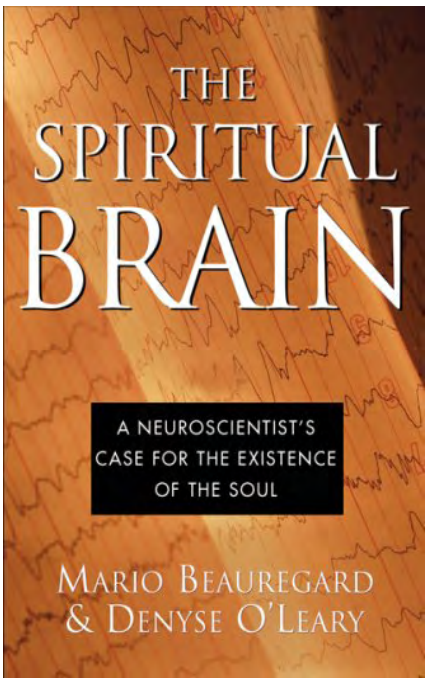

Mario Beauregard and Denyse O'Leary

The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul

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Reviewed by Ulrich Mohrhoff

In 2006, *Neuroscience Letters* (Vol. 405, Issue 3, 186–190 ↗) published a study by Mario Bauregard and Vincent Paquette titled "Neural correlates of a mystical experience in Carmelite nuns." In *The Spiritual Brain: A Neuroscientist's Case for the Existence of the Soul*, co-written with Toronto-based freelance journalist Denyse O'Leary, Beauregard discusses the significance of this study and aims to "provide a neuroscientific approach to understanding religious, spiritual, and mystical experiences" (RSMEs, for short). The book is lavishly furnished with valuable quotations from both champions and detractors of materialism and/or selectionism, and is itself a rich source of *bon mots*. One marvels, for example, at the cheerful audacity of people like V. S. Ramachandran or D. C. Dennett:

> Even though it's common knowledge these days, it never ceases to amaze me that all the richness of our mental life — our religious sentiments and even what each of us regards as his own intimate private self — is simply the activity of these little specks of jelly in your head, in your brain. There is nothing else. (V. S. Ramachandran, p. 57)[1]
>
> If you have the right sort of process and you have enough time, you can create big fancy things, even things with minds, out of processes which are individually stupid, mindless, simple. Just a whole lot of little mindless events occurring over billions of years can cre-

1 All page numbers refer to *The Spiritual Brain*.

> ate not just order, but design, not just design, but minds, eyes and brains. (D. C. Dennett, p. 2)

How stupid must we be as a species if, as Dennett proclaims, this is "the best idea anyone ever had"? Thank God — or should I say, thank the God circuit, factor, gene, meme, module, spot, or switch? — for the steadily growing number of critics of scientism and/or promissory materialism.

> Over the years, people keep proposing theories that go: "what everybody really wants is just. . ." (fill in the blank). Versions fashionable in their times have included: money, power, sex, death, freedom, happiness, Mother, the Good, pleasure, success, status, salvation, immortality, self realization, reinforcement, penises (in the case of women), larger penises (in the case of men), and so on. The track record of such theories has not been good; in retrospect they often look foolish or vulgar or both. Maybe it will turn out differently for "what everybody really wants is to maximize his relative contribution to the gene pool." But I don't know any reason to think that it will, and I sure wouldn't advise you to bet the farm. (Jerry Fodor, p. 216)

> Science is wonderful at explaining what science is wonderful at explaining, but beyond that it tends to look for its car keys where the light is good. (Jonah Goldberg, p. 57)

It looks, though, as if science is wonderful at explaining hardly anything. Compare (i) Edward O. Wilson's claim that "Knowledge of the world ultimately comes down to chemistry, biology, and — above all — physics" (p. 210) with (ii) the only incontrovertible fact about quantum mechanics, the general theoretical framework of contemporary physics. This is that quantum mechanics provides us with algorithms for calculating the probabilities of possible measurement outcomes on the basis of actual measurement outcomes. The rest is metaphysical embroidery, usually with strongly materialistic overtones. In actual fact, quantum mechanics tells us nothing whatever about the mechanisms or processes responsible for the statistical correlations between measurement outcomes.

