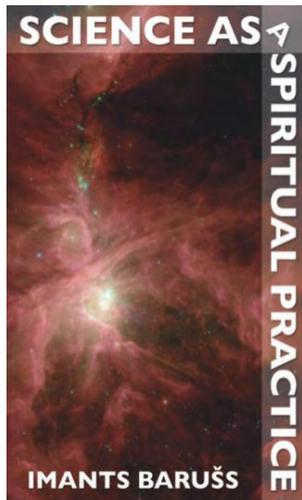


## BOOK REVIEW



Imants Barušs

*Science as a Spiritual Practice*

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The title of this book is not meant to suggest that science *per se* is, or can be viewed as, a spiritual practice. The question is, can “a spiritual practice be developed that would be suitable for scientists”? And the answer? *Science as a Spiritual Practice* concludes with the words: “this book is not an answer but a challenge. How can science be used as a spiritual practice?”

The author, Imants Barušs, is Professor of Psychology at King’s University College at The University of Western Ontario. To obviate the customary brickbats from his colleagues, the majority of whom believe that anything of the what-it’s-like sort, not to mention spiritual experience, is “in reality” (at any rate, as far as science is concerned) nothing but physicochemical goings-on in a brain, Barušs devotes the first part of his book to deconstructing materialism.

Materialism is dead. However, the bones of materialism continue to rattle along the corridors of academia. To say that materialism is dead is either an outrageous or banal remark depending upon one’s point of view. (p. 6)

According to materialism, matter is all there is. But what is matter?<sup>1</sup> Whereas quantum physics, the general theoretical framework of contemporary physics, does a good job at

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1 The most sensible definition of “matter” I’ve come across is that given by von Weizsäcker in *The Unity of Nature*, and this is perfectly consistent with a spiritual ontology: “Matter, which we can now define only as that which satisfies the laws of physics may be spirit insofar as . . . spirit conforms to the mental operations of distinguishing and objectifying.” (von Weizsäcker, 1980, p. 244)

disposing of the more naïve conceptions of matter, it is (or seems to be<sup>2</sup>) consistent with physicalism, “the idea that reality is entirely physical in nature.”

A critic could say that perhaps materialism is wrong, given that it depends upon simplistic schemata about the nature of matter, but that surely physicalism must be correct. After all, matter is still matter even if somewhat different in its behaviour from what we might have naively expected. Everything must be physical whatever the physical universe turns out to be like. The problem with that argument is that what the universe turns out to be like might stretch the notion of “physical” to the point of rendering it meaningless. (p. 12)

Either “everything” stands for “the *physical* universe” and the claim that “everything is physical whatever the *physical* universe turns out to be” is a tautology, or the claim that everything is physical defines “physical” as equivalent to “everything.” And the more a term denotes, the less it connotes.

It is not just that matter does not behave in a matter-like way, but there exist anomalous phenomena whose occurrence suggests that the universe contains a robust dose of consciousness that promises to strain any physicalist theorizing. (p. 12)

The anomalous phenomena discussed by Barušs can certainly help dispel the illusion of knowledge which, according to Daniel Boorstin, is the greatest obstacle to discovery. But why not mention the reality of the what-it’s-like sort of things, or the fact that things seem to exist not only “by themselves” but also *for* selves or subjects? If they be appearances, whence the appearances qua appearances? These mysteries, too, suggest that the universe contains a robust dose of consciousness.

Before addressing the question of whether science can be a spiritual practice, one has to be clear about what is meant by “science.”

There is a power structure in science, held in place through the admission of students to graduate programs, the approval of their research projects and theses, the hiring and promotion of university faculty, the approval of research grants, and the review and acceptance of academic papers and books for publication. The power of academics and scientists permits them to exclude from the scientific community half-baked fantasies about reality. The problem is that materialism is so entrenched that any disapproval of it can also be censored. . . And thus, prevailing doctrines, such as that of materialism, can be sustained despite the evidence against them. . . Science in its oppressive form has sometimes been called “scientism” and is not authentic science at all. For scientism, a materialist world view is dominant and governs what interpretations of the world are to be acceptable. (p. 15)

The name of the game is not to understand (consciousness, intentionality, the meaning of quantum mechanics, whatever) but to understand in a way that is consistent with a

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2 The mathematical formalism of quantum physics is a bunch of algorithms for calculating the probabilities of possible measurement outcomes on the basis of actual outcomes. Considering that the general theoretical framework of contemporary physics tells us nothing whatever about the mechanisms or processes responsible for the statistical correlations between measurement outcomes, saying that everything is physical is certainly a bit of a stretch.

materialistic world view. Which is precisely why those hard-to-understand things in parentheses are hard to understand.

