# NATURALIZED SACREDNESS? A REALIST, PANENTHEIST, AND PERENNIALIST ALTERNATIVE TO KAUFFMAN'S CONSTRUCTIVISM

by Itay Shani

Abstract. In his recent book Reinventing the Sacred, renowned biologist and systems theorist Stuart Kauffman offers an avenue for the revival of the sacred and for reconciling sacredness with a robust scientific outlook. According to Kauffman, God is a human cultural invention, and he urges us to reinvent the sacred as the ceaseless creativity in nature. I argue that Kauffman's proposal suffers from a major shortcoming, namely, being at odds with the nature, and content, of authentic experiences of the sacred, experiences which point invariably in the direction of a reality which transcends human imagination and capacity for cultural innovation. Correspondingly, I point in the direction of an alternative approach to the revival of the sacred rooted in what I call the path of direct spiritual awareness. I argue that, while being in better accord with the phenomenology of religious experience, this realist alternative to Kauffman's constructivism also avoids the unpleasant symptoms which often accompany traditional theism, namely, dogmatism, irrationalism, and incompatibility with a scientifically minded metaphysics.

Keywords: complexity; direct spiritual awareness; evolution; Stuart Kauffman; naturalism; panentheism; perennial philosophy; sacred; spirituality

"Where would such an idea, say as that of God, come from, if not from direct experience?" (C.S. Peirce 1962; *The Concept of God*)

It is no secret that advocates of systems theory are prone to interpret their subject as constituting a challenge to the orthodox neo-Darwinian conception of the biosphere (see, e.g., Depew and Weber 1995, Goodwin 1994, Kauffman 1995, Rosen 2000, Ulanowicz 1997, Wicken 1987). Often, this critical bearing is generalized, culminating in the idea that the systems approach opens up a new "window on the world," a global change of perspective with wide ramifications for our understanding of nature at large, of science, and of the relations between science and culture (Capra 1982, Jantsch 1980, Laszlo 1996, Prigogine and Stenger 1984, Ulanowicz 2009). In line with this broader analysis of the transformative potential

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of the systems approach, some theorists are emboldened enough to touch on the sensitive topics of religion and the divine. Stuart Kauffman's latest book, *Reinventing the Sacred* (2008), is a prominent representative of this recent trend.

For the most part, Kauffman's book is an elaboration of his well-known views about self-organization, reduction, emergence, agency, life at the edge of chaos, and the creativity of evolution – topics about which he has written extensively on previous occasions (see Kauffman 1993, 1995, 2000). What marks Kauffman's latest effort as unique in his corpus is the fact that it goes beyond the science of complexity *per se* and explores at greater length issues pertaining to morality and spirituality. In particular, Kauffman urges us – csientifically educated, rationalistically inclined, and secularly brought up inhabitants of Western culture – to reconsider the place of God and sacredness in our personal and public lives. Coming from a leading figure in systems thinking, this is a remarkable plea, for it stands to reason that just as the systems view of the biosphere (and of nature at large), offers a refreshing alternative to neo-Darwinism and to scientific reductionism, respectively, it may also revitalize and enrich the debate concerning the relation between religion and science, a debate which, in North America in particular, has been characterized by a tiresome antagonistic exchange between God's brigades and Darwin's watchdogs.

Of particular interest, in this respect, is the question: "Could a systemsinspired perspective become a force of transcendence, facilitating our capacity to go beyond the entrenched dichotomous narrative which posits science and religion as two opposite poles, destined for collision or, alternatively, for mutual disregard?" Some critics, for example, Ken Wilber (1995), express skepticism. Wilber sees systems theory as but the holistic counterpart of atomistic reductionism, both of which are venerable inhabitants of "flatland," a landscape without depth and interiority, a realm of austere objectivity which leaves no space in its midst for the workings of spirit. Yet this judgment seems too harsh. At the phenomenological level (the level of lived experience) it is, I believe, a fact that many of those who become seriously acquainted with the systems outlook feel that it changes their perception of reality in fundamental ways. They learn to see the world anew, and what they see is more often than not an arena of greater depth and wonder, full of surprising connections hitherto unvisualized, and of possibilities previously unimagined. The overall effect is that of a gestalt switch, where the postswitch gestalt is characterized by an increased sense of fecundity, meaning, and awe. And, what are these if not outlets from flatland?