Sometimes academic scientists are so convinced that providing support for materialism is the purpose of science that they end up violating conventional civil rights. Beauregard and O'Leary report what happened to Richard von Sternberg, a paleontologist who permitted a peer-reviewed article to be published in his journal, the Smithsonian's *Proceedings of the Biological Society of Washington*. The article suggested that the explosion of complex life forms that occurred quite suddenly about 525 million years ago might best be ex plained by intelligent design. Sternberg was not himself a supporter of ID, but he believed in putting all the options on the table. As a result,

> he was cross-examined about his political and religious beliefs by his employers, removed from his position, and denied access to collections of fossils he needed for his work as a paleontologist. (p. 26)

When the biological society made a statement disowning the article,

> he was counseled not to attend, because, in his words, "I was told that feelings were running so high they could not guarantee me that they could keep order." He appealed to the Office of Special Counsel, a federal body that protects the civil rights of government em-

> ployees, who found that he had had been subjected to retaliation and a misinformation campaign. A December 2006 Congressional report again vindicated Sternberg against many false allegations, accusing senior Smithsonian officials of having "harassed, discriminated against, and retaliated against" him. It became apparent that Sternberg had violated not a written law but an unwritten one. . . Sternberg was supposed to have known better than to publish such a paper *even though* it had passed peer review. (pp. 26–27, original emphasis)

As mathematician and ID theorist William Dembski has pointed out,

> Materialistic ideology has subverted the study of biological and cosmological origins so that the actual content of these sciences has become corrupted. The problem, therefore, is not merely that science is being used illegitimately to promote a materialistic worldview, but that this worldview is actively undermining scientific inquiry, leading to incorrect and unsupported conclusions about biological and cosmological origins. (p. 27)

Which in turn leads to a loss of credibility.

Faced with a growing body of evidence that defies materialistic explanation — the examples addressed in *The Spiritual Brain* are extrasensory perception and psychokinesis, near-death experiences (NDEs), and the placebo effect — some think that the solution is to advertise materialism more raucously than before; witness the recent spate of diatribes in print and on the Internet against the traditional opponents of materialism. Any publication that can help stem this tide must therefore be welcomed. I only wish that a more sober title had been chosen.[2] The authors are well aware that a neuroscientist *qua neuroscientist* is not in a position to make a case either for or against the existence of the "soul." There is, however, a case to be made against a mindless materialism (pun intended) or militant scientism, and this *The Spiritual Brain* does well.

The book is divided into ten chapters, has a helpful glossary, and is extensively annotated. Chapter One surveys the landscape. Here's a tidbit from the section on AI, which is worth sharing.

> One long-standing artificial intelligence goal has been a computer big enough and cleverly programmed enough to beat any human at chess. . . In 1952 AI pioneer Alan Turing wrote the first computer chess program. Only in 1980 was the Fredkin Prize established: $100,000 would be awarded to the programmers of the first computer to beat a reigning world chess champion. For over a decade and a half, the programmers toiled at their craft without collecting the prize. In 1996 Russian grand master Garry Kasparov announced "Machines are stupid by nature," and proceeded to beat IBM's Deep Blue. But, in 1997, Kasparov made headlines by losing to Deep Blue, and its three programmers shared the Fredkin Prize. According to many media sources, the age of the human was over and the age of the spiritual machine was about to begin. . .
>
> [T]he age of the spiritual machine went by so fast that practically everyone missed it. In 2003, Kasparov tied the much more powerful Deep Junior and another program, X3d-

2 I also wish the publisher's promotional material did not refer to a "World Media Net," which supposedly selected Beauregard to be among the "One Hundred Pioneers of the 21st [sic] Century." Who are the other ninety-nine? Ask Google. The only sites that refer to the World Media Net are those that either promote or critique *The Spiritual Brain* (except for ↱ and ↱).