For Barušs, science is “an open-ended exploration of nature and not a foreclosure of lines of investigation that tread upon prevailing opinions.”

For authentic science, world views are shaped by the actual evidence that emerges in the course of examining whatever subject matter is of interest using whatever methods seem most appropriate. (p. 15)

Fair enough, except that things are not that simple. Evidence isn't evidence until it is interpreted as evidence for or against something. Science operates within an interpretative framework that formulates questions and interprets answers. While this framework is itself not testable, some frameworks ask better questions than others, in the sense that they obtain more sensible answers than others. Only in this qualified sense can a world view be shaped by evidence.

And what is meant by “spiritual practice”? Barušs uses this phrase “to denote any activity deliberately undertaken by a person for the purpose of seeking something more existentially meaningful than ordinary everyday existence.”

Those who believe that there is more to reality than meets the senses are thought to lack critical judgment — by those who believe of themselves that they don't. Barušs had students check out some correlations. Their findings make interesting reading. One was that transcendent beliefs correlate positively with a personality trait dubbed “understanding” (being more curious about the world, more reflective, having a more rational approach). Another was that both lower and higher IQ scores correlate positively with more transcendent beliefs, whereas midrange scores correlate positively with more materialist beliefs. This parabolic pattern suggests that there are different reasons for transcendent beliefs. Those with lower IQ could be uncritically reflecting transcendent ideas that are prevalent in popular culture, whereas those with higher IQ could have concluded that transcendence is more sensible than materialism.

If materialism is false, then what is true? Although answering this question does not fall within the purview of a monograph on the feasibility of pursuing science as a spiritual practice, Barušs nevertheless hazards “at least the beginning of a line of development for a possible theory.” For starters, he asserts that the quantum-mechanical state vector associated with a system of fundamental particles gives us “the probabilities of a number of possible impressions that could be created on an observer.” What a state vector actually does is correlate measurement outcomes (rather than “impressions on an observer”), as explained in note 2.

Next we are told that upon observation, “the state vector collapses so that those possibilities become a single physical event.” Even if Barušs meant that *one* of several possible events becomes an actual event, this would be wrong. A state vector is a mathematical machine with three inputs and one output. The output consists of the probabilities of a set of possible measurement outcomes. The input consists of (i) a measurement context that *defines* the set of possible outcomes, (ii) the time at which the measurement is

made, and (iii) the actual outcome of at least one other (usually, but not necessarily, earlier) measurement. A state vector's functional dependence on time is not the time-dependence of something that persists and can change. It is the dependence of a probability algorithm on the time of the measurement to the possible outcomes of which it serves to assign probabilities. Needless to say, something that cannot change, cannot collapse.

Barušs gestures at a well-worn objection to a profound insight due to Niels Bohr, who initiated the development of quantum physics and massively contributed to the new theory during its first two decades. According to Bohr, it is the experimental setup that makes properties available for attribution to the system under investigation. Without a *macroscopic* context, there are no properties that can be attributed to a *microscopic* system. In other words, the microscopic *supervenes* on the macroscopic: the microworld is what it is because of what happens or is the case in the macroworld, rather than the other way around, as we are wont to think. The objection echoed by Barušs is that Bohr's interpretation

is incomplete given that the fundamental particles are supposed to be the constituent parts of people-sized things and hence should form the basis for an explanation of the experimental processes themselves, which otherwise remain inadequately explained. (pp. 41–42)

It is true that the experimental processes themselves remain inadequately explained — if one tries to explain them in materialistic terms, as one does if one thinks of microscopic objects as constituent parts of macroscopic ones.