While such phenomenological reports may be dismissed as too subjective (though without good reason, I think: phenomenology is as good a witness on such matters as any other method could possibly hope to be), there are also objective reasons to expect that the systems view of reality

will serve as a portal to an increased sense of spirituality and as a platform from which to view the relation between science and religion with fresh eyes. It is a hallmark of spiritual experiences that they are accompanied by a sense of *unity*, namely, by a sense of understanding – often conjoined with a potent feeling of elation – which surpasses and unites what previously was perceived as separate and even antagonistic components. The holism, process centrality, and medium neutrality of the systems approach, combined with a relentless emphasis on ontological continuity and theoretical integration, are conducive to a transcendence of many dualisms characteristic of traditional substance metaphysics or of orthodox contemporary physicalism, and, as such, the approach is conducive to an increased sense of unity. Another trademark of the systems approach is its emphasis on internal relations (Bickhard 2003, Laszlo 1996, Whitehead 1929), in stark contrast to the mechanistic view of nature according to which all things are only externally related to each other (i.e., are mutually separable). This emphasis on the internality of natural relations, that is, on seeing relations to other entities as constitutive of the nature of a given entity, is a veritable hallmark of spiritual views of reality in which, like the jewels in Indra's net, the whole is reflected in each of its parts. Finally, there is the emphasis of the systems view on the *continuity* in nature, which, rather than leading to a deteriorated ("flatland") conception of mind and spirit as Wilber fears, is often conducive to the conclusion that even the lower tiers of physical reality are endowed with the rudiments of life and mind, hence to the contemplation of radically different modes of thinking about nature and the place of spirit within it. While none of this serves as *proof* that learning to see the world through the eyes of systems theory is conducive to an enhanced spiritual awareness and to novel insights regarding the relationships between science and religion, it does serve to show that deep familiarity with the systems view of nature *could* facilitate such insights. It is therefore with a sense of anticipation and excitement that I approached Kauffman's manuscript.

But although Kauffman's quest for a revitalized sense of sacredness and divinity is commendable, and although his prose is crisp and candid, his treatment of the subject left me with a mild sense of disappointment. Ultimately, Kauffman remains too close to the old confines of the debate between science and religion. In particular, he continues to view the terrain as one which is marked by the dichotomy between secular modernism, on the one hand, and traditional Western theism on the other hand. Kauffman's unsevered tie to modernism is implicit in his proposed solution to this divide, the plea for *reinventing* the sacred. For it is, essentially, a modernist sentiment to argue that God is our own creation, that sacredness is of our own making, and that "it has always been us, down the millennia, talking to ourselves" (Kauffman 2008, 286). Freud, I imagine, could not agree more. Equally indicative of Kauffman's modernist persuasion is the

fact that, apart from his own proposal, the only religious strand he considers as an alternative to disenchanted secularism is the mainstream Abrahamic (Judeo-Christian-Islamic) tradition with its uncompromising commitment to a personal, supernatural, creator God situated *outside* of creation (viz. a supreme being who is wholly transcendent, and not at all immanent, to the creative process of cosmic evolution). By narrowing the field so severely, Kauffman leaves us with only one choice if we wish to avoid the unpleasant extremes of theist dogmatism and of disenchanted secular skepticism: to join him in his quest for reinventing the sacred.

Yet, as Kauffman himself realizes, the idea that sacredness and divinity are of our own making is hard to digest. The resistance to this idea, Kauffman argues, is rooted in a lingering attachment to Abrahamic intuitions, namely, to a traditionalist theist conception from whose standpoint his proposed "Copernican revolution" must be deemed threatening and insulting. But while Kauffman is doubtlessly correct that his approach is likely to be perceived this way by traditionalists, I think there is a *deeper* reason for dissatisfaction. Simply put, the problem with Kauffman's proposal is that it overlooks the fact that religious *experiences* are experiences of encounters with a transcendent reality, of coming into contact with something which far surpasses our own limitations (or any known natural limitations, for that matter). It is therefore highly unlikely that that which grounds such experiences could be of our own making. This phenomenological observation, and not any religious dogma, is what casts the most potent doubt on treating sacredness and divinity as cultural inventions: to the extent that the testimonies of lived experience play an essential role in determining our cultural understanding of the meaning of such terms as "sacredness," "holiness," and "divinity," Kauffman's proposal suffers from turning such notions into something which the relevant facts do not support (for more on this, see section 3 below).