> Fritz. This surprised many people because a powerful computer program is capable of considering many more strategies at once than a human being can. Generally, a chess-playing computer relies on its enormous parallel processing power to sort through a vast memory to evaluate millions of moves and choose the best one. Deep Junior powered through up to 3 million possible moves per second. Kasparov probably evaluated only two to three moves per second. . . Kasparov himself said: "Whatever [programmers] Shay and Arnir say about Junior's ability to run through millions of possible strategies, I, by contrast, might consider only a few strategies in anyone game. But you can bet your life they will be the very best ones." . . . It also emerged, in the aftermath, that the grand masters are getting better at playing computers, even as the computers are becoming more powerful. (pp. 21–22)

In other words, grand masters evolve faster than computers!

Chapters Two to Four present and critique popular theories about spiritual experience that are committed to a materialist worldview, such as claims by Matthew Alper and Dean Hamer to the effect that spirituality represents a genetically inherited trait, claims by Jeffrey Saver and John Rabin and others to the effect that there is a "God spot" or "God module" in the brain, which accounts for religious visions, feelings of ecstasy, and related phenomena, or claims by Michael Persinger that his "God helmet" induces spiritual or mystical experiences by electromagnetically stimulating the temporal lobes. Hamer, who is director of the Gene Structure and Regulation Unit at the U.S. National Cancer Institute, thinks of himself and other humans as "a bunch of chemical reactions running around in a bag." (p. 35) Whereas the popular media adore Hamer's thesis, the science media have been less kind.

> At one end of the spectrum, physicist and science writer Chet Raymo, who makes clear that he would like to believe Hamer's thesis, pronounces it "frail" and hopes others will defend it better. Science writer Carl Zimmer suggests that VMAT2 [Hamer's "God gene"] is best titled "A Gene That Accounts for Less Than One Percent of the Variance Found in Scores on Psychological Questionnaires Designed to Measure a Factor Called Self-Transcendence, Which Can Signify Everything from Belonging to the Green Party to Believing in ESP, According to One Unpublished, Unreplicated Study." At the far end of the negative spectrum, science writer John Horgan bluntly asks, "Given the track record of behavioral geneticists in general, and Dean Hamer in particular, why does anyone still take their claims seriously?" (p. 52)

Zimmer adds,

> The time for writing pop-sci books about the discovery of a "God gene" is *after* scientists publish their results in a peer-reviewed journal, *after* the results are independently replicated, and *after* any hypotheses about the adaptive value of the gene (or genes) have been tested. (p. 54, original emphases)

Probably the most interesting information to emerge from Persinger's experiments with his "God helmet" is that the sensitivity of Richard Dawkins' temporal lobes to magnetic stimulation is, in Persinger's words, "well below average": "In the case of Dr. Dawkins his temporal lobe sensitivity is much, much lower than most people we run, than the average person, much, much lower" (p. 80). What are we to conclude from this? Beauregard and O'Leary sagely refrain from telling.

Persinger reported that his contraption induced the experience of a sensed presence, and he speculated that such an experience "may be the fundamental source for phenomena attributed to visitations by gods, spirits, and other ephemeral phenomena." For the popular science media even this was not enough. According to *Wired*, Persinger's

> work practically constitutes a Grand Unified Theory of the Otherworldly: He believes cerebral fritzing is responsible for almost anything one might describe as paranormal — aliens, heavenly apparitions, past-life sensations, near-death experiences, awareness of the soul, you name it. (p. 84)

As the *Wired* article illustrates, the culture of popular science is one of unidirectional skepticism.

