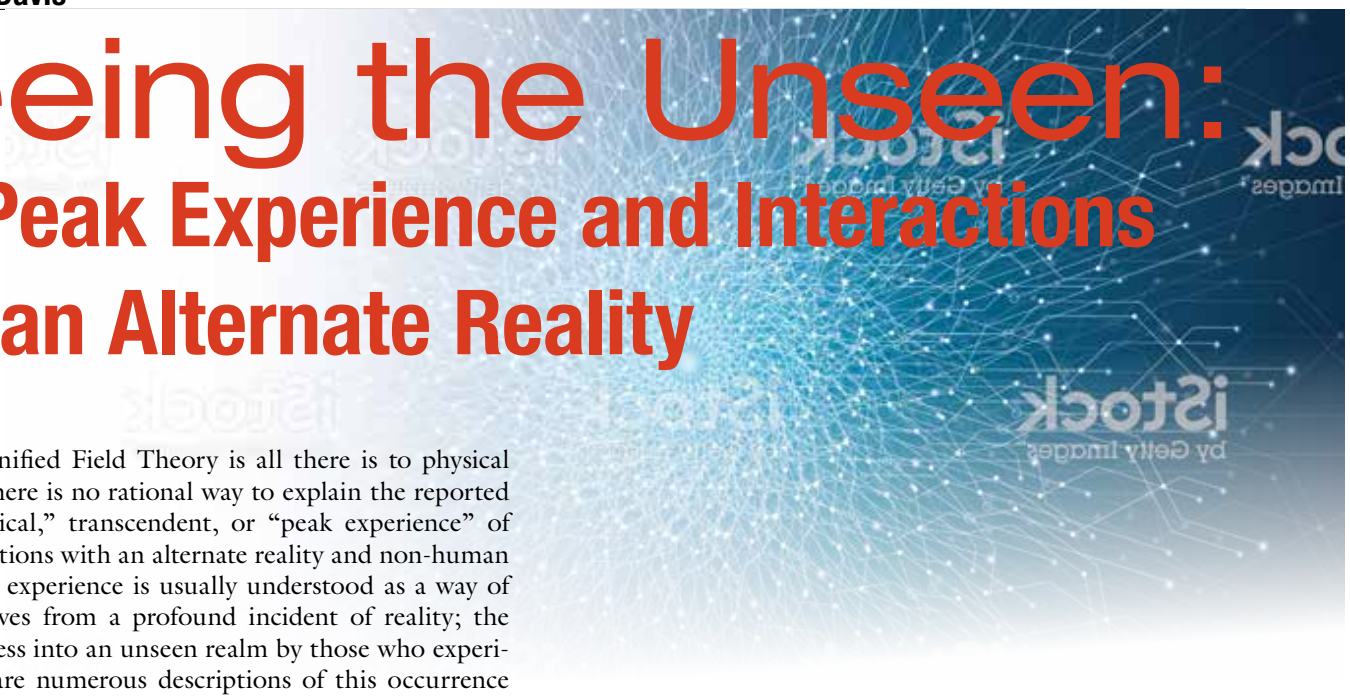
Robert Davis

Seeing the Unseen:
The Peak Experience and Interactions with an Alternate Reality



If Einstein's Unified Field Theory is all there is to physical reality, then there is no rational way to explain the reported so-called "mystical," transcendent, or "peak experience" of reported interactions with an alternate reality and non-human entities. A peak experience is usually understood as a way of being that evolves from a profound incident of reality; the medium for access into an unseen realm by those who experience it. There are numerous descriptions of this occurrence in religions which agree it is a direct experience of reality that transcends the separation of mind and body, and the separation of self and reality. The peak experience may all be spokes of the same wheel despite being generated by different trigger events, including the near- death experience, the out-of-body experience, and hallucinogenic experiences from psychoactive drugs, hypnosis, and meditation.

The altered state of consciousness reported by peak experiencers is generally characterized by perceptions of oneness with the universe, ineffable emotions, alterations of time and/or space, insight and wisdom, visionary encounters, and communication with a Supreme Being, the deceased, and/or non-human entities. Carl Jung, who founded analytical psychology, termed these beings "archetypes"—a form of symbolic reality of images and dreams that interact with humans on a subconscious level.[1] The peak experience may also include the feeling of one's consciousness separating from the body, telepathic communication, an increase in intuitive and psychic capabilities, and the sense that reality is a manifestation of a universal energy. The detailed accounts by millions worldwide who contend to have had a peak experience are extraordinarily similar. But is it a normal innate tendency or an illusion created by the mind?

