

ESSAY REVIEW

Subtle Energies and Quantum Mechanics

From Quantum Physics to Energy Healing: A Physicist's Journey to Mind and Healing by Johanna Blomqvist, translated by Tuula Yrjö-Koskinen. Helsinki, Finland: Mindstream Publishing, 2018. 294 pp. \$16.16. ISBN 978-9529404186.

The Mind's Interaction with the Laws of Physics and Cosmology by Jeffrey S. Keen. Cambridge Scholars Publishing, 2018. 435 pp. \$33.95 (paperback). ISBN 978-1527513648.

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Today such notions as chi, “subtle energy,” or “life force energy” are typically ridiculed by conventional scientists, who might argue that our modern understanding of matter and energy leaves no room for what they might call New Age versions of vitalism. Yet such notions persist in the yoga studio, the acupuncture clinic, the tai chi class, and other venues. What can we make of this? Such notions also are the focus of two recent books that explore them in very different ways. One book is *The Mind's Intervention with the Laws of Physics and Cosmology* by Jeffrey Keen, which provides a dowser's deep exploration into the various kinds of subtle energy in the world all around us. The other book is Johanna Blomqvist's *From Quantum Physics to Energy Healing*, which is a much more personal journey into energy healing. As it happens, both books look for links between so-called subtle energy and quantum mechanics. While some might scoff, I submit that there may be dividends here, given the persistent mystery of quantum mechanics. In any case, I will discuss these two books as well as consider how what they present as subtle energy might fit with quantum mechanics.

Blomqvist's book can be characterized as a personal journey of a trained physicist exploring the world of energy healing. The book serves as a good overall introduction to energy healing, with a heavy emphasis on Blomqvist's personal experience and insights. Her focus is primarily Reiki, with a dash of William Bengston's energy healing method added in. She also presents an overview of the empirical research on both Reiki and Bengston's technique.

There is also something of a theoretical foundation for her claims through the chapters on quantum mechanics and consciousness.

She begins by discussing how energy healing (sometimes called “laying on of hands”) has appeared in ancient cultures, including Egypt, Greece, early Christianity, and the Middle Ages of Europe. She then turns to the East to include China, India, and Tibet, where references to energy healing are plentiful and persist to the present day. She notes that the system of the body’s meridian system (energy channels) through which chi or life energy flows through our body originates in China. This chapter’s key thread is how ancient and universal these practices are. Of course, many practices such as acupuncture and qigong draw heavily on this system and understanding of chi. Interest in hands-on healing became rather fashionable in Enlightenment Europe through such doctors and alchemists as Paracelsus, Mesmer, and Galvani. However, this heightened interest gained little traction among the scientists of the time.

Blomqvist pivots toward a more contemporary inquiry with the work of William Bengston, whose publications document some remarkable results from applying his technique on mice with cancer. A distinctive feature of Bengston’s method is that the healer uses a “cycling” technique which involves rapid mental imaging of positive situations in one’s mind. Apparently, this creates an emotional state that facilitates healing. Blomqvist notes that unlike many other methods, Bengston’s technique isn’t necessarily relaxing or peaceful; further, Bengston claims that the healer’s belief in the healing process has no effect on its efficacy. Blomqvist discusses an especially interesting mechanism from Bengston’s work, “resonant bonding,” to account for cases where one group receiving treatment might affect another (perhaps control) group that is not intended to receive treatment. That is, the healer, either through inadvertent contact with the control group (that does not involve treatment) or possibly thinking about them, fails to exclude some healing effects intended only for the treatment group.

But Blomqvist’s main focus, in her own experience and throughout the book, is Reiki. Indeed, Reiki has a particularly prominent place in the world of energy medicine. Drawing on a UCLA study, *The Washington Post* recently reported that “More than 60 U.S. hospitals have adopted Reiki as part of patient services, . . . and Reiki education is offered at 800 hospitals” (*The Washington Post* 2014). As Blomqvist explains, Reiki originated from the Japanese teacher Mikao Usui in the 1920s. Usui, as the story goes, climbed Mount Kurama and there received healing wisdom, including the symbols used in Reiki. As Blomqvist notes, when one learns Reiki, one is attuned or initiated to receive and give energy, as well as to support one’s spiritual growth. Like other healing methods, Reiki draws on a framework of universal life

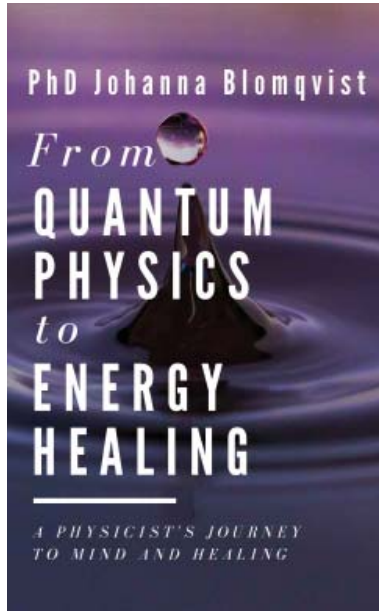
energy, which might be also described as a field that encompasses everything and has a dynamic character. Skeptics might dismiss such talk as vitalism, while those at the other end of the spectrum might conjure notions such as “the Force” invoked in a well-known movie franchise.