Yet, in claiming that religious experience ought to incline us against Kauffman's constructivism, I do not intend to suggest the vindication of old-school religious dogmatism. Rather, I shall argue that it is possible to avoid Kauffman's dilemma altogether. It is possible to regain sacredness without giving up reason and without committing ourselves to the unintuitive, indeed untenable, view that it is us who are the source of the divine presence in our lives. We can do so because, at its core, the experience of coming into contact with the divine has very little to do with explicit dogma and offers very little reason to abnegate reason.

# REINVENTING THE SACRED, HEALING OUR WOUNDS

Kauffman's plea for reinventing the sacred is grounded in an important insight, namely, the realization that something fundamental is amiss in the rationalistic ethos of modern secular society. The faith in reason as the

sole guide of private and public life has got us significantly far in science, technology, medicine, commerce, the modernization of state apparatus, education, the promotion of individual rights, and much more, but it can no longer be our faith. Reason alone is all too one-sided, all too abstract, all too detached from the complex realities of life, all too incomplete. In today's world, it becomes ever more apparent that the Enlightenment's legacy of putting our faith in reason as the sole guide of private and public life has run its course. Its immanent shortcomings are evident everywhere. It left us with an untenable ideal of scientific reductionism within whose confines there is no proper place for emergence and hence, more specifically, for life, agency, consciousness, meaning, and value. It conferred upon us a notorious split between matter and mind, fact and value, science and the arts. It bequeathed upon us a narrow vision of economic motives and conduct, which – it is now hard to deny – cultivates unbridled greed, market instability, corporate irresponsibility, and an ever widening gap between rich and poor. It bestowed upon us the mixed blessing of unbridled technological progress which, we now know, is not the unconditional cure for our problems but often their perpetrator. It propels us onto the edge of ecological disaster. It nourishes significant forms of psychological and social malaise: loneliness, existential angst, stress, emptiness, fragmentation, alienation, and anomie. And, despite undeniable major advances in promoting individual freedom and dignity, and the institutions necessary for their sustenance, it did not carry the promise of delivering us from the legacy of dominance: of First World over Third World, rich over poor, men over women, social and political elites over the masses and the unprivileged, and so on. To believe that the answer to all of these problems is more of the same is unreasonable. Reason itself exposes its own limitations, which is why Kauffman concludes, correctly I think, that reason alone is an insufficient guide to action.

It is this postmodernist insight (postmodernist in the rather general sense that it is a reflective critique of the driving force behind the modernist outlook) which motivates Kauffman in his quest after a revival of a personal and collective sense of sacredness.<sup>1</sup> He is, of course, neither the first nor the only critic to have reached such, or similar conclusions, but this takes nothing from the significance of the conclusion itself. In a way, we can rephrase this key insight as one which proclaims that reason must be complemented by the *heart*, that is, by the presence – public as well as private – of a moral and spiritual compass which alone can unite reason with the deep currents of life necessary for sustaining right action.

Yet, although Kauffman's diagnosis is deeply critical of one of the cornerstones of the modernist creed, his prescription – reinventing the sacred – remains tethered to the landscape shaped by modernism. Earlier, I explained why I think that an initiative which includes reinventing the sacred and choosing to employ the concept of God as "the most powerful symbol we have" (Kauffman 2008, 284) is a thoroughly modernist one, and more will be said on this subject below. However, first we must come to terms with what seems to be, at least *prima facie*, an inherent tension in Kauffman's proposal.