> It is skeptical of any idea that spirituality corresponds to something outside ourselves, but surprisingly gullible about any reductionist explanation for it. Not surprisingly, therefore, before any attempt at replication of Persinger's findings, the God helmet took on a life of its own. Pilgrim science journalists toiled up to Sudbury from distant lands to try it on. To some individuals, the story of the helmet seemed not only inevitable and true, but also ready for incorporation into popular culture and commercialization. (p. 91)

Thus Persinger's erstwhile colleague Todd Murphy now markets the Shakti Headset. Consisting of eight magnetic coils linked to a PC and attached to the head with a Velcro headband, it is yours for USD 225 or thereabouts. Moody apparently suffers from a confusion of categories, writing as he does that

> rebirth is an adaptation which contributed to our survival at some point in the history of our species. If this is so, then the specific mechanisms by which rebirth operates must be the same for everyone, because we all share a common evolutionary ancestry. (p. 92)

Phew! By the way, the story was updated by an understated item in *Nature News:*

> A research team at Uppsala University in Sweden, headed by Pehr Grannqvist, mirrored Persinger's experiment by testing eighty-nine undergraduate students, some of whom were exposed to the magnetic field and some of whom were not. Using Persinger's equipment, the Swedish researchers could not reproduce his key results. They attributed their findings to the fact that they "ensured that neither the participants nor the experimenters interacting with them had any idea who was being exposed to the magnetic fields, a 'double-blind' protocol.". . . Of the three subjects who reported strong spiritual experiences, two were members of the control group. Of the twenty-two who reported "subtle" experiences, eleven were members of the control group. (p. 95–96)

The experiments conducted by Persinger's team, on the other hand, cannot be considered double-blind, inasmuch as participants were frequently given an inkling of what was happening by being asked to fill in questionnaires designed to test their suggestibility to paranormal experiences *before* the trials were conducted.

Most of us bunches of chemicals tend to think of the mind as something that is distinct from the brain. We say, "I made up my mind to buy a bike," not "I made up my brain to buy a bike" (p. x). Yet some materialists feel that we should not use terminology that implies there is such a thing as a mind. As archaeologist Peter Watson suggested in *New Scientist*,

> Perhaps it is time that, in science at least, "imagination" and "introspection" are remodelled or, preferably, retired. Artists can have fun with them, but the serious business of the world has moved on. (p. 119)

Has it now? Chapter Five presents evidence that the mind and the brain are *not* identical. Thanks to the spread of advanced resuscitation techniques, as well as scientific studies conducted by Pim van Lommel, Sam Parnia, Peter Fenwick, and Bruce Greyson, there now exists a large data base on near death experiences (NOEs), and this clearly shows that it is not the case that "when the physiological activity of the brain ceases, as far as anyone can tell the person's consciousness goes out of existence," as Steven Pinker wrote in *Time*.

Chapter Six introduces research suggesting that the mind acts on the brain as a nonmaterial cause. The authors discuss several lines of evidence demonstrating that mental phenomena can alter brain activity, e.g., functional magnetic resonance imaging (fMRI) studies of emotional self-regulation, control of phobias through cognitive behavior therapy (CBT), and functional neuroimaging studies of the placebo effect — the first on *New Scientist*'s 2005 list of "13 Things That Don't Make Sense." (The authors report that after reviewing the scientific literature available in the 1970s, Herbert Benson concluded that this effect is much more powerful for many conditions than the conventional estimate of 30 percent, originally given by Henry K. Beecher in a 1955 study and used as a benchmark today. Benson reviewed many cases where the placebo effect was closer to 70 to 90 percent of the total treatment effect.)

To interpret the results of these studies, the authors propose a hypothesis about the relationship between mind activity and brain activity. This "psychoneural translation hypothesis" (PTH)

> posits that the mind (the psychological world, the first-person perspective) and the brain (which is part of the so-called "material" world, the third-person perspective) represent two epistemologically different domains that can interact because they are complementary aspects of the same transcendental reality. (p. 150)

Incidentally, if complementary aspects of the same transcendental reality can interact, then they are not just epistemologically but *ontologically* different. But if they *can* interact, then how do they *do* interact? To say, even metaphorically as they authors do, that the language of the mind gets translated into the language of the brain, doesn't begin to answer this question. The author's may, however, take comfort in the fact that explaining how the mind interacts with the brain is arguably harden than explaining how matter interacts with matter, and even this is not understood! As you will remember, all that physicists have is a bunch of algorithms for calculating correlations between measurement outcomes. They know nothing whatever about the mechanisms or processes responsible for the correlations.

