BOOK REVIEW

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Mario Beauregard is a neuroscientist and associate research professor in the Department of Psychology and Radiology at the Neuroscience Research Center, University of Montreal. He is also the author of a number of books and articles on subjects similar to the one that is the focus of this review.

I am a clinical psychologist who has been in private practice for the last 25 years in Orange County, California. During those years, and the 10 that preceded it, I have been involved in the field of near-death studies to some extent. I have always stayed current in the literature. I have spoken at a number of annual conferences, most recently at the 2014 International Association for Near-Death Studies conference, where I presented a workshop in shamanic journeying. I have also published a number of articles in the Journal of Near-Death Studies.

This book is not about a war over brains; in that sense it is poorly titled. It’s a war about opposing worldviews as it is played out in the arena of neuroscience, psychiatry, and psychology. People who subscribe to philosophical materialism attempt to reduce everything to the physical—in this case the brain; they consider the mind to be nothing more than an epiphenomenon of the brain. By contrast, those who subscribe to philosophical dualism argue that the mind is much more than just a product of the brain—that it is, in fact, a separate

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entity that, although unseen, can be empirically proven to exist based on its ability to affect the brain and/or the body and, in some cases, to transcend them. Thus, proponents of these two mutually exclusive perspectives are at odds. Is there only one type of “stuff” in the universe which is material, physical stuff, or are there two types of stuffs, one physical and one mental or spiritual?

Beauregard made it very clear from the outset that he is firmly in the dualistic camp, and each chapter was a discussion of a different area of research demonstrating the mind’s ability to affect and/or to transcend the physical brain. One possible criticism of the book would be that the author made no attempt to give a balanced view of both sides of the argument, but that was clearly never his intent. His purpose was to outline a number of areas of research that over the last 50 years have demonstrated that the mind is more than just the brain.

Beauregard used the same basic format throughout the book. In each chapter he first gave one of the most compelling and often well-known cases of the area of research under discussion, then something about the background and how it was discovered or developed, followed by a somewhat drier but still important discussion of a number of relevant research articles about the subject.

In the Introduction, Beauregard outlined the brain/mind problem, pointing out that materialism remains the dominant scientific view. Although materialism has been the accepted underlying philosophy since the beginning of modern science, during the last five decades, eight areas of research addressed in the book (along with a number of others) all have in common that their findings point away from a materialistic view of the mind/body problem and towards a dualistic explanation. These lines of research, like eight leaning poles that meet at the top, show that the materialistic worldview is not so much wrong as it is incomplete and that until these other areas are adequately explained and incorporated into the prevailing Western worldview and clinical methods, humans’ understanding of ourselves and our world will be incomplete.

Chapter One was a discussion of what is probably the least controversial of these areas of research: the placebo effect and its corollary, the nocebo effect. Used for centuries in medicine, the placebo effect refers to the well-replicated finding that about one-third of the time, when a person who is a perceived authority—whether because that person is wearing a white coat with a stethoscope draped around their neck, or because of the large number of shrunken skulls that adorn one’s hut—if that person gives something to an individual who is suf-
ferring, and if that individual believes that what they were given will cure them, that belief often creates the conditions for the person to be cured even when the treatment was known to have no physiological effect. In Western medicine the most often used example of placebo was a sugar pill which, throughout the 19th and into the 20th century was often all physicians had to offer their suffering patients. The mind exerts a very real and often powerful effect on the brain and the body that has the ability to heal it. What is beyond any legitimate dispute is that it is the mind’s belief that is the healing agent. Because the person believed they had been given something that would help them, they were, in fact, helped. The placebo effect shows that people’s beliefs about the treatments they receive often have a powerful influence on how they experience such things as how much pain they are in, how successful a surgery was, or how quickly they are able to return to their regular activities following surgery. Placebo has been shown effective in reducing pain, in reducing the effects of Parkinson’s disease, in increasing the success of a number of different types of surgeries, and in reducing stomach ulcers and depression. What people’s minds consider to be the truth becomes truth.