Reiki symbols distinguish Reiki from other modes of energy healing, and are used during Reiki training (different symbols at different levels of training) to heal the healer and to bring in universal energies. During the Reiki course, the student learns the symbols and the positions on the body to place the hands. But Blomqvist (and Reiki teachers generally) also encourage students to trust their intuition and

allow the Reiki energy to guide them on where to place the hands. And Reiki is remarkably flexible in other ways; remote healing is available for those not in the vicinity of the Reiki practitioner. And Reiki healers apparently are not bound by time: Blomqvist shares her experiences of “treating one’s timeline with the present as a starting point, moving from either toward the past or the future. In one’s mind one can imagine the path as a ribbon with pearls, knots, anything” (p. 64).

Much of the book recounts Blomqvist’s personal experience with energy healing (mostly with Reiki). She provides copious descriptions of such things as her initiations in her first courses, details about the Reiki symbols and descriptions, and the sensations she experiences as she treats clients. She counsels that ego must relinquish control and that one needs not believe in Reiki to achieve results. Some of her insights have a New Age ring. For example, in her words, “my subconscious mind . . . would say that Reiki was all about love, pure love, total acceptance” (p. 53). In another example, “Negative feelings express that the direction is wrong. . . . Positive feelings, on the other hand, tell that the direction is right and that more of this is needed” (p. 62). Of course, my bristling at these and similar more or less innocuous passages, may say more about my own limitations than hers. And to be fair, I do believe Blomqvist endeavors to give the reader a sincere and transparent account of her experiences.

Later in the book, Blomqvist provides material on the empirical research



on Reiki. Caution should be exercised here, given the likely variance of efficacy across practitioners, as well as other difficulties, such as controlling for all factors during remote healing. That said, she provides a wealth of evidence that Reiki provides valuable results. However, as she notes, many of the studies have relatively small sample sizes. Also, the variable of interest for many studies is an overall feeling of well-being rather than some specific physiological variable. While this might seem vague and subjective, it is probably defensible given the holistic character of energy healing. But reading the descriptions and results of study after study is not light reading, and many readers might have some difficulty assessing all of it. A table summarizing the empirical research would have been a helpful addition.

One particularly well-known study Blomqvist discusses, by Catlin and Taylor-Ford (2011), found that groups receiving Reiki treatment and a sham Reiki treatment both achieved significant results, but there was no statistical difference between them; however, a control group receiving no treatment achieved no significant results. Catlin and Taylor-Ford thus argue that sham Reiki is likely as good as official Reiki and suggest that the true benefit arises from the physical contact which allows patients to relax, as well as possibly a placebo effect. However, Blomqvist notes that this may demonstrate the resonant bonding (suggested by Bengtson and briefly discussed above) where two different groups are linked in some unconventional way and respond similarly, despite only one group receiving the official treatment. (Perhaps another possibility is that even those untrained in Reiki provide energy healing benefit to patients.)

But what, you may ask, does all of this have to do with quantum mechanics (as the book's title implies)? Blomqvist does provide the reader with an overview of quantum mechanics, emphasizing the Copenhagen interpretation, with alternative interpretations, such as Hugh Everett's many worlds and David Bohm's hidden variables, briefly added in. Blomqvist's presentation of quantum mechanics might be characterized as a boiled-down version of what one might find in an introduction to the subject, aimed at a broad audience. Blomqvist does give hints of a speculative sort about how energy healing might be linked with quantum mechanics, but it falls a bit short of anything resembling a clear framework.