Chapter Seven examines both popular and academic beliefs about mysticism. Here's a couple of decent definitions by, respectively, W. T. Stace and Evelyn Underhill:

> The most important, the central characteristic in which all fully developed mystical ex-

> periences agree, and which in the last analysis is definitive of them and serves to mark them off from other kinds of experiences, is that they involve the apprehension of an ultimate nonsensuous unity in all things, a oneness or a One to which neither the senses nor the reason can penetrate. In other words, it entirely transcends our sensory-intellectual consciousness. (p. 182)

> Mysticism. . . is not an opinion: it is not a philosophy. It has nothing in common with the pursuit of occult knowledge. On the one hand it is not merely the power of contemplating Eternity: on the other, it is not to be identified with any kind of religious queerness. It is the name of that organic process which involves the perfect consummation of the Love of God: the achievement here and now of the immortal heritage of man. Or, if you like it better — for this means exactly the same thing — it is the art of establishing his conscious relation with the Absolute. (p. 184)

The Spiritual Brain looks at the work of Sir Alister Hardy, who established the Religious Experience Research Unit (RERU) at Manchester College in Oxford in 1969. The aim of RERU was to collect and classify contemporary accounts of firsthand religious or transcendent experiences and to investigate the nature and function of these experiences. According to an eight-year survey of over three thousand firsthand accounts, the most frequent triggers of mystical experiences are prayer, meditation, natural beauty, and participation in religious worship.

Chapter Eight investigates how spiritual/mystical experiences affect those who have them. As contemporary psychological research indicates, spiritual/mystical experiences can result in profound life changes in goals, feelings, attitudes, and behaviors as well as improved health. Negative effects of "mystical" experiences have also been reported, but these do not really qualify according to the above definitions of mysticism.

There is a popular misconception that true mystics segregate themselves from the world because they have lost interest in its problems.

> Not so; the mystic wants to stop thinking, speaking, and acting out of layers of false consciousness, that is, to stop being one of the world's *problems* and start being the desired *change*, as Gandhi put it. The mystic believes that no other approach will really work in the long run. But when mystics are sure that they are acting from a true instinct, they often become quite active indeed. . . However, it is true that mystics tend to understand social action somewhat differently from many others. (p. 250, original emphases)

Indeed! Chapter Nine describes the research project Beauregard and Paquette conducted with Carmelite nuns using two of the most powerful functional brain imaging technologies available — fMRI and quantitative electroencephalography (QEEG) — to identify what happens in their brains when they recall or relive the mystical union with God, the ultimate goal of the contemplative techniques practiced by Christian mystics. An earlier pilot study by Andrew Newberg and his late colleague Eugene D'Aquili supported their dismissal of the pop-sci "pathology" model of RSMEs.

> We do not believe that genuine mystical experiences can be explained away as the results of epileptic hallucinations or, for that matter, as the product of other spontaneous hallucinatory states triggered by drugs, illness, physical exhaustion, emotional stress, or sensory deprivation. Hallucinations, no matter what their source, are simply not capable of

> providing the mind with an experience as convincing as that of mystical spirituality. . . In simplest terms, the brain seems to have the built-in ability to transcend the perception of an individual self. We have theorized that this talent for self-transcendence lies at the root of the religious urge. (p. 261)

The study by Beauregard and Paquette is summarized in the abstract to their article in *Neuroscience Letters*:

> The main goal of this functional magnetic resonance imaging (fMRI) study was to identify the neural correlates of a mystical experience. The brain activity of Carmelite nuns was measured while they were subjectively in a state of union with God. This state was associated with significant loci of activation in the right medial orbitofrontal cortex, right middle temporal cortex, right inferior and superior parietal lobules, right caudate, left medial prefrontal cortex, left anterior cingulate cortex, left inferior parietal lobule, left insula, left caudate, and left brainstem. Other loci of activation were seen in the extra-striate visual cortex. These results suggest that mystical experiences are mediated by several brain regions and systems.