#### KAUFFMAN'S CONSTRUCTIVE PANTHEISM

One curious fact about Kauffman's concept of reinventing the sacred is that it includes two tenets which do not necessarily fit comfortably with each other. On the one hand, as mentioned above, he endorses a constructivist view according to which it is up to us to reinvent the sacred and to choose to employ the concept of God as our most potent symbol. On the other hand, he proposes to identify God with the natural, emergent *creativity* in the universe. This latter element in Kauffman's proposal sounds like a present-day variant of pantheism. It is well understood why Kauffman is sympathetic to this idea. Much of his notable work as a scientist focused on emergent complexity in biology and beyond, and, as his recent work makes rather clear, he came to believe that there is an irreducible creative nisus in nature, "not fully describable by natural law" (2008, 135). In this space of "ceaseless creativity in the universe, biosphere, and human civilization," which, presumably, is already beyond the pale of the old materialistic-rationalistic-reductionist order, lies a potential for transcendence, renovation, and recuperation, and hence a true possibility for us to "reinvent the sacred, and find a new view of God as the fully natural, awesome, creativity that surrounds us" (2008, 135). But does Kauffman's pantheism fit with his constructivism?

*Prima facie*, there is a tension here because if God truly *is* the natural, emergent creativity in the universe, then it is for us to rediscover it, not to reinvent it. But the tension is at least partially resolved if we consider the logic of Kauffman's reasoning. At the heart of this reasoning is the convergence of two separate elements: the belief in the irreducible creativity of nature, and the conviction that a revived sense of sacredness is a vital desideratum of the present times. The convergence of these two lines of thought leads naturally toward their unification in the pantheist idea that the divine simply is that ceaseless creativity in the universe. However, in itself, this does not motivate the constructivist conclusion that the sacred has to be reinvented. The latter is an independently supplied interpretation superimposed on the identification of God with the creativity in the universe. In other words, nothing in what Kauffman says up to this point motivates a constructivist rather than a realist interpretation of his proposed pantheism. While not contradictory, Kauffman's constructivist choice is not necessary either. Rather, as mentioned earlier, I think that what lies behind Kauffman's constructivism are his unsevered ties to the modernist outlook.

From a modernist Western perspective, it is natural to approach sacredness and the divine as our own cultural products, much as it is natural to shy away from realist theistic convictions. In particular, what renders theological realism unpalatable to the modernist mind is the fact that the modernist narrative is, constitutively, a secular narrative, a narrative of emancipation from the dogmatic confines of traditional Western theism and of "salvation" through reason, and reason alone. This exclusive secular narrative serves to consolidate the contrast between reason and faith and is, in turn, further consolidated by fundamentalist religious reactions to it. It is no surprise, therefore, that the debate over religion in the Western hemisphere continues to be dominated by the projection of a stark dichotomy between secular rationalism, on the one hand, and orthodox Abrahamic monotheism on the other hand, perpetuating a climate of strife, mistrust, and even mutual contempt. In such a climate, it is all too easy to forget that there are alternative religious outlooks, and alternative ways of considering the relationships between reason and faith. Even a thinker of Kauffman's stature seems to be at least partially guilty of such forgetfulness, or so I argue next.

#### REALISM AND THE PERENNIAL PHILOSOPHY

I began by arguing that Kauffman's recipe for a revived sense of sacredness suffers from the fact that it does not cohere well with the nature of religious experience. There is little point in attempting to reestablish a portal to the sacred without also attempting to reestablish a channel for authentic experiences of sacredness, for, ultimately, a genuine sense of the sacred is grounded in such authentic personal experiences. Ritual is empty if it is not accompanied at some point in time, and by some worshipers, by first-hand experience of awakening to the divine. One finds such personal experiences at the heart of each and every major religion - antedating, underscoring, and transcending explicit dogma. However, as mentioned before, genuine experiences of this sort – mystical religious experiences – are essentially experiences of coming into contact with something which far transcends human reality. There is, therefore, no proper sense in which the experience of sacredness can be *reduced*, wholesale, to human cultural parameters, and hence also no proper sense in which our coming into contact with the sacred could be adequately described as a matter of invention, or reinvention. Therein lies the trouble with Kauffman's constructivism, that it cripples that which it seeks to revitalize: a revived sense of sacredness must be *more* than a matter of reinvention, it must be more than us talking to ourselves.<sup>2</sup>