The corollary to the placebo is the nocebo effect. Nocebo refers to the patient’s belief that the treatment one received was somehow going to have an adverse effect. It has been documented that people who believe they are more at risk for some type of illness or disease are more likely to actually end up with that problem. Also, when a patient is given something from a perceived authority figure that they believe will be harmful to them, even though what was given to them has no known harmful physiological effects, the mind often creates the conditions to harm the individual. Many researchers have argued that the nocebo effect is what causes the well-known voodoo death or “hex death” that occurs in some cultures. The hex death is when a person is told they have been bewitched, and within a short period of time they do, in fact, become ill and die, despite the fact that there is no reasonable explanation for why this outcome should have occurred. Although overt cases of nocebo are not seen very often in Western practice, it is probably responsible for many of the side effects of many medications. Most clinicians quickly learn to be very careful about how they talk to patients about the medications they are using, because people are often very suggestible, and sometimes the most apparently innocuous comment can be followed by a very strong, negative response in some individuals.

In Chapter Two, the author discussed the research into neurofeed-
back that has taken place over the last four decades. In neurofeedback electrodes are usually placed on the individual’s scalp, and the brain’s activity is shown on a monitor through the use of images and sounds. When the user is able to produce the desired brain wave, he or she is given positive feedback, such as a gentle auditory signal. When one is not able to produce the desired brain wave, no feedback is given. Over time, the person learns how to produce a given brain wave at will. With enough training many individuals are able to permanently alter the functioning of their brains, resulting in improved behavior.

Beauregard pointed out that research into neurofeedback now has an impressive track record of being successful in the treatment of attention deficit/hyperactivity disorder, alcoholism, and post-traumatic stress disorder. Studies have also shown that areas of the brain that regulate the perception of pain were metabolizing more slowly, which was consistent with reports of reduced levels of pain. A type of neurofeedback that was found to help cats learn to enter into a brain state that was both very still and very alert, referred to as sensorimotor rhythm (or SMR), was also shown to be effective in reducing seizures in people with epilepsy. There is now evidence that neurofeedback creates improved connectivity between areas of the brain that have to do with many higher areas of cognitive functioning. Before neurofeedback, neuroscientists didn’t believe an individual could consciously control their own brain activity. However, this research has shown conclusively that people are able to do so, again demonstrating the mind’s ability to affect the brain.

In Chapter Three, Beauregard discussed neuroplasticity, a term that refers to the brain’s ability to reorganize itself based on life experiences or specific training. Forty years ago neuroscientists believed that the brain one was born with was all that one had. Since that time, research has shown that the brain is capable of creating new brain cells, referred to as neurogenesis, as well as making new connections between existing brain cells.

Beginning in the 1960s, researchers were able to show that mice raised in enriched environments had brains that weighed more and contained more chemical messengers than mice raised in environments that did not have similar enrichments. By the 1990s, researchers had shown that mice raised in enriched environments showed an increase in neurons in the hippocampus, an area of the brain that consolidates information from short-term to long-term information, compared with the brains of mice raised in unenriched environments. One of the first studies of humans was completed using London-
based taxi drivers who were required to undergo an extensive training program to become familiar with the streets of that city. One group was composed of student drivers, whereas the other was a control group of people who did not drive taxis. The researchers found that the taxi cab drivers had larger bilateral posterior hippocampi than the control group, and that the more experienced taxi drivers had even larger bilateral hippocampi than the less experienced ones. This research was among the first to document the fact that how people live, what they do for a living, and how they use their brains, all have a measurable effect on the brain, making it larger and better connected in areas that they use often in daily life.