Thus the experience of union with God is not solely associated with the temporal lobe, as Ramachandran suggested in an unpublished study. (Although this study received wide publicity, it was never more than an abstract for a poster session at the 1997 Society for Neuroscience meeting.) There is no "God spot" in the temporal lobe or anywhere else in the brain. (According to Beauregard, this is one of the reasons that the electromagnetic stimulation of the temporal lobe with Persinger's "God helmet" does not work.) Rather, the experience described as "union with God" is associated with

> a spatially extended neural circuit encompassing brain regions involved in attention, body representation, visual imagery, emotion (physiological and subjective aspects), and self-consciousness. These findings are more consistent with an actual experience than with a delusion. (p. 37)

In response to critics, Beauregard and O'Leary clarify that

> we have never entertained the idea of proving the existence of God! Our goals are decidedly more modest. The only thing that neuroscientists can really determine is whether current neuroscience provides useful information about mystical states and experiences. Specifically, we wanted to know two things: whether brain activity during mystical consciousness is localized in the temporal lobe, as some have argued, and whether mystical contemplation produces brain states not associated with ordinary consciousness. (p. 265)

A recent article in *The Economist* contended that Beauregard "is not really measuring a mystical experience at all — merely an intense emotional one. This is because the nuns are, so to speak, faking it." The article predicted that Beauregard will find this criticism hard to rebut.

> Actually, we would not find that particular accusation hard to rebut at all. In a neuroscientific study, a person who is "faking it" should generate a lot of beta waves (typical of strenuous conscious activity) and not many theta waves (typical of deep meditative states). It turns out that there are some things you just *can't* fake! (p. 265, original emphasis)

Chapter Ten concludes with these words:

> If we are to make significant breakthroughs with regard to our under standing of human mind and consciousness as well as the development of the spiritual potential of humanity, we need a new scientific frame of reference. Such a frame will recognize that dogmatic materialist scientism is not synonymous with science. A scientific frame of reference must bring together the inner and the outer, the subjective and the objective, the first person perspective and the third-person perspective. Mystical experience from various spiritual traditions indicates that the nature of mind, consciousness, and reality as well as the meaning of life can be apprehended through an intuitive, unitive, and experiential form of knowing. A scientific frame of reference must address the evidence for that. Such a frame work would greatly stimulate the scientific investigation of the neural, physiological, psychological, and social conditions favoring the occurrence of RSMEs as well as the effects of RSMEs and spiritual practices on health and psychological and social functioning.
>
> There is a trend in human evolution toward spiritualization of consciousness. The proposed new scientific frame of reference may accelerate our understanding of this process of spiritualization and significantly con tribute to the emergence of a planetary type of consciousness. The development of this type of consciousness is absolutely essential if humanity is to successfully solve the global crises that confront us (e.g., destruction of the biosphere, extremes of poverty and wealth, injustice and inequality, wars, nuclear arms, clashing political interests, opposing religious beliefs, etc.) and wisely create a future that benefits all humans and all forms of life on planet earth. (p. 295)

While I fully agree with the authors' assessment of mystical experience and the need for spiritualization, I doubt that there can be such a thing as a scientific frame of reference for the study of mystical experience, or else that such a frame of reference would be of much help for the spiritualization of consciousness. Being a collective human enterprise, science is as humans are, and humans fall into two broad categories (which of course is a gross oversimplification): those who've had a genuine mystical or spiritual experience and those who haven't. Beauregard went into neuroscience in part because of a series of mystical experiences he himself has had since his childhood.