Over the past decade, the self-transcendent experience or peak experience has been the focus of increasing research interest. Researchers in the neurosciences, physics, and philosophy are trying to better understand the concepts of one's spirituality and "sensation of the mystical" or the surreal, and how it may interact with the physical laws of nature, the brain, and "consciousness." And this objective makes sense since it can have a profound effect on the psychological health of those who experience it. In general, those who report to have had a peak experience believe it facilitated dramatic changes in their personal and philosophical viewpoints on life, love, death, and spirituality. As one typical peak experiencer related: "My NDE was the best experience of my life, and absolutely shaped me in a profound and positive way. I can only say it is real reality."[2] But while national surveys show that approximately 30 to 50 percent of Americans claim to have had a peak experience in the form of a mystical or transcendent experience,"[3] few empirical studies have investigated the nature and validity of the peak experiencers' reported interactions with an alternate reality or non-human entities.

The Peak Experience: A Window to an Alternate Reality?

Are some individuals actually "seeing a different world," or are they instead, "seeing this world differently" in a non-spatial/non-temporal context? For the most part, Western science generally considers the peak experience's surreal perceptual content a manifestation of a psychological or neurobiological abnormality—a misrepresentation of the actual relationships between one's consciousness and reality, as in dreaming, psychosis and/or a depersonalization reaction to stress, sleep transition disorders, or hallucinations generated when communication between the brain's frontal lobe and sensory cortex is compromised. However, although our brain fails at times to distinguish between a visual or auditory stimulus occurring externally and one generated by our mind, it should not be considered "abnormal" in all cases. After all, scientists, psychologists, philosophers, and theologians often interpret altered states of consciousness differently, and the psychological community has not even developed agreed upon criteria for what constitutes a transcendent experience or peak experience, let alone recognizing it as part of a "normal" psychological state in a well-balanced individual. In fact, there are both unique similarities and differences between psychotic episodes and certain aspects of transcendent experiences.

One important clinical criterion that distinguishes a true peak experience from a psychotic disturbance is the impact of the experience on one's overall wellbeing. The peak experience, for example, generally facilitates positive emotions and behavioral transformations in the form of feelings of joy, serenity, wholeness, and love, which can lead to improvements in psychological health and awareness of the spiritual dimension in life—an expanded consciousness and an awareness of themselves being more than just physical matter. In contrast, psychotic episodes typically generate feelings of confusion, anxiety, and depression, which increasingly isolate the person from society. Consequently, the peak experience may be viewed as healthy growth toward higher states of spiritual awareness—a type of spiritual awakening that does not present symptoms of a psychological disorder.

An altered state of consciousness induced by hallucinogens or meditation may also stimulate specific brain regions, resulting in a broad range of experiences perceived as being "spiritual" in nature, and which yield positive psychological benefits. But despite the apparent absence of a chronic and severe psychological disorder (psychosis, dissociation) in most peak experiencers, an abnormal short-lived and fleeting brain-based hallucination in the form of a perceived peak experience cannot be completely ruled out. After all, realistic illusory perceptions are not uncommon when delicate brain processes are compromised by different externally and internally induced events. The activation of a large network of the parietal system (which integrates sensory information) in the brain, for example, is thought to play a crucial role in both self-transcendence4 and altered states of consciousness elicited by "life-threatening situations, psychiatric and neurological disorders, and all deep existential crises."[5] Hallucinations are even a common part of the grief reaction, with as many as 70 percent of bereaved individuals experiencing illusions of their deceased loved one.[6]

The peak experience, which may reflect the brain's inability to regulate one's perceived body's relationship to the world and position in space, appears similar to an altered state of consciousness described in the book *A Stroke of Insight* by neuroanatomist Jill Taylor, following damage from a stroke to her brain's left hemisphere.[7] For example, when the brain's right hemisphere was in control during her stroke, Taylor expressed feelings of being "at one with the universe," and of "incredible deep inner peace and contentment."[8] One explanation for both Taylor's altered state, and the documented psychological benefits facilitated by peak experience trigger events may be the associated unitive experience that accompanies it—a symptom of ego-dissolution or a compromised sense of "self."[9] The peak experience and its corresponding sense of unity with reality, therefore, may be allowed for by a change in brain hemisphere activity. Consequently, similar aspects of compromised brain function induced by different trigger events may be responsible for the shared perceptual content of this altered state of consciousness.