If the quantum-mechanical correlation laws teach us anything, it is that a twenty-five century old paradigm has passed its expiry date: it is no longer appropriate to ask, what are the ultimate building blocks and how do they interact and combine? The right questions proceed from the assumption that what ultimately exists is a single, intrinsically undifferentiated (and hence ineffable) Being. How does this manifest itself? How does it come to constitute an apparent multitude of objects? How does it come to constitute an apparent multitude of subjects? How does it differentiate into subjects and objects? If one turns to quantum mechanics with questions of this sort, one is surprised by the simplicity and straightness of the answers one obtains (Mohrhoff, 2001, 2004, 2005, 2006, 2007a–d).

Subsequently the reader is led down a trail of red herrings from the postulated “existence of hidden variables that determine what actually occurs during an observation” to their interpretation as “volitional directives emerging from a transcendent aspect of reality.” My advice is to skip these half-baked fantasies and proceed to the outline of Robert Assagioli's theory of personality, which goes by the name of “psychosynthesis.”

In psychosynthesis, the psyche has various components. One such component is the awareness of our ongoing experience. At the centre of this awareness is the conscious self, the one for whom the contents of consciousness occur. There is a preconscious, consisting of material that is readily available to our awareness should we direct our attention to it. There is a subconscious, not readily accessible to our ordinary awareness,

whose composition includes biological drives, results of past learning, buried memories, and psychopathological material. And, what is particularly relevant to our discussion, there is a superconscious, consisting of a part of ourselves that is wiser and more emotionally mature than we ordinarily are, from which intuition, moral imperatives, genius, and spiritual insights can originate. As with the subconscious, the superconscious is not immediately accessible to our ongoing stream of consciousness, although it can sometimes manifest itself, such as during mystical experiences. At the apex of the superconscious is the higher self, which is our self, in the sense that the higher self can potentially form the basis of our self-identification. The entire psyche is porous so that influences from outside a person can impact on a person's psyche without the mediation of the senses. (pp. 43–44)

We seem to be back on track.

Part II addresses the possibility of inner knowledge, defined by Barušs as “knowledge that is not evidently the result of physical sensory perception or ordinary reasoning.” Whereas Barušs addresses claims to the effect that there is no such thing as inner knowledge, it may turn out that inner knowledge is, in fact, the *only* knowledge: even knowledge that is *apparently* the result of physical sensory perception or ordinary reasoning may contain a robust dose of inner knowledge. As Sri Aurobindo<sup>3</sup> (1972, pp. 540–541) wrote,

Consciousness is one in the subject and the object, and in the contact of existence with existence this identity brings to light or awakens in the self the dormant knowledge of this other self outside it. But while this pre-existent knowledge comes up in the surface mind as a knowledge acquired, it arises in the subliminal as a thing seen, caught from within, remembered as it were, or, when it is fully intuitive, self-evident to the inner awareness; or it is taken in from the object contacted but with an immediate response as to something intimately recognisable. In the surface consciousness knowledge represents itself as a truth seen from outside, thrown on us from the object, or as a response to its touch on the sense, a perceptive reproduction of its objective actuality. Our surface mind is obliged to give to itself this account of its knowledge, because the wall between itself and the outside world is pierced by the gates of sense and it can catch through these gates the surface of outward objects though not what is within them, but there is no such ready-made opening between itself and its own inner being: since it is unable to see what is within its deeper self or observe the process of the knowledge coming from within, it has no choice but to accept what it does see, the external object, as the cause of its knowledge.

Thus all our mental knowing of things represents itself to us as objective, a truth imposed on us from outside; our knowledge is a reflection or responsive construction reproducing in us a figure or picture or a mental scheme of something that is not in our own being. In fact, it is a hidden deeper response to the contact, a response coming from within that throws up from there an inner knowledge of the object, the object being itself part of our

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3 Sri Aurobindo is a rare example of an accomplished yogi who received his education in the West, where he imbibed the essence of the modern scientific attitude. Through an original synthesis of yogic methods, he developed psychic, intuitive and spiritual faculties and realizations of the highest order without any loss of intellectual clarity and capacity for systematic observation.

larger self; but owing to the double veil, the veil between our inner self and our ignorant surface self and the veil between that surface self and the object contacted, it is only an imperfect figure or representation of the inner knowledge that is formed on the surface. This affiliation, this concealed method of our knowledge, obscure and non-evident to our present mentality, becomes clear and evident when the subliminal inner being breaks its boundaries of individuality and, carrying our surface mind with it, enters into the cosmic consciousness.