Blomqvist also gives us some of the recent thinking on the "hard problem of consciousness," a term coined by philosopher David Chalmers. For Chalmers, the hard problem is how to account for our subjective experience. According to Chalmers, we have made progress in understanding consciousness on some fronts, but we are not any closer to resolving the hard problem. Blomqvist posits that Chalmers and some other philosophers suggest that the answer likely requires moving away from purely physicalist

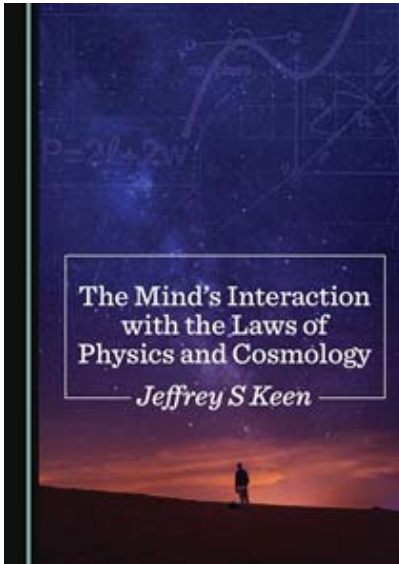
explanations of our world. And viewing consciousness or the mind as fundamental in some sense (she briefly discusses dualism, idealism, and neutral monism as possible alternatives) helps to support her claim that mind can affect matter, at least in subtle ways. To back this up, she cites work from Dean Radin and the PEAR (Princeton Engineering Anomalies Research lab) project that suggest one's intention can influence the world around us in unconventional ways.

Overall, Blomqvist probes the subject of energy healing from many angles. Although she falls short in providing a satisfying link between energy healing and quantum mechanics, we can note that currently no consensus on how to think about quantum mechanics exists. While much of the material on Reiki is likely helpful for those considering a healing practice, quite a lot of that material is available online, including on YouTube, in addition to copious books. Nevertheless, Blomqvist's book is likely unique in the wide variety of fields and methods she brings together in her exploration.

I pivot now to another investigation of what we might call subtle energy, but this time from the vantage of dowser Jeffrey S. Keen, which he presents in his book *The Mind's Interaction with the Laws of Physics and Cosmology*. Of course, just as in the healing energy work discussed above, the nature of these subtle energies sensed by dowsing is not understood within the framework of conventional science. And Keen's notion of subtle energy extends beyond living organisms to include all physical objects and even abstract mathematical shapes.

Dowsing, as Keen explains, is the ability to detect and measure various subtle energy fields in our world that are not detected by either the five senses or existing scientific instruments. Keen also explains that, in conjunction with the mind's intent, our subconscious mind has the ability to probe these subtle energy fields, usually using something like a pendulum or metal rods. According to Keen, the world most likely contains an uncountable number of different subtle energy fields that the mind must learn to block in order to manage what would otherwise be an enormous flow of information. Thus, it is necessary to learn how to tune into a specific "channel." Dowsing involves the mind interacting with this environment in the widest sense via consciously specifying intent, and visualizing what information is being sought.

So, what Keen (the dowser) describes as subtle energy may differ in significant ways from what Blomqvist (the healer) describes. Perhaps Keen offers a broader range of subtle energy that also includes whatever is sensed by the Reiki healer. That said, there also seem to be important similarities. Both seem to be inherently subjective in the sense that we know of no objective method for the detection of either. In both cases, the human subject appears to play a necessary role; the healer or dowser learns to detect subtle sensations



or follow one's intuition, presumably rooted in the subconscious. And both Blomqvist and Keen invoke something of an underlying field of information that supports the process in each case.

Keen's book is a highly ambitious and serious inquiry that is most likely intended for the scholarly or serious dowsers. The book is fairly dry and technical, albeit for the most part quite readable. Although he eschews introductory guidance on pendulums or dowsing rods, he usually breaks down his inquiries into careful steps, perhaps to allow others to confirm his observations. Keen is eager to fit subject matter with mathematical

formulas whenever possible; however, the mathematics remains at an undergraduate level and thus is accessible to most people. And Keen presents copious graphs, illustrations, and photographs to facilitate what would otherwise be very difficult subject matter to grasp.

One important caveat: We really have no way of knowing how much of the results Keen reports would be confirmed by other dowsers. Dowsers generally use various devices, such as a pendulum or rods, to "amplify" the sensations they learn to feel; but Keen explains that most of his presented results were obtained without such devices (except for an occasional use of angle rods). Thus, Keen relies on intuition or his other gifts to a greater degree than most other dowsers to give us a much wider range of examination in the nature of subtle energy.

All of this said, Keen offers a deep (and in my view fascinating) exploration into different kinds of subtle energies, which range from lines across the landscape, auras (for both living and non-living forms), vorticular energies, "psi-lines," and others. While Blomqvist tries to describe as best she can the details of inherently subjective experiences, Keen is eager to quantify everything he can, often in surprising ways. Many of his findings are counterintuitive, as well as intriguing. His detailed charts and illustrations demonstrate how various properties vary with distance or time. Also, Keen's attempts to use equations to ascertain the relationships of various aspects of subtle energy observations are impressive. Almost needless to say, Keen is especially interested in mathematical constants and

series, such as phi and Fibonacci's sequence, that mystics and occultists have been fascinated with for centuries.