Taylor's ego-dissolution or compromised sense of "self" may be supported by neurophysiological evidence of this state-specific altered state. In one study, for example, when meditators reported the exact moment they attained their meditative climax along with a sense of being united with the universe, there was a corresponding decrease in the left hemisphere's orientation centers.[10] Apparently, when one's internal thoughts and the external world subside from either brain damage or peak experience trigger events, the brain's electrical activity reduces and receives decreased input from the sensory systems. This, in turn, causes one to lose sight of one's relative position in space and to experience a sense of oneness and unity. This may explain why Taylor reported that her consciousness shifted from feeling "like a solid," to a perception of "feeling fluid—at one with the universe"—when this region was silenced from her stroke.

This evidence suggests that the brain's default mode network (DMN), which is closely associated with self-referential mental activity during the resting-state, may represent the underlying neurological mediator for peak experience trigger events that evoke feelings of "self-transcendence" or the unitive experience—an inability to differentiate between one's inner self and external reality; an alteration of time and space; a floating sensation; and the sense of an interconnectedness with the universe. Thus, one may perceive things one would otherwise not realize and wrongly interpret it as a mystical-like peak experience and associated interaction with an alternate reality. More specifically, the inhibition of the posterior-superior parietal lobes creates a sensation of "pure space that is subjectively experienced as absolute unity or wholeness and obliteration of the self-other dichotomy."[11] In fact, the neural network properties of the identified "core-self" DMN regions (medial prefrontal cortex, posterior cingulate cortex, and inferior parietal lobe) suggests that the peak experiencer's altered state of consciousness is not an imagined event memory, but rather a real experience despite not actually having been experienced in reality.[12] Consequently, a highly emotional, personally important, and surprising event like the peak experience can result in a preferential encoding that makes peak experience memories feel real, more detailed, and longer-lasting than everyday memories.[13] But whether the peak experience is real or imagined, the magnitude and importance of the peak experience's perceptual and semantic content may explain why it has such a profound impact on the person's core personal viewpoints and values.

Moreover, the unique similarity of reported perceptual and semantic descriptions induced by different peak experience trigger events suggest that these characterizations may actually be facilitated by comparable brain processes. For example, the brain's medial temporal lobe has been identified as the same mechanism responsible for the "complex imagery, entity encounters, and vivid autobiographical recollections," reported in the altered state of consciousness induced by psychoactive drugs, the near death experience,[14] and meditation.[15] Interestingly, when meditators mentally visualize and emotionally connect with encountering a "being of light" typical of a near death experience, high gamma activity (corresponds to a state of enhanced cognitive performance) and other neuroelectric changes are seen to arise from brain regions associated with positive emotions, imagery, attention, and spiritual experiences.[16] These outcomes were also supported in a recent cross-sectional online survey on the prevalence of peak experiences in

more than a thousand meditators; a majority of the respondents reported having had anomalous and transcendental experiences similar to those documented in both the near-death and psychedelic altered state of consciousness.[17]

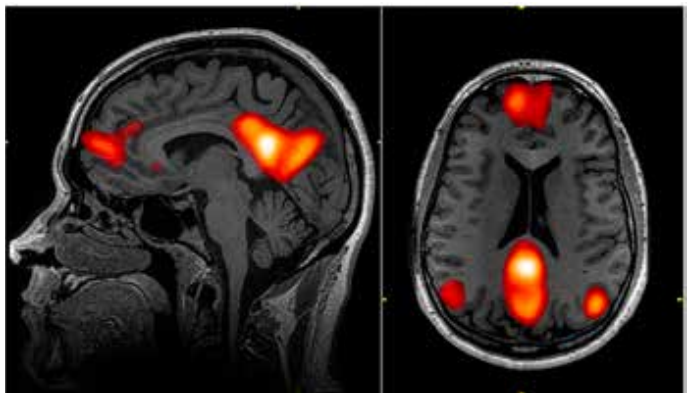
In light of this preliminary evidence, the question remains whether the brain, or an aspect of mind, may be capable of providing us with an enhanced sense of awareness of an alternate and ultimate reality as part of the natural evolution of consciousness in humankind. In other words, like space-time and energy, the act of conscious awareness may represent a yet-to-be discovered fundamental law of the universe that may facilitate greater human potential, perception, and mindfulness. But at this early stage in our embryonic development, our poor understanding of how the brain facilitates one's sense of self and reality make it virtually impossible to firmly conclude that the experience of an alternate reality is either valid or illusory in nature.