This research also has implications for a number of psychological disorders. Beauregard summarized one of his own studies in which women who suffered from an intense fear of spiders went through a four-week desensitization program, gradually increasing their exposure to spiders. He scanned the women’s brains both prior to and after treatment. The experimental group was found to report less fear from a film depicting spiders, a change that corresponded to their brain scans showing no activation in the hippocampal formation. Over a four-month period these woman had, in effect, rewired their brains so that they were able to overcome a fear that, prior to treatment, had brought them close to panic. By using their minds to direct their will to follow a particular course of treatment, they had altered their brains.

In Chapter Four Beauregard discussed the research that has taken place over the past 40 years in the area of psychosomatics. Psychosomatic medicine was founded on the belief that the mind can cause physical symptoms, a view that emerged first during the 20th century as a reaction against the mechanistic view so prevalent in science and medicine.

The physician and psychoanalyst Franz Alexander was among the first to point out that psychological factors can play a part in physical disorders and disease. In the 1960s, psychiatrist George Soloman was among the first to do research in the area of psychosomatic medicine. He began studying the personality effects associated with rheumatoid arthritis. In a paper entitled “Emotions, Immunity, and Disease: A Speculative Theoretical Integration,” he argued that the immune system is often influenced by mental events. He was also the first to coin the term “psychoimmunology.”

A decade later, researchers studying stress concluded that reducing stress could also reduce a number of physical illnesses including
heart disease and cancer. David Felton and colleagues found a direct connection between nerve fibers in the spleen, lymph nodes, thymus, and bone marrow, which was the first time that researchers were able to document a connection, not only between physical disorders and mental states but also between these and how the brain and the immune system interacted. With this discovery, a field of research now referred to as psychoneuroimmunology was born. A few years later a viable mechanism through which the emotions can influence the immune system was discovered by Candace Pert and her colleagues when they discovered that neuropeptide receptors are present in the immune system.

Since that time numerous studies have shown that people's thoughts and feelings do affect their health. Both the development and the outcome of many illnesses can be traced to mental functioning which, in turn, effects both neurological and immune functioning and, consequently, often can determine the outcome of many illnesses and diseases. Especially acute or chronic stress can increase the severity and duration of infectious diseases and wound healing and can even stimulate the reactivation of latent viruses. The stress of being involved in any type of situation that one perceived as being beyond one's control can disrupt the smooth functioning of the immune and endocrine systems. Chronic negative emotions can contribute not only to an increase in physical disease but also to death, whereas positive emotions and determination increase the likelihood of health. In one study of women who had had a mastectomy, those who showed a positive attitude had a 50% chance of surviving 15 years in good health. Women who exhibited anxiety, helplessness, and stoic acceptance of the diagnosis had only a 15% survival rate at 15 years.

The psychosomatic network consists of the mind, the nervous system, the immune system, and the endocrine system. Through the use of chemical messengers, such as neuropeptides, these four systems act as one and are continuously communicating and interacting with each other. That communication and interaction usually occurs below the conscious level.

More recently, researchers have shown even the expression of some genes can be a function of whether a person is relaxed or stressed. Psychologist Jeffrey Dusek and his colleagues compared gene-expression patterns in 19 long-term relaxation practitioners, 19 healthy controls who had not practiced and were not practicing relaxation, and 20 newcomers who underwent eight weeks of relaxation training. They found that more than 2,200 genes were activated differently in the longtime
practitioners relative to the controls. They also were able to document that a particular gene that was either turned on or off by stress could be turned the other way by relaxation. These findings clearly showed that people need to have the mind and the body working in tandem to get the best results for maximum long term health.

Finally, Beauregard discussed the work of Carl and Stephanie Simon ton who were the first to propose the use of relaxation and mental imagery as a method to strengthen the immune system against cancer. Subsequent research has shown that relaxation combined with mental imagery increases immune cell production and reduces nausea and vomiting so often experienced during chemotherapy. It also decreases the distress associated with radiation therapy, facilitates recovery from cancer surgery, decreases anxiety and depression, and enhances quality of life.