Yet, to stride beyond Kauffman's constructivism is to enter a troubled terrain full of hazards. We are looking for a perspective able to better accommodate the nature of religious experience which, at the same time,

also avoids the pitfalls rightly feared by Kauffman, namely, the dogmatism, irrationalism, and intolerance often procured by authoritarian organized religion. In this search, it is, I believe, possible to walk some distance alongside Kauffman himself. On Kauffman's view, a renewal of the sacred ought to proceed along the following lines:

- (1) *Inclusiveness*: Our search for a renewed sense of the divine must be inclusive, or in Kauffman's words: "we need to find a global spiritual space that we can share across our diverse civilizations, in which the sacred becomes legitimate for us all, and in which we can find a natural sense of God that we can share to a substantial extent whatever our religious convictions" (283).
- (2) Evolutionism: Change, process, evolution, growth, and development are fundamental and universal features of reality manifest at all levels and on all scales. Evolution is not an exclusive characteristic of life, let alone of life on earth, but a universal cosmic trait. Against this background, in which change rather than stasis is the default assumption, it is natural to expect that even the divine will be couched in dynamical evolutionary terms. The divine itself may be an open-ended process, a work in progress.<sup>3</sup>
- (3) Naturalism: In articulating a revived sense of the sacred, we must refrain from supernatural connotations. Our concept of the divine should not be in defiance of reason and nature. Moreover, God is not to be understood as an external agent a creator and designer operating outside the natural order. Rather, it is an in-dwelling entity whose workings are immanent to the nature of things.

Although Kauffman does not state these criteria in an explicit orderly fashion, it is clear that his proposal is designed to satisfy them all. God as the natural creativity in the universe is consistent with evolutionary naturalism and, as Kauffman accentuates, it provides for a rather inclusive sense of the divine. Standing in opposition to this conception is traditional Western theism with its sectarianism, antievolutionism, and supernaturalism – traits which are often conducive to dogmatism, irrationalism, and intolerance. This, at any rate, seems to be the general picture which Kauffman's presupposes, perhaps with good sense. However, since I argued that the picture is more nuanced, and that alternatives are available to Kauffman's view which do not suffer from the pitfalls he dreads, it is time for us to clarify the nature of this assertion. In what follows, I shall first articulate what I mean when I claim that it is possible to take a realist stance toward the divine without sacrificing reason, tolerance, universalism, or pluralism. I will then follow by considering the question of evolutionary naturalism, namely, by inquiring whether naturalism and evolutionism are indeed necessary features of a revived sense of the sacred.

30

What do I mean when I say that Kauffman presents us with an all-too-narrow depiction of the conceptual terrain? Above all, I mean that he fails to take sufficient notice of the fact that there is an alternative route to the affirmation of the sacred, one which is neither stifled by dogma (or, at any rate, need not be so), nor burdened with the artificiality of the constructivist approach. This alternative path is the path of *direct spiritual awareness* – the mystical path. It is the path which leads one in search for direct acquaintance with the divine ground of all things, in search for the spiritual truth that lies beyond all formulations, religious or otherwise. It is, in other words, the path of the so-called *perennial philosophy* – whether sought within the recognized channels of established religion, or apart from them.

Though this, the path of direct spiritual awareness, is the most fundamental channel through which a genuine sense of the sacred is rendered accessible, there is no mention of it in Kauffman's discussion. The closest Kauffman gets to this subject is in a very brief passage where he mentions Buddhism approvingly as a "wisdom tradition without a God" (383), "with deep understanding of our emotional-rational-intuitive selves" (384). This is also the only place where Kauffman pauses, however briefly, to consider a religious-spiritual tradition other than Western monotheism. However, when Kauffman says that he hopes that the rest of us learn from Buddhism's "years of study of human consciousness" (384), he neglects to mention that the highest goal of this study of consciousness is the attainment of enlightenment, a state of mind, or rather a state of being, wherein separate selfhood is dissolved and a sense of unity with the whole – the interdependent nexus of reality, and the spiritual ground of all things is achieved. Thus, it is through the enlightened mind, through cultivated transcendence of ordinary consciousness, that a portal to the sacred is established. This is very much in line with the teachings of the path of direct spiritual awareness wherever it is, or has been, practiced.

