develops his enactive view of the self in light of the Buddhist philosophy of dependent arising, concluding that while the self is dynamic, dependent and changing under various conditions, it is still a process of I-making, and this I naturally appears stable and existential.

While neuroscience and much of Western philosophy have developed a number of approaches for examining consciousness, they almost never take into consideration rich and detailed systems for taxonomies and maps of the mind developed in the Upanishads, the Abhidharma, the Yoga-cara or Dzogchen traditions. Thompson aims at closing the gap between "Western" and "Eastern" ontologies, finding common ground through resonances in the variety of subjective states, through recognition of shared lived experiences and through common goals of describing, understanding and training the mind. Indeed, parallels have been noted between practices of époque (Husserl 1982), or "bracketing," and contemplative practices. For example, during the Mind and Life Summer Research Institute the silent day of meditation is often colloquially referred to as "phenomenology on the cushion."

Thompson challenges the widely accepted view of consciousness as consisting of hierarchically-organized "levels," mostly defined as presence or absence of awareness in relation to the level of psychophysiological arousal. Within such a system, consciousness is one property, which is more or less present in various states, and one can roughly divide them into states where consciousness is present and those where it is absent. Contra Guilio Tononi’s much cited passage: "Everybody knows what consciousness is: it is what vanishes every night when we fall into dreamless sleep and reappears when we wake up or when we dream" (Tononi 2008: 216), Thompson directs the reader’s attention to an alternative: In Indian tradition, consciousness is separated into gross and subtle consciousness. The gross or coarse consciousness is understood in the sense of general attention and awareness of the self and the environment, whereas the subtle consciousness is a substrate energy, a source of gross consciousness. According to yogic and Buddhist meditative traditions, one can become aware of subtle consciousness in some dream experiences, at the moment of death, and following rigorous meditative training. This perspective opens avenues for new kinds of questions for the science of the mind. Can one truly oneself to appreciate the qualities of subtle consciousness? Accepts of dream yoga would say so. What kind of electrophysiological activity would reflect the state of awareness of subtle consciousness? And finally, what kind of world opens up in the state of awareness of the subtle consciousness? In other words, is awareness without object possible? These and other questions are common to contemplative traditions, and are now making their way into contemporary neuroscience.

Thompson walks us through some of the neuroscience of waking perception and conscious states. Through the examples of binocular rivalry, electroencephalographic (EEG) patterns of brain activity corresponding with moments of conscious visual awareness, and descriptions of “mind moments” from the Abhidharma tradition, the author presents the distinction between consciousness as “object-directed awareness” and consciousness as “being a conscious creature with a persistent field of awareness that changes across waking and sleeping” (65, my emphasis). Investigating awareness as a field rather than as discrete moments of perception allows Thompson to expand his self-as-a-process approach into otherwise prohibiting domains of hypnagogic states, dreams, “dreamless” sleep, and out-of-body and near death experiences.

Dreaming as spontaneous imagining

Discussion of dreaming and sleep-related conscious phenomena has been largely absent from phenomenology and embodied mind discourse. Insights about the nature of consciousness in cognitive neuroscience mainly come from studying an awake and alert subject, interacting with his/her environment. While dream science is quite a vibrant field, enaction and embodiment have rarely been applied to oneiric phenomena. Thompson covers quite a vast territory, discussing hypnagogic experiences (images and sensations happening at sleep onset), dreams, lucid dreams (dreams during which the dreamer is aware of the fact that it is a dream) and “dreamless” sleep, and as well as out-of-body experiences.

To account for the multiplicity of possible ways of being in a dream, Thompson distinguishes between the dreaming self and the dreaming ego, where “the dream ego is like an avatar in a virtual world; the dreaming self is its user” (109). The balance between the two can be thought of as a degree of lucidity – awareness of the dream state. The more one is aware of dreaming, the more the dreaming self is able to distinguish itself from the dreaming ego. Conversely, in non-lucid dreams the dream self has an impression of being one with and the same as the dream ego: the dreamer is fully immersed in the dream scenario.