In Chapter Five Beauregard turned his attention to hypnosis, yet another area in which the mind is able to act on the brain and body causing a favorable outcome. Although not everyone is able to be hypnotized, most people can be put into at least a fairly deep trance state by a competent hypnotist. Although there is no consensus on how hypnosis works, the ability to relax and to open oneself up to the hypnotist’s suggestions has a great deal to do with successful hypnosis. It has also been shown that the best candidates for hypnosis are individuals who are focused, are intelligent, and have an aptitude for blocking out the external world and becoming absorbed in fantasy or imagery.

The chapter began with a rather amazing account of a young man who had suffered from a condition that caused his skin to turn into a black substance as hard as the enamel found on teeth. In May 1950, the young man, who was then age 15, could barely move because of this condition. With no other effective treatment for this condition, an anesthesiologist named Albert Mason hypnotized the young man, and to everyone’s astonishment, the scales began falling off of his body and were replaced by fresh new skin, despite the fact that he had none of the oil-forming glands necessary to allow the outer layers off skin to peel off and refurbish themselves. Recent research has shown hypnosis to be effective in dealing with chronic pain including fibromyalgia, arthritis, low-back pain, and temporo-mandibular joint pain and with acute pain associated with childbirth labor and delivery; asthma; skin conditions, especially psoriasis and urticarial; breast biopsies requiring the use of a large needles; severe burns; surgery; and the anticipation of surgery.
In Chapter Six, Beauregard turned his attention to psi. Psi is actually a shorthand phrase that British psychologist Robert Thoules first used to describe a wide range of different psychic abilities including extrasensory perception (ESP), psychokinesis (PK), telepathy, clairvoyance, and remote viewing. Beauregard discussed the U.S. Central Intelligence Agency’s (CIA’s) then top-secret Stargate Project in which individuals attempted to gather espionage by remote viewing. Near-death experiencer (NDEr) Joe McMoneagle has long been known to be among the best remote viewers involved in that work.

Psychic research has always been a somewhat neglected field with not more than a handful of researchers actively being involved in it at any one time. However, their collective efforts and results have been impressive. Thousands of controlled experiments over the last four decades have been published in reputable scientific journals and have conclusively demonstrated the reality of psi. When the United States Congress asked the American Institutes of Research to review previously classified research done by the CIA, one of the main reviewers of that research concluded that from a statistical point of view, there was little point in continuing research designed to offer proof of psi. She concluded that the existing research had so overwhelmingly proved the existence of psi that further research should focus on how to make psi useful.

Beauregard noted that psi is still regarded as an anomaly but that many major breakthroughs in science had at one time been considered anomalous. For example, in 1772 the leading French academy of science, led by Antoine Lavoisier, considered the father of modern chemistry, convened to examine reports of falling stones (meteors) from the sky and concluded that there could not be any falling stones because there were no stones in the sky. Another example is that even after the proffering of much evidence, many leading scientists in the United States and elsewhere refused to believe that two bicycle makers from North Carolina had been able to successfully launch a heavier-than-air flying machine; it was considered an impossibility and, therefore, was obviously a hoax. What was considered impossible in one generation becomes the norm in the next.

Chapter Seven is a discussion of the subject most relevant to readers of this Journal: near-death experiences (NDEs). Beauregard discussed the now-famous and often-cited case of Pam Reynolds, possibly the most thoroughly documented case of a person who, following neurosurgery, reported veridical perception of idiosyncratic operating room conversation and medical instruments. The truly amazing
thing about Reynolds’s observations is that they occurred while she was fully anesthetized, eyes taped shut, ears completely plugged with speakers emitting sound, and monitored for brain activity showing none except the extremely low-level “idle” of full anesthesia. In veridical cases such as hers, the NDEr was able to accurately report things that they either saw or heard during a period of time in which, according to current scientific models of how brain/mind works, they could not possibly have been encoding new information; these are among the most difficult for committed skeptics to dismiss.