In the space of this review, I cannot do justice to the range and detail that Keen covers. But I'll discuss a few examples, beginning with auras. According to Keen, they surround every object on earth, be it inanimate object, life form, or even a shape of abstract geometry. The size of an aura is a function of its source object's shape, size, composition, and mass. And unlike gravity or electromagnetism, auras (and subtle energies in general) possess a constant field-strength with a very unnatural sudden sharp boundary. Thus, there is no gradual fade-in or fade-out, nor does the dowsing reaction obey the inverse square law.

Keen begins his examination of auras with solid inanimate source objects, such as stones and crystals. Fundamentally, dowsing solids produce a pattern centered on the source object, comprising seven distinct fields. Typically, the aura(s) of a physical object includes seven concentric ovoid shells (which Keen compares to Russian dolls). Each shell is associated with a color, and Keen provides tables that illustrate this as well as other properties, such as how they shrink in darkness or expand in light. Keen then proceeds to explore the auras of plants, and ultimately humans. He notes that, unlike inanimate objects, human intent enables us to alter our own and other people's auras and chakras. Another interesting, and likely controversial, claim is that the auras of all life forms produce a "Tree of Life" structure of vortices/conical helices and lines in a horizontal plane adjacent to the life form. But perhaps most surprising is Keen's finding that abstract geometric shapes produce very similar auras to those of solid objects. (This is something he observed with other sorts of subtle energies in addition to auras.) In fact, he reports that the subtleties of abstract shapes might exceed solid objects: He reports that 2- (or 3-) dimensional solid discs "only have a 7-fold geometry, but abstract drawn circles produce 9-fold geometry in their ellipsoidal auras, spirals, bands, and rings" (p. 86).

Keen also explores the interactions between two bodies in relatively close proximity. He finds that provided their auras overlap, the interaction of any 2 bodies (even of pure abstract geometry forms) instantly generates a complex pattern. He also finds that complex patterns of subtle energy persist as the bodies separate. (There is a surprising diverse range of patterns that space prevents me from providing more detail about.) At several points in the book, Keen argues that the structure of the universe has the ability to treat abstract geometric sources similarly to physical objects, with respect to the creation of subtle energies. But intriguingly, physical bodies, which one might have thought involve more information than an equivalent abstract geometrical pattern, produce less subtle energy.

I admit I found Keen's presentation on the quantity and range of subtle energies, as well as mathematical relationships on some properties—with literally everything around us—a bit bewildering. Often, I was a little torn between skepticism—would other dowsers give us similar reports?—and admiration for Keen's systematic inquiries on all aspects of subtle energies. In the end, I couldn't help but look at objects around me and wonder what subtle properties might be emanating around them. (And it has also strengthened my motivation to follow Marie Kondo's advice for tidying up my home!)

Another subject the author turns to is mind-matter effects; that is, how the mind creates patterns of subtle energy. He focuses especially on what he terms "psi-lines," which he describes as "a form of linear subtle energy, often perceived to be flowing along the ground" (p. 247). Keen argues that these psi-lines are also created by animals to assist in migrations, and by our ancestors for travel and tracking. According to Keen, psi-lines have been known from ancient times and were presumably used for direction finding and navigation. They are created by the mind, sometimes to find a route from A to B, where A is the creator desiring to find a place or person located at point B. The psi-line can then subsequently be used by future people requiring the same optimum route. They can have beneficial or detrimental effects on health, according to Keen. Keen's results suggest that local and astronomical forces, including gravity and the earth's spin, affect the properties and structure of psi-lines. Also, he notes that these mind-generated subtle energies are terminated by spirals. Based on experimental observations, Keen develops a formula on the relationship between their length and width.

Keen also provides in detail many other facets of subtle energy that I will touch on only briefly. These include details and properties of spirals, conical helixes, and columnar vortices. He provides some depth about the relationship between such subtle phenomenon and various ancient sites and burial mounds, as well as natural features, such as underground intersecting watercourses. Keen also explores how the auras change when objects are rotated. (He finds that the auras of inanimate objects are unchanged through spinning, but the aura of spinning water expands.) He also notes that mind-generated fields (which would include prayers) have similar properties to rotationally generated subtle energy fields.