Barušs is well aware that “[w]hatever rigorously logical structure our thinking has is a synthetic product of conscious and nonconscious processes.” He discusses a number of instances of successful nonconscious processing, without failing to mention the misses. His first candidate case is a hunch that turned out to be right on the money. We probably have all had such hunches, as well as hunches that turned out to be dead wrong. Where do they come from, and how is one to know which is right and which is wrong? Cognitive science offers some interesting studies but little in the way of illumination.

While being appropriately skeptical of the veracity and/or value of most channeled material, Barušs nevertheless acknowledges the danger

that there may exist entities whose presence we cannot apprehend through our physical senses but which nonetheless could intrude on us. . . It is possible that the source of channelled material really is from somewhere else. And, if that is the case, then whoever or whatever is the source of that information may be less intelligent than we are. Furthermore, its motives may not be in our interests. And it may not be willing to disengage itself once it has latched on to us. (pp. 59–60)

Quite so. As Sri Aurobindo (1972, pp. 775–776) wrote,

If we scrutinise the intimations of supraphysical world-realities which we receive in our inner experience and compare with it the account of such intimations that has continued to come down to us from the beginnings of human knowledge, and if we attempt an interpretation and a summarised order, we shall find that what this inner experience most intimately conveys to us is the existence and action upon us of larger planes of being and consciousness than the purely material plane, with its restricted existence and action, of which we are aware in our narrow terrestrial formula. These domains of larger being are not altogether remote and separate from our own being and consciousness; for, though they subsist in themselves and have their own play and process and formulations of existence and experience, yet at the same time they penetrate and envelop the physical plane with their invisible presence and influences, and their powers seem to be here in the material world itself behind its action and objects.

. . . the experiences there are organised as they are in our own world, but on a different plan, with a different process and law of action and in a substance which belongs to a supraphysical Nature. This organization includes, as on our earth, the existence of beings who have or take forms, manifest themselves or are naturally manifested in an embodying substance, but a substance other than ours, a subtle substance tangible only to subtle sense, a supraphysical form-matter. These worlds and beings may have nothing to do with ourselves and our life, they may exercise no action upon us; but often also they enter into secret communication with earth-existence, obey or embody and are the intermediaries and instruments of the cosmic powers and influences of which we have a subjective experience, or themselves act by their own initiation upon the terrestrial

world's life and motives and happenings. It is possible to receive help or guidance or harm or misguidance from these beings; it is possible even to become subject to their influence, to be possessed by their invasion or domination, to be instrumentalised by them for their good or evil purpose.

At one point Barušs concludes that inner knowledge cannot be compelled: it “appears to emerge into the experiential stream spontaneously.” This is an over-generalization from a too narrow range of data. Needless to say, over-generalizations are extremely common in almost any field of inquiry. What Barušs says is true for those who are as yet unable to consult or enter their subliminal being at will.

At another point Barušs muses, “I could have become a ‘puppet of god’ with the ironic consequence of curtailing my own process of self-transformation.”

If anyone has generalized from a sufficiently broad range of experiential data, it is Sri Aurobindo, and for him being a “puppet of god” is the ultimate freedom, for it means being governed by nothing but one's highest, deepest, truest self. To the author's resolve of strengthening his will so as to be able to act on the basis of his “own understanding,” Sri Aurobindo would have replied that ultimately there is only one will, the will of our highest, deepest, and truest self, and that to strengthen one's will is to progressively identify one's “own” will with that, by the seemingly paradoxical process of surrendering it to that. Otherwise free will remains a delusion. (The illusory nature of our apparent free will is one of the few points on which neuro-psychological investigation, philosophic analysis, phenomenological introspection, and spiritual experience all seem to agree.) In the words of Sri Aurobindo (1972, p. 212),

Existence and consciousness and force being one, we can only have some real power over so much of our existence as we are identified with by self-awareness; the rest must be governed by its own consciousness which is subliminal to our surface mind and life and body. And yet, the two being one movement and not two separate movements, the larger and more potent part of ourselves must govern and determine in the mass the smaller and less powerful; therefore we are governed by the subconscious and subliminal even in our conscious existence and in our very self-mastery and self-direction we are only instruments of what seems to us the Inconscient within us.