Reynolds’s surgery required a “standstill” during which both the brain and the heart are completely offline and the blood was drained from the brain. Only in this way was the neurosurgeon able to excise the aneurysm without causing a massive bleed in the brain. Although Beauregard reported that the veridical accounts occurred during the period while Reynolds had no heartbeat and no brain functioning (not to mention no blood), a closer reading of the account shows that the veridical aspects of her account occurred prior to this while she still had the heartbeat and brain functioning of a fully anesthetized patient. Only later, while undergoing the standstill aspect of the operation, did Reynolds report the deep, otherworldly aspect of her NDE. Nevertheless, in my opinion, Beauregard’s point remains valid, because there have been a number of veridical accounts during NDEs. He pointed out that research has shown that almost 5% of the population—one in every 20 people—reports having had an NDE (though not necessarily veridical perception)—an estimated 25 million people worldwide.

One of the strengths of this chapter is the excellent discussion of the numerous positive aftereffects NDErs report experiencing. It is among the best I recall reading and points out that skeptics have never been able to come close to answering the question of why people who, by definition, have experienced a brain insult and shouldn’t be able to encode anything, report vivid accounts—much less why, in the aftermath of NDEs, experiencers become better people in a number of different ways. NDEs are probably the most well-known phenomenon involving the mind transcending the brain and the rest of physical reality for a period of time.

In Chapter Eight, Beauregard discussed mystical experiences during which, people report, the usual boundaries between self and other suddenly no longer exist. For a brief but intense period of time people become aware of a different, expanded state of consciousness characterized by a sense of peace, bliss, joy, ecstasy, having been touched by the very ground of existence and having communed directly with
God. Mystical experiences can occur during or after a period of intense prayer or meditation, during an NDE, during a shamanic initiation, while using any of a number of mind-altering substances, or for no apparent reason during the usual course of life.

Also interesting is the effect that mystical experiences often have on the people who experience them. Experiencers often make major changes in their lives that they attribute to their experience and the knowledge gleaned from it. It is difficult to see how some type of brain dysfunction could not only make people better in a number of ways but also cause them to change the course of their lives.

In the concluding chapter, Beauregard asserted that there is no radical separation between the physical and the mental spheres; that they interact with each other at every turn. People’s thoughts, beliefs, and emotions have an enormous impact on what happens in their brains and bodies and often hold a key role in their health and wellbeing. Rather than just a by-product of the brain, people’s minds are much more powerful than was generally believed to be the case 30 years ago. We now know that meditation and neurofeedback can permanently and positively alter the physical structure of the brain. Under some conditions, consciousness is able to act at a distance, as it does during many psi activities. During NDEs and other mystical experiences, consciousness transcends the brain and the rest of physical reality for a period of time and enters into a spiritual realm of being.

What all this suggests is that consciousness itself has become a very important question and area of research. Although materialists assume that consciousness is the result of brain functions, the proponents of the emerging paradigm suggest that consciousness might actually be the most fundamental underlying component of the universe. Now liberated from the dogma of materialism, scientists and researchers are free to study this area of research.

Other than the aforementioned inaccuracy and overstatement regarding the Reynolds case and veridical perception in NDEs, I have a difficult time finding anything of substance to criticize about this book. I can think of a number of other phenomena Beauregard could have discussed including lucid dreams, shamanic journeys, and the use of mind-altering substances. But one must save something for the next book. Beauregard’s book is an excellent summation of the research that has taken place over the most recent 50 years that argues for a dualistic view of the universe.

It is notable that this book was written by an academic neuroscientist. There was a time not so long ago when espousing such believes
might have spelled the end of a career in academia. But that is no longer the case, and slowly but surely the materialistic worldview that has dominated science throughout the modern age is being challenged and dismantled from within. A new generation of researchers and scientists is coming of age who do not have a lifetime commitment to materialistic reductionism and who find some of these areas of research fascinating enough to seriously research them. It is truly a great time to be alive.