Bottom of Form The Peak Experience, Parallel Worlds, and the Mind

Some physicists believe there exists strong evidence to support the theories of superstrings, extra-dimensions, and parallel universes. And these theories provide an alternative explanation to psychological and neurobiological-based theories of the peak experience in the form of an ultimate reality. Several complex and exquisite mathematically derived principles, for example, have independently revealed the existence of hidden universes and dimensions beyond the subjective reality we perceive in our everyday waking consciousness that could exist parallel to our universe. Consequently, there may actually be two realities in human experience; one visible and experienced by our senses, and one that is not—an unseen alternate realm of existence. In other words, the peak experience could be either physiological; a common brain event, or non-physiological; the separation of consciousness from the physical body. And this concept should not be entirely dismissed, especially since anecdotal testimony from those who have had a peak experience suggests that the experiencer often returns from an apparent unseen realm with a firm understanding of the interconnectedness of all things.

Subjective depictions that "time and space no longer exist," and that it is possible to "see everything at once" and "through any obstacle and in every detail as a holographic view" also appear to correspond with certain features of evolving scientific principles in quantum mechanics: String Theory, Quantum Hologram, and the Many Interacting Worlds theory. The reported subjective PE characteristics, which seem analogous to QM principles of time and space, indirectly suggest that QM may provide the conceptual framework for understanding the PE. This includes the concepts of non-locality, coherence or interconnectedness, knowledge of existence in another dimension without a body, the perception of time as if the past, present, and future exist simultaneously and instantaneously, and the instantaneous information exchange in a timeless and placeless dimension. In fact, many physicists acknowledge that the universe we live in could be just one of an infinite number of universes making up a "multiverse."[18] And these universes may exist beyond the three dimensions we are familiar with but are hidden from us because they exist in our time and space at a slightly different frequency or phase. Proponents of the Many Interacting Worlds theory, for instance, contend that parallel universes exist and interact through a "universal force of repulsion between 'nearby' similar worlds."[19]

For the peak experience and its associated interaction with an alternate reality to be authentic, an aspect of mind or awareness must behave independently of the brain and somehow extend beyond normal space/time. And principles in quantum mechanics may actually allow for an aspect of one's consciousness to access another parallel time and space via a peak



Magnetic resonance imaging of areas of the brain in the default mode network. John Graner, Neuroimaging Department, Walter Reed National Military Medical Center, Bethesda, MD.

experience. In fact, the possible force governing this behavior may eventually prove to be on par with electromagnetic, gravitational, and the nuclear forces that describe universal reality.

The connection between human consciousness and the physical world is precisely why so many founding fathers of quantum physics were so preoccupied with consciousness and "non-material" science in general. Many eminent physicists, for instance, contend that consciousness does not strictly obey the rules of the physical world. For example, David Bohm agreed that it makes "no sense to separate physical effects from spiritual effects,"[20] and Max Planck regarded "consciousness as fundamental" and matter as "derivative from consciousness." Eugene Wigner also emphasized how "it was not possible to formulate the laws of quantum mechanics in a fully consistent way without reference to consciousness,"[21] and Erwin Schrödinger believed that extrasensory perception could be explained by realizing that our consciousness is immersed in the quantum mechanical wave function which serves as a "field of consciousness" over the Earth.[22]

But just how can consciousness be experienced independently of the body during the peak experience? That is, is consciousness itself a non-local phenomenon? And if it is, then the subjective attributes and content of the peak experience may actually provide the means to help prove or disprove theories of the possible existence of parallel universes, and possibly even consciousness itself. Moreover, certain features of the peak

experience appear to have quantum-like holographic properties that correspond with some of the basic principles from quantum theory. Consequently, if certain aspects of sensory information processing, such as in telepathy and precognition, are in fact "non-local," it may explain the perceptions by peak experiencers that everything in the universe is interconnected and that normal time and space is dramatically altered. Non-local perception, therefore, which appears to function outside normal physical evolutionary processes, may be related to higher unknown aspects of consciousness. In other words, there may actually be two realities in human experience; one visible and experienced by our senses, and one invisible that exists beyond human sensory capabilities.