Among the intriguing findings, Keen notes that the measurements from subtle energy readings do vary with time. He also finds that the dimensions of auras and subtle energies vary with various celestial events (such as the time of day, time of year, and the position of the moon relative to the earth). (In most cases, he presents the results of his measurements in

charts.) Particularly interesting events include equinoxes and solstices (he argues that the spin of the earth on its axis leads to vorticular movements in subtle energy). In addition, he finds that shifts in subtle energies occur with astronomical alignments, involving Jupiter, Neptune, Saturn, and the moon.

To help us make sense of all this, Keen invokes a notion of cosmic consciousness as a fundamental part of the structure of the universe. This cosmic consciousness, or cosmic field of information, responds to passive requests (such as those asking to be led to an underground source of tin ore) or pro-active ones (projecting a geometric shape to remote parts of the world). The author makes some references to quantum mechanics as a justification for this rather vague characterization, but doesn't provide much additional theoretical structure.

One minor quibble I have is that there aren't many references to Eastern notions of subtle energy. Keen's view of subtle energy appears to be influenced more by Western mysticism. Such concepts as the Tree of Life and the golden ratio appear prominently in his work. Philosophers and mathematicians who influence him include Plato, Pythagoras, and Fibonacci. Now, I have no real problem with that; I only find it a little surprising, given that arguably most contact we have with subtle energy today is through Eastern practices or systems, such as tai chi, yoga, Feng Shui, and qigong.

At this point, I would like to suggest how the works of Blomqvist and Keen might both fit within an interpretation of quantum mechanics, as well as consciousness. It is of interest that both Blomqvist and Keen invoke something like a field of information that is an ultimate base or ground supporting the work of both the healer and the dowser. For Blomqvist, the healer is drawing on what we might call a universal life force that is characterized by—not exactly energy, at least not in the conventional sense—but what we might describe as a field of information. Thus, we might say the healer is tapping into a kind of energy-information that supports our life processes. Keen invokes a notion of a cosmic field of information—that he also argues is conscious in some sense—which responds to passive requests or pro-active ones. While both Keen and Blomqvist invoke quantum mechanics in rather vague terms, I believe that their suggestions of an underlying field or ground of information can be fruitfully compared with the physicist David Bohm's (2005) "implicate order."

Bohm's implicate order (2005) is an extension of his earlier hidden variables framework, which described how subatomic particles are guided by an underlying "pilot wave." This pilot wave in turn Bohm characterized as "active information," which depends holistically on the entire configuration of the quantum system. Usually, the configuration is understood as the given

positions in space of all the system particles. But fun fact: If the quantum system is entangled with its environment, the relevant configuration becomes the particles of the entire universe. Thus, the active information guiding subatomic particles is grounded on a vast amount of information indeed. Bohm called this inherently nonlocal “space,” which is the base or source for active information, the implicate order. For Bohm, the implicate order is also the foundation for both matter and consciousness. Thus, Bohm’s interpretation is not too far from Keen’s notion of a cosmic source of information and consciousness.

Recently, some philosophers, such as Nagasawa and Wager (2016), consider the possibility that the universe as a whole is conscious (in some sense), in order to solve the hard problem of consciousness. Such work has also been motivated by Schaffer’s (2010) argument that the universe is best viewed as a fundamental whole, rather than a vast collection of parts. Of course, such views remain far from the current mainstream. Nevertheless, the persistent problems of quantum mechanics and consciousness appear to be leading some people to consider such possibilities.

I believe this interpretation (or something similar to it) has some attractive features with respect to the subject matter in these two books. In the case of Blomqvist’s energy work, the “resonant bonding” that links two different groups together might be explained through quantum entanglement. Perhaps as the healer is connecting with a group intended for treatment (via the field of active information) he inadvertently connects with the other group as well due to the inherently nonlocal properties of this universal life field. The inherently holistic nature of this active information sheds light on the holistic nature of energy healing. But holistic, energy medicine—contrary to the mechanistic framework of conventional medicine—is far more subtle, less predictable, often effective (but not always), and avoids the intrusive side effects of conventional medicine. And of course, the nonlocal aspect of this field (or the implicate order) suggests why remote healing might not be so far-fetched.

Now many people might object that quantum mechanics simply cannot operate in the relatively warm and noisy environment of the healer or dowser. Until recently, most physicists have argued that quantum mechanics generally remained confined to the laboratory, where conditions could be controlled for observation of paradoxical behavior at the level of subatomic physics. However, recently quantum mechanics has been observed to play a significant role in a growing number of biological processes (McFadden & Al-Khalili 2014).

While this might not be the view of these authors, I submit that Bohm’s implicate order has points in its favor. In any case, I do believe that both

authors of the books under review here, in different ways, contribute to a richer understanding of how subtle energy appears to permeate our world. And I also believe that progress in this area likely requires that we let go of the notion that we can study it in isolation from our own being.

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