> One of these experiences occurred twenty years ago while I was lying in bed. I was very weak at the time because I was suffering from a particularly severe form of what is now called chronic fatigue syndrome. The experience began with a sensation of heat and tingling in the spine and the chest areas. Suddenly, I merged with the infinitely loving Cosmic Intelligence (or Ultimate Reality) and became united with everything in the cosmos. This unitary state of being, which transcends the subject/object duality, was timeless and accompanied by intense bliss and ecstasy. In this state, I experienced the basic interconnectedness of all things in the cosmos, this infinite ocean of life. I also realized that everything arises from and is part of this Cosmic Intelligence. This experience transformed me psychologically and spiritually, and gave me the strength necessary to successfully recover from my disease. (p. 293)

I don't think it's possible to convince scientists of the authenticity of a genuine mystical or spiritual experience unless they themselves have had such an experience, and in that case it's unnecessary. I do not mean to belittle the importance of studying the neural correlates of mystical experiences, but the findings will inevitably be interpreted in the

light of personal experience or lack thereof. There is no way of being objective about mystical experiences.

> With all our knowledge, there still remains that one ever-elusive piece of the puzzle, that one mystery which looms tauntingly over all of the physical sciences, and that is the problem of God. This, more than anything, seems to be humankind's ultimate challenge, that one riddle which — should it ever be resolved — might possibly grant us that definitive picture for which we've so painstakingly been searching. (Matthew Alper, p. 43)

AntiMatters (http://anti-matters.org)

- an open-access journal addressing issues in science and the humanities from non-materialistic perspectives
- published quarterly by Sri Aurobindo International Centre of Education, Pondicherry, India.

Focus and Scope

Materialism, in one form or another, is still widely accepted as the overarching framework for discussing issues not only in science but also in the humanities. *AntiMatters* is dedicated to illuminating these issues from non-materialistic perspectives.

Materialism is by nature pluralistic. It assigns ultimate reality to a multitude (particles, spacetime points, monads, actual occasions, q-bits, etc.). It models reality "from the bottom up." Its principal explanatory concepts are composition and interaction, to which modern field theories have added the concept of instantiation (usually of physical properties by spacetime points).

AntiMatters encourages the exploration of ontologies that are essentially monistic, not because they aim to reduce reality to a single category such as matter or mind, but because they assign ultimate reality to an entity or principle that is intrinsically one. Such ontologies model reality "from the top down," using novel explanatory concepts such as differentiation, manifestation, emanation, or emergence (and probably others that nobody has thought of yet).

AntiMatters is for those who are uncomfortable with (or unconvinced of) materialism, or who favor a non-materialistic world view. Such persons are oftentimes unaware of how much of what is claimed to have been scientifically established is actually spurious. For their benefit, the Journal aims to critically examine the alleged scientific evidence for materialism. While authors are expected to respect and take account of all relevant empirical data, they should bear in mind that empirical data are inevitably theory-laden and paradigm-dependent, and that theories and paradigms, being to a considerable extent social constructions, are relative.

Science operates within an interpretative framework that formulates questions and interprets answers. This framework is itself not testable. *AntiMatters* wants to serve as a platform for the comparative study of alternative interpretative frameworks. The Journal emphasizes the following criteria for the evaluation of such frameworks:

(i) Consistency with all empirical data, not only the quantifiable ones but also those obtained through phenomenological methods, altered states of consciousness, and mystical or spiritual experience.

(ii) An appropriate ontological status for what we value most, such as happiness, self-fulfillment, excellence — the Platonic trinity of beauty, good, and truth.

The Journal wants to set high intellectual standards without sacrificing substance. Style is important, but more so is content. Positive thinking is as essential as clarity of exposition. Deconstruction for its own sake qualifies as little as religious dogma.

It is not the (primary) aim of *AntiMatters* to "convert" die-hard materialists. Instead, the Journal offers non-materialists the opportunity of a stimulating exchange of views.

Discussions of "anomalies," which are neglected or ignored by mainstream science, also fall within the scope of the Journal.

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