Dream neuroscience has traditionally seen dreaming as synonymous with a specific sleep stage, known as rapid-eye movement (REM) sleep. Experiments show that if a research participant is awakened from REM sleep, the chances are that she should will recall a dream experience; thus much of neuroimaging research has used REM sleep as a neural proxy for dreaming. It is possible, however, to have vivid and immersive experiences in other stages of sleep, and the REM = dreaming view is currently being challenged. As the domain of sleep studies expands and neuroscience uncovers more possible functions of sleep, such as memory consolidation or emotion regulation, dreams have been seen as either epiphenomenal to or reflecting the underlying brain activity during REM sleep (Wamsley 2014). One view of dreaming proposes that...
under the right conditions, can support the ties of the dream state and that “REM sleep, spontaneous imaginative activity of the dream – challenges such a fatalistic and passive view of dreams, returning the sense of agency to the dreamer. The common explanation for lucid dreams is that these are dissociative states – i.e., overlapping wake/REM sleep states, suggesting, in an almost pejorative way, that a normal process, whereas sleep and wake are entirely different states, is altered. Thompson disagrees with the delusional/hallucinatory and dissociative approach to dreaming and proposes the imagination conception of dreaming: “a dream isn’t a random false perception; it’s a spontaneous mental simulation, a way of imagining ourselves a world” (184).

Dreamlike vividness and immersion are qualities of imaginative activity that we can also experience during wake, for example when day-dreaming or when absorbed by a work of art. According to Thompson, it is not the salience of the imagined stimulus, but the attention that we accord it that determines what comes to the fore of dream consciousness. And dreaming, both lucid and non-lucid, is a trainable skill: Western lucid dreaming techniques as well as Tibetan practices of dream yoga can change the way the dreamer attends and attends to the dream world. Lucidity during the practices of dream yoga, instead of being a strange state of paradoxical co-existence of dreaming and wake, is, on the contrary, an opportunity to train attention to be aware of, explore and sustain the dream state all the while recognizing its oneric, immaterial nature. In other words, dream yoga is a means of observing and recognizing the spontaneous imaginative activity of the mind. Instead of a dissociation, Thompson argues that lucid dreaming shows the necessity for further exploration of various qualities of the dream state and that “REM sleep, under the right conditions, can support the witnessing awareness of dreaming” (161). Lucid dreams, however, should not be fetishized and seen as the “best” way to dream, warns Thompson. Non-lucid dreams, where the dreamer is completely immersed in the dream scenario unaware of the fact that she is dreaming, are equally an integral part of what it is to be an imagining human being. Reflecting on a dream may have its own value for creativity and insight.

Thompson draws inspiration from the philosophical traditions of Yoga and Vedanta to investigate the possibilities of seeing “deep” or “dreamless” sleep as a mode of consciousness with its distinctive phenomenal qualities. Going against the typical neuroscientific account of the “levels” of consciousness and stages of sleep, he suggests that deep sleep is characterized not by the absence of consciousness but by “consciousness without an object” (238) or, in Tibetan Buddhist tradition, by “subtle consciousness” without sensory or cognitive content. This “subtle consciousness” is not diminished consciousness or a state of unconsciousness, but rather a substrate, the “basis upon which dreaming and waking consciousness arise” (251). Most contemporary sleep neuroscience holds that in “deep sleep” (stages 3–4 of the non-REM sleep) consciousness disappears, and that dreaming, at least the full-blown immersive spatiotemporal narrative experience, is impossible. Thompson, however, challenges the equation of deep sleep with the absence of consciousness and argues that at the very least there is a kind of quality of subtle awareness that characterizes dreamless sleep, and that while untrained/naive individuals may not be able to report on its phenomenal qualities, reliance on reports of long-term practitioners of meditation such as Vipassana or dream yoga may yet illuminate distinct qualities of experience possible even in deep “dreamless” sleep. Awakening a research participant from deep sleep is not an easy task: the sleeper must change his/her electrophysiological state in a rather dramatic manner: from 1 Hz average EEG activity (delta waves) to the 12–30 Hz (beta waves) characteristic of awake consciousness. While difficult, it is, however, not impossible. Most reports collected from deep sleep do not contain dreaming, and even in cases when they do, participants report disjointed, simple images or thoughts (for a review see (Nielsen 2000). Detailed investigation of experiential phenomena that take place in deep sleep require not only state-of-the-art brain imagery equipment, but also trained participants, who, by virtue of their sustained contemplative practice, may have a privileged, fine-grained access to their own contents of awareness.