The 64,000 Dollar question is, how can we distinguish the promptings or intimations of our highest, deepest, truest self from other suggestions? The answer depends on one's spiritual development. Initially, and for a long time, all that matters is the sincerity of one's surrender. If this is mixed with lesser motives, we are likely to be attracted by false lights.

What Barušs himself understands by becoming a “puppet of god” is that “a person relinquishes control of her own life in favour of guidance.”

Inauthenticity is characterized by compliance with the expectations of others; in the case of inner knowledge, internal others. Authenticity is the effort to act on the basis of one's own understanding. Hence my continual emphasis on the importance of understanding as a fundamental feature of the psyche. And my emphasis on the exercise of the will. (p. 87)

True guidance, which has nothing to do with anyone's expectations, is essential. It is implicit — along with the false lights — in what we tend to think of as our “own” understanding and our “own” will. Barušs is of course right that “for constructive self-transformation to take place. . . a person needs to engage all of her resources, including her capacity for rational thinking, creativity, and self-determination.” (Sri Aurobindo once remarked that the first thing that people entering the path of yoga tend to surrender, is their common sense.) But again, ultimately there is only one self which has the capacity for self-determination, and once our “own” resources are sufficiently developed, further development is proportional to one's capacity for self-giving — to out highest, deepest, and truest self.

Barušs is however right in saying that “it may not be appropriate to have answers to metaphysical questions at a particular stage of self-transformation because the availability of such answers can undermine the process of self-transformation itself,” and that “inner knowledge sometimes functions precisely by releasing one's own interpretation of reality.” In the words of Sri Aurobindo (1999),

The integral Yoga aims at a knowledge not merely of some fundamental principle, but a knowing, a gnosis which will apply itself to and cover all life and the world action, and in this search for knowledge we enter on the way and are accompanied for many miles upon it by the mind's unregenerated activities before these are purified and transformed by a greater light: we carry with us a number of intellectual beliefs and ideas which are by no means all of them correct and perfect and a host of new ideas and suggestions meet us afterwards demanding our credence which it would be fatal to seize on and always cling to in the shape in which they come without regard to their possible error, limitation or imperfection. And indeed at one stage in the Yoga it becomes necessary to refuse to accept as definite and final any kind of intellectual idea or opinion whatever in its intellectual form and to hold it in a questioning suspension until it is given its right place and luminous shape of truth in a spiritual experience enlightened by supramental knowledge. (p. 772)

The human intellect is too much afraid of error precisely because it is too much attached to a premature sense of certitude and a too hasty eagerness for positive finality in what it seems to seize of knowledge. As our self-experience increases, we shall find that our errors even were necessary movements, brought with them and left their element or suggestion of truth and helped towards discovery or supported a necessary effort and that the certitudes we have now to abandon had yet their temporary validity in the progress of our knowledge. The intellect cannot be a sufficient guide in the search for spiritual truth and realisation and yet it has to be utilised in the integral movement of our nature. And while, therefore, we have to reject paralysing doubt or mere intellectual scepticism, the seeking intelligence has to be trained to admit a certain large questioning, an intellectual rectitude not satisfied with half-truths, mixtures of error or approximations and, most positive and helpful, a perfect readiness always to move forward from truths already held and accepted to the greater corrective, completing or transcending truths which at first it was unable or, it may be, disinclined to envisage. (p. 777)

It bears repetition: “we shall find that our errors even were necessary movements, brought with them and left their element or suggestion of truth and helped towards discovery or supported a necessary effort and that the certitudes we have now to aban-

don had yet their temporary validity in the progress of our knowledge.” Hence the sincerity of one’s surrender has to be complemented by faith.