Research Directions

The unique and perplexing subjective characteristics of the peak experience emphasize the need for continued research to determine whether some individuals can actually "see a different world" or instead, to "see the world differently" in a non-spatial/non-temporal context. To prove this theory, the scientific method requires that it be testable, reproducible, and falsifiable. But the peak experience may not be testable, reproducible, and falsifiable in a manner consistent with traditional scientific practice. For example, one major research limitation associated with the peak experience is that it emerges spontaneously, making the study of this state-specific experience very difficult, if not impossible, to conduct in a well-controlled and reliable manner. And this concern is compounded by the lack of agreed upon perceptual and semantic content criteria to accurately distinguish psychologically well-balanced, "peak experiencers" from those with psychological disorders for research purposes. Consequently, one major research objective is to develop a reliable and valid standardized behavioral test that incorporates yet-to-be established criteria to accurately define a "true peak experience." Once defined, the attributes of the peak experience that influence or predict the extent of personal change can then be analyzed to isolate the relative contribution of personal and situational variables, and related interactions, to observed behavioral transformative changes in peak experiencers.

Moreover, future research should focus on the development of a standardized "peak experience model" that reliably generates a predictable altered state of consciousness for experimental purposes. Initially, researchers should attempt to develop this model in advanced meditators and those under the influence of a psychoactive drug like ketamine or DMT. This is an important research objective, especially since the state-specific consciousness in each population appears similar in perceptual and semantic content to both the near-death and peak experiencer.[23] Consequently, the development of a reliable "peak experience model" may enable the assessment of real-time changes in neurological activity and associated perceptual content of specific and identifiable peak experiences induced by different trigger events. In turn, the nature of an individual's specific peak experience can then be accurately identified and properly categorized. This preliminary evidence may provide the needed foundation for future research to build upon to help determine if an individual's peak experience is a valid representation of either "seeing a different world" or of "seeing this world differently."

In our still infant evolutionary stage of intellectual and spiritual development, the elusive nature of how the brain facilitates every aspect of one's subjective experience remains a fundamental research objective in neuroscience. The process by which the collective behavior of brain activity translates into the conscious act of thought and emotion will likely remain obscure until physical and/or non-physical processes can, if at all, be associated with the essence of consciousness itself. Only then will we be able to understand the true nature of the peak experience.

REFERENCES

1. Jung, C. (2011). Archetypes and quantum physics and psychology. *NeuroQuantology*: 9, 563–571.
2. Robbins, S. (2018). Personal communication.
3. The Harris Poll. "The Religious and Other Beliefs of Americans." http://wiki.creation.org/ Public Opinion, accessed January 26, 2019.
4. Urgesi, R, et. al. The spiritual brain: selective cortical lesions modulate human self-transcendence. *Neuron*: 65, 309–319.
5. Facco, E. & Agrillo, C. (2012). Near-death experiences between science and prejudice. *Front Hum Neurosci*: 6, 209.
6. Grimby, A. (1993). Bereavement among elderly people. *Acta Psychiatrica Scandinavia*: 87, 72–80.
7. Taylor, J. (2006). *My Stroke of Insight*. New York: Penguin Publishing.
8. Taylor, J. *My Stroke of Insight*.
9. Nour, M. (2016). Ego-Dissolution and psychedelics: validation of the Ego-Dissolution Inventory (EDI). *Front. Hum. Neuroscience*: 10, 269–284.
10. Kurth, F., et. al. (2015). Shifting brain asymmetry: the link between meditation and structural lateralization. *Soc Cognitive Affect Neuroscience*: 10, 55–61.
11. d'Aquli, E.G. & Newberg, A. B. (1993). Religious and mystical states: A neuropsychological model. *Zygon*; 28 177–200.
12. Davey, C. G., et. al. (2016). Mapping the self in the brain's default mode network. *NeuroImage*: 132.
13. Thonnard, M., et. al. (2013). Characteristics of Near-Death Experiences Memories as Compared to Real and Imagined Events Memories. *PLoS One*: 8(3).
14. Britton W. B. & Bootzin R. R. (20004). Near-death experiences and the temporal lobe. *Psychol Science*: 15(4): 254–258.
15. Timmermann, C., et. al. (2017). LSD modulates effective connectivity and neural adaptation mechanisms in an auditory oddball paradigm. *Neuropharmacology*: 10.
16. Beauregard, M., et. al. (2009). Brain activity in near-death experiencers during a meditative state. *Resuscitation*: 80(9):1006–10.
17. Vieten, C., et. al. (2018). Future directions in meditation research: Recommendations for expanding the field of contemplative science. *PLoS One*: 7: 131.
18. Hall J.W., et. al. (2014). Quantum Phenomena Modeled by Interactions between Many Classical Worlds. *Phys. Review*: 4. 212–232.