Altered embodiment in out-of-body and near death experiences

Following the line of thought from his earlier books The Embodied Mind, co-authored with Francisco Varela and Eleanor Rosch, (1992) and The Mind in Life (2007), Thompson views the body as the very condition of possibility of any personal experience. Drawing a distinction of experiencing one’s own body as a subject and as an object, Thompson proposes that out-of-body experiences (OBEs), instead of proving the possibility of “disembodied” mind, are really experiences of “altered” embodiment: “you see your body from the outside as being in a location that doesn’t coincide with the felt location of your awareness” (209), which shows that “You locate yourself as an experiential subject wherever your attentional perspective feels located” (211, author’s emphasis). Similar to his discussion of dreaming and illuminating qualities of consciousness, OBEs still depend on the physical body for an “altered” or “floating” vestibular sensation, yet require attention to determine its position relative to its perceived place.

In his discussion of death and the process of dying, Thompson relates practical exercises and experiences from a workshop with Roshi Joan Halifax. While in the “West” dying is seen as an ultimate failure of life and is considered to be a medical affair, Tibetan Buddhist tradition has a powerful and detailed approach to the preparation for death and to guiding the dying person. Indeed, much of meditation and dream practices in Tibetan tradition are oriented toward recognizing the nature of the mind so that at the moment of death the practitioner is prepared for the transition. Moreover, every moment in time can be seen as a mini-cycle of birth and death, and careful observation
of one's mental contents can shed light onto these processes:

“[N]oticing the dissolution of each thought and the gap before the arising of the next one […] gives us the opportunity to experience directly the dissolution that is always present together with the luminous pure awareness.” (293).

Thompson is critical of much of the findings of cognitive neuroscience concerning near-death experiences. Instead of resorting to a materialist reduction of “hallucinatory” brain processes, he urges neuroscientists to adopt a more contemplative attitude of “tolerance of uncertainty and bearing witness” (317). Learning from near-death experiences through the lens of neurophenomenology with rigorous and non-skeptical study of first-person reports may illuminate shared experiential qualities of the dying process and help us, as a culture, reintegrate dying into our collective set of practices.

By the end of the book, the patient reader is rewarded with Thompson’s take on the question of the enlightenment. He writes that:

“enlightenment’ or ‘liberation’ […] does not consist in dismantling our constructed sense of self… Rather, it consists in wisdom that includes not being taken in by the appearance of the self as having independent existence.” (366)

Thompson concludes that the I-making process of the ego is part of our human condition and that the awakening that contemplatives work towards may be understood as “waking up to the dream without having to wake up from dreaming” (366).

Following the phenomenological tradition, Thompson reminds the reader that any inquiry can only start right from already being in the middle of the embodied and co-dependent situation. Edmund Husserl’s initial project of grounding all natural sciences of the mind in phenomenology (Husserl 1970) is given a new chance with neurophenomenology and interdisciplinary study of lived experiences, integrating and cultivating disciplined first-person observation of subjective states through contemplative training and detailed interview techniques, such as Claire Petitmengin’s elicitation interviews (Petitmengin 2006). While relying on neuroscientific data to lay out his study of consciousness, Thompson hopes that a paradigm shift away from material reductionist perspective will allow for a richer and more precise mind science of the future. He writes that we…

“need to rethink what we mean by ‘physical’ so that physical being is understood as naturally including, at its most fundamental level, the potential for consciousness or experiential being.” (104)

References


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