An intriguing tidbit:

[A person] known for having had anomalous experiences, participated in a study in which the contents of his dreams the night before viewing an audio-visual slide show were compared to the contents of his dreams on the night after the show with regard to the degree to which the dreams matched the show’s contents. This protocol was repeated for a total of 8 different showings. It was found that on 7 occasions, the preceding nights’ dreams better matched the shows’ contents than the following nights’ dreams. (p. 86)

Part III of *Science as a Spiritual Practice* deals with transcendent states of consciousness, whose noetic quality

poses perhaps the greatest challenge to conventional science, in that inner knowledge about the nature of reality apparently becomes available to the person for whom transcendent states of sufficient profundity have occurred. That knowledge undermines the materialist world view characteristic of scientism. And yet, the controversial thesis of this part of the book is that *science itself can be used as a spiritual practice for seeking transcendent states of consciousness.* (p. 93, original emphasis)

The American philosopher-mathematician Franklin Merrell-Wolff is a case in point; he provides the bulk of the material presented and discussed in this part. Like many a mystic before him, Merrell-Wolff appears to have experienced a fundamental shift in consciousness away from individual identity toward a ground of consciousness that gives rise to the manifested world. He felt that he knew the objects of the world through having become one with them. This knowledge by identity he called “introception.”

Having “deliberately passed up and down” between the ordinary and transcendent domains “trying to maintain continuity of consciousness,” Merrell-Wolff concluded that “it could not be done.” He was able to have “both types of consciousness running concurrently,” but without a discernible relationship. This difficulty of the mind was well known to Sri Aurobindo and the reason why he worked so hard to “bring down” what he called the “supermind,” for only this original creative awareness can bridge the gulf between world experience and what Merrell-Wolff referred to as “the ground of being.”

Another significant development was the occurrence of thoughts of great abstraction and universality, beyond which there was an “impenetrable Darkness” that Merrell-Wolff knew to be the “essence of Light.” Knowledge changed from being a means to find reality to being a means to express the reality found. This is a characteristic result of entering what Sri Aurobindo has called the “higher mind,” the first of a series of increasingly illumined states of consciousness.<sup>4</sup>

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4 At a later stage, Merrell-Wolff could enter a state of consciousness in which there is an equilibrium between all dualities, including the duality between ordinary consciousness and transcendent consciousness. Sri Aurobindo would have described this as an opening to the overmind, the highest rung of mental consciousness bordering on the infinities of the supermind.

Merrell-Wolff experienced an intense joy whose nature he described as a “force-field” giving a “glow to life” — the Vedantic *ānanda*. There was serenity in the face of environmental disturbances — the Vedantic *samatā*. And there was a deep interest in seeing good brought about in the world — a characteristic trait of the evolving psychic complement of life evolving in a material universe.

Associated with that force-field of joy was the presence of what Merrell-Wolff called the “Current.” Others have reported feelings of joy in his presence. Doroethy Leonard, his granddaughter, reports that during a public lecture given by him she entered a peaceful and profoundly still state, and found it difficult to contain her joy. When she drew his attention to her state, he told her that she had been in the current. Commenting on a particular verse<sup>5</sup> of the Kena Upanishad, one of the core Vedantic scriptures, Sri Aurobindo (1981, p. 181) explained,

And what will be the result of knowing and possessing Brahman<sup>6</sup> as the supreme Ananda? It is that towards the knower and possessor of the Brahman is directed the desire of all creatures. In other words, he becomes a centre of the divine Delight shedding it on all the world and attracting all to it as to a fountain of joy and love and self-fulfilment in the universe.

Merrell-Wolff found that ontological fullness was present in a thought or concept to the extent that sensory accessibility were missing: ontologically substantiality is inversely proportional to material ponderability. The “thicker” or “deeper” an idea is introceptively, the “thinner” or “shallower” it is perceptually and conceptually. Beyond verbal and symbolic formulation lie the depths of “disembodied Meaning.” This, for Merrell-Wolff, was the immaterial substantial substrate underlying all of experience, and this immaterial substrate, in turn, was consciousness.

All of this taken together comes close to the Vedantic conception of Brahman as *sachchidānanda*: the transcendent ground of being relates to manifest being as an all-constituting substance (*sat*), an all-containing consciousness (*chit*), and an infinite delight (*ānanda*) or meaning (or quality, or value) that manifests itself in finite forms.