19. Griffith University. (2014). Many Interacting Worlds theory: Scientists propose existence and interaction of parallel worlds. October 30, 2014, https://phys.org/news/2014-10-interacting-worlds-theory-scientists-interaction.html.
20. Bohm, D. (1993). *The Undivided Universe*. New York, NY: Routledge.
21. Wigner, E. (1967). *Symmetries and Reflections*. Bloomington, IN: Indiana University Press.
22. Schrödinger, E. (1980). The present situation in quantum mechanics. *Proc. Amer. Phil. Soc*: 124. 323–338.
23. Thonnard, M. et. al. (2013). Characteristics of near-death experiences memories as compared to real and imagined events memories. *PloS One*. 8: 3. https://doi.org/10.1371/journal.pone.0057620

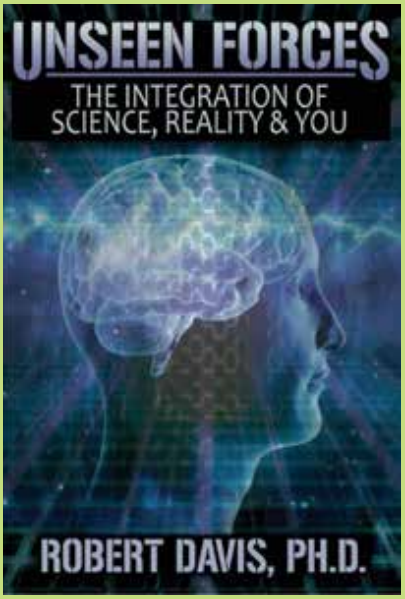
ROBERT DAVIS served as a professor at the State University of New York for more than 30 years. He graduated with a Ph.D. in Sensory Neuroscience from The Ohio State University. He has published more than 60 articles in scholarly journals, lectured at national and international conferences, and was awarded several major research grants by the National Institute of Occupational Safety and Health. Since retiring, he has written three books, most recently, *Unseen Forces: The Integration of Science, Reality and You*. His website is: bobdavisspeakes.com.

OBSERVATORY, continued from page 5

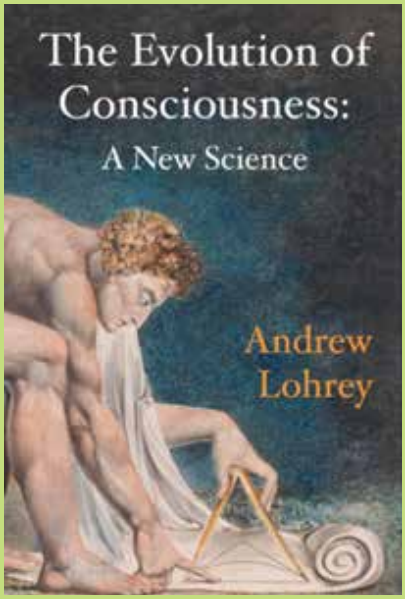
REFERENCES:

Dossey, L. (2013) *One Mind: How Our Individual Mind is Part of a Greater Consciousness and Why it Matters*, New York: Hay House.
Foucault, M. (1982) *This Is Not a Pipe*, Trans., & Edited, James Harkness, Berkeley: University of California Press.
Goswami, A. (1995) *The Self-aware Universe: How Consciousness Creates the Material World*, New York: Putnam.
Jahn, R.G. & Dunne, B.J. (2011) *Consciousness and the Source of Reality: The PEAR Odyssey*, Princeton, New Jersey: ICRL Press, ebook.
Lawson, H. (1985) *Reflexivity: The post-modern predicament*, La Salle, Illinois: Open Court.
Lohrey, A. (2018) *The Evolution of Consciousness: A New Science*, Princeton: ICRL Press.
Nagel, T. (2012) *Mind and Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False*. Oxford University Press. Kindle Edition.
Radin, D. (2006) *Entangled Minds: Extrasensory Experiences in a Quantum Reality*, New York: Paraview.
Young, A. (1999) *The Reflexive Universe*, Cambria: Anodos Publications.

Noteworthy Books



Unseen Forces, Robert Davis, Ph.D.
Visionary Living, 2019



The Evolution of Consciousness: A New Science,
Andrew Lohrey, ICRL Press, 2018