But what is one to make of Merrell-Wolff’s “mathematical yoga”? After all, it was not through mathematics that he arrived at the “complete identification of the self with the supersensible and substantial world.” He arrived at it by metaphorically turning his consciousness back toward its source. His yoga involved not only doing mathematics with a high degree of abstraction but philosophy and normal yogic processes as well. His view that aspirants in the West could effect a transition to transcendence by moving along a theoretic continuum that starts from science and mathematics, therefore needs to be taken with a grain of salt. Whereas the austerity required to do mathematics can be an effective preparation — as can any other activity requiring sustained concentration — concentration becomes spiritually effective only if it is aimed at a spiritual target. When

5 The name of That is “That Delight”; as That Delight one should follow after It. He who so knows That, towards him verily all existences yearn. — Kena Upanishad IV:6.

6 The transcendent ground of being in Vedantic terminology.

asked for the keynote leading to his success, Merrell-Wolff's response was that "it might've been the tendency to drive toward the root. . . that from which all comes."

How did Merrell-Wolff come to think of mathematics as "that portion of ultimate truth which descended from the upper hemisphere. . . with minimum distortion and thus become the Ariadne thread by which we may ascend again, most directly, most freely"? It is no secret that success in mathematics hinges on a rather mysterious feeling for beauty and rightness. There is a mathematical intuition that connects the successful mathematician with a higher plane of consciousness, above the seeking and constructing intellect. But much the same can be said for other creative activities. There is, for instance, a poetic intuition and a musical intuition that connects the successful poet or musician with *their* "upper hemispheres." The "minimum distortion" claim holds, but only in the sense that the correctness of a mathematical intuition can be rationally confirmed, whereas the inevitability that characterizes the perfect poem or musical composition, descending with the same minimum distortion, can only be confirmed by another intuition.

Merrell-Wolff held that concepts that are more abstract, such as mathematical constructions, are closer to the real than concepts that have concrete referents. One could argue that, on the contrary, a mathematical construction is *farther* from the real than the inevitable poem or musical composition *because* it can be rationally confirmed, whereas the inevitability of a perfect poem or composition can only be confirmed by another intuition.

As Merrell-Wolff concedes, the "mathematical path" cannot lead to uniting a person with the transcendent unless there is a change of attitude from "self-withholding" to "self-giving."

Through proper practice of mathematics and philosophy, one can reach the door to the transcendent but cannot force it open. *The transcendent is not compelled by our actions within the dualistic realm of consciousness but is itself the causal agent.* However, one can solicit the transcendent by a "complete sacrifice of everything that [one] is and has." (pp. 109–110, original emphasis)

This is the nub of the matter and true of every spiritual path, not only the mathematical variety. In fact, it's what makes a path spiritual. Merrell-Wolff held that it is necessary to sacrifice everything that one is in order to relinquish one's hold on the objective surface of consciousness. Barušs is undoubtedly right in interpreting such sacrifice as an attitudinal shift, which by itself need not have any behavioral implications (you may keep your job). It is also true, as Barušs writes, "that, having made the sacrifice, everything beneficial is returned with the difference that one is now a steward rather than owner of private possessions".<sup>7</sup> Who, then, is the real owner, and who the recipient of the sacrifice?

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<sup>7</sup> In the words of the Isha Upanishad (verse 1), "All this is for habitation by the Lord, whatsoever is individual universe of movement in the universal motion. *By that renounced thou shouldst enjoy.*" It seems impossible to state the secret of true enjoyment more succinctly.

In the West, the tendency is to think of ultimate reality as having an impersonal rather than a personal character. Barušs submits that “there could also be a personal aspect to ultimate reality.” According to Merrell-Wolff, our being is interpenetrated by an underlying divinity, which “is found to be quite the most intimate of all things.” The most intimate of all things is an interpersonal relationship.

All elements of the Indian triple path, *trimārga*, are thus in place: the yoga of knowledge, *jñāna yoga*, which uses the intellect as a lever to reach transcendence, the yoga of love or devotion, *bhakti yoga*, which uses the emotions as its lever, and the yoga of works, *karma yoga*, which uses *any activity whatsoever*, provided that it is done as a sacrifice to the ultimate reality however conceived. Merrell-Wolff understood the necessity of combining the three paths. By itself, liberation of the mind does not lead to liberation of the will or the feelings. Whereas the fruit of the yoga of knowledge is a liberated mind, that of the yoga of devotion is liberation of the feelings, and that of the yoga of works is liberation of the will.

In the words of Barušs, Merrell-Wolff “has maintained that there are continua, specific to the East and the West, along which an aspirant can move from the ‘differentiated’ relative domain to an ‘indeterminate’ transcendent domain.” As a matter of fact, there are several such continua in the East (e.g., the paths of knowledge, devotion, and works), and each arguably has its counterpart in the West. The pertinent difference between the East (specifically India) and the West is that the former has for a significant period of time emphasized the spiritual over the material (and thus lost its grip on matter), whereas the latter has for a significant period of time emphasized the material over the spiritual (and thus lost its grip on the spirit), which is why so many spiritual aspirants from the West have turned to the East for guidance.

The author’s warning against becoming “inauthentic” by following a path that is at odds with one’s nature must be heeded. Nowhere is this warning stated more clearly than in the Bhagavad Gita (3:35):

Better is one’s own law of works, *svadharma*, though in itself faulty, than an alien law well wrought out; death in one’s own law of being is better, perilous is it to follow an alien law.

But a native of the West does not become inauthentic by following a path that was hewn in the East, any more than a native of the East becomes inauthentic by following a path that was hewn in the West. Rather, she becomes inauthentic if she does not follow her “own law of works,” *wherever* this may lead.

It is true that the scientific approach to the world developed in the West can be exploited for the purposes of spiritual aspiration, as was stressed by Merrell-Wolff. But it is also trivial, inasmuch as any activity whatsoever can be so exploited. As Sri Aurobindo put it, *all life is* (or can become) *yoga*. Science can be practiced as a basis for spiritual development — provided that this is in keeping with the practitioner’s *svadharma*.

Vivekananda, pointing out that the unity of all religions must necessarily express itself by an increasing richness of variety in its forms, said once that the perfect state of that essential unity would come when each man had his own religion, when not bound by sect

or traditional form he followed the free self-adaptation of his nature in its relations with the Supreme. So also one may say that the perfection of the integral Yoga will come when each man is able to follow his own path of Yoga, pursuing the development of his own nature in its upsurging towards that which transcends the nature. For freedom is the final law and the last consummation. (Sri Aurobindo, 1999, p. 57)

## References

- Mohrhoff, U (2001). Beyond the cookie cutter paradigm. In Cornelissen, M (Ed.), *Consciousness and its Transformation* (pp. 333–345). Pondicherry: Sri Aurobindo International Centre of Education. ↗
- Mohrhoff, U (2004). Psychology all the way down. Presented at the *National Conference on Indian Psychology, Yoga, and Consciousness*, Pondicherry, December 10–13, 2004. ↗
- Mohrhoff, U (2005). The Pondicherry interpretation of quantum mechanics: An overview, *PRAMANA-Journal of Physics* 64 (2), 171–185. ↗
- Mohrhoff, U (2006). Is the end in sight for theoretical pseudophysics? In Krasnoholovets, V, and Columbus, F (Eds.), *New Topics in Quantum Physics Research*. New York: Nova Science Publishers. ↗
- Mohrhoff, U (2007a). Particles, consciousness, volition: a Vedantic vision. *AntiMatters* 1 (1), 23–53. ↗
- Mohrhoff, U (2007b). The quantum world, the mind, and the cookie cutter paradigm. *AntiMatters* 1 (1), 55–90. ↗
- Mohrhoff, U (2007c). Inside the Spirit Matrix: A contextualization of contemporary physics. Presented at *Approaches to Mind Sciences Emanating from Indian Culture*, conference organized by the Department of Psychology, University of Delhi, January 27–29, 2007. PHILICA.COM Article number 82. ↗
- Mohrhoff, U (2007d). The physics of Sachchidananda. Presented at *The Collective Yoga of Man: A World in Process*, conference held at Auroville, India, January 12–14, 2007. PHILICA.COM Article number 73. ↗
- Sri Aurobindo (1972). *The Life Divine*. Pondicherry: Sri Aurobindo Ashram.
- Sri Aurobindo (1981). *The Upanishads: Texts, Translations, and Commentaries*. Pondicherry: Sri Aurobindo Ashram.
- Sri Aurobindo (1999). *The Synthesis of Yoga*. Pondicherry: Sri Aurobindo Ashram.
- von Weizsäcker, C F (1980). *The Unity of Nature*. New York: Farrar, Straus, Giroux.

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#### **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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