I shall not, on the present occasion, debate the question whether there is indeed universal content to the path of direct spiritual awareness, namely, whether there is truly a certain core of basic experiences, insights, and teachings, which remain significantly invariant amid changes of cultural, social, religious, and historical contexts, and which constitute a perennial philosophy (for different views on the subject, see, e.g., Katz 1978, Schuon 2010, and Smith 1976). My own amateurish studies in comparative religion and in mystical literature, combined with personal experience, have led me to believe that such common spiritual ground does exist but in this article my concern is not to debate the point but rather to explore how, assuming its reality, such *philosophia perennis* stands with respect to Kauffman's concerns.

Consider first rationality. From the rationalist standpoint still predominant among present-day literati, the admission of higher forms of knowledge irreducible to rational propositional discourse is viewed with suspicion, if not downright animosity and contempt. Discursive reason, in particular formal reasoning, is, on this view, the sole occupier of the high pedestal of gnosis; it recognizes no other authority and tolerates no competition. To proclaim forms of consciousness which defy ordinary reason as valid avenues of knowledge is preposterous (hence the frequent use of "mystical" as a derogatory term). To declare that the rationalist stance is itself but a stage in the advancement of consciousness, however important, and that transition toward a *transrational* stage, in which reason as we came to know it since the Enlightenment is assimilated within a greater whole of the spirit, represents *progress* is sacrilege. Hence, from this perspective, the alternative we are now considering must be viewed as a nuisance or a threat — it is seen as a wishy-washy New-Age rhetoric, or perhaps as a lamentable regress to the Dark Ages.

But things ought to be judged differently when viewed from a perspective such as Kauffman's, since he already takes the crucial step of acknowledging that reason alone is an insufficient guide to wisdom and virtue. The rationalist's mistake is in assuming that the sole alternative to a rationalist stance is irrationalism – a regress to dogmatism, authoritarianism, superstition, unscrutinized myth, and the abnegation of reason; in short, a return to a prerational mode. The mistake lies in failing to recognize the difference between an irrationalism of this regressive pathological sort and a transrational stance, namely, one which while it continues to embrace reason in all its splendor and dignity becomes ever more aware of the need to reconnect abstract reasoning with our deepest roots of being, to complement discursive conceptual thought with other forms of knowing, and, more generally, to move beyond the confines of an isolated, mechanized, quasi-algorithmic conception of reason toward a higher level of psychological integration in which analytical reason becomes embedded in a greater, wiser, more balanced and more wholesome thinking-feeling-respondingintuiting-creating-knowing whole.4

The removal of this misconception enables us to reconsider our question in a more dispassionate manner. Our commitment to a realist approach to the sacred grounded in the path of direct spiritual awareness involves stepping beyond the rationalist-modernist standpoint but it need not, and does not, entail embracing irrationalism. To maintain that the key to a revitalized sense of the divine lies in cultivating certain transrational forms of consciousness in no way compels us to reject reason, or to become less committed to rational methods, practices, and forms of thinking, properly applied. On the contrary, if correct, such transrationalism represents a maturation of reason in that it involves a heightened degree of awareness of the bounds and limitations of rational process – a reflective *achievement* of reason.

The fear associated with the prospect of admitting an epistemic status to nonrational forms of knowing is that these will collide with reason and, upon doing so, subdue it at the service of dogmatism, authoritarianism, intolerance, and partisanship. But this, too, is unsubstantiated. The path of direct spiritual awareness offers no dogmas but those which can be verified directly by way of personal experience, or indirectly by observing the effects visible in the conduct of those who embrace it as their own and made significant advance along the road. In other words, the tree is justified by its fruits, and the fruits – though they are not to be gathered without much intent and effort – are there to be seen and enjoyed by whoever cares enough to do so. Where there is a collision with reason, it stems not from the contents derived from the path of direct spiritual awareness per se but from the religious context in which it is often embedded. Animosity toward reason has certainly been expressed by some individuals of spiritual repute throughout history (Al Ghazali is but one notable example), but such sentiments have usually been motivated by commitment to the mores and morals of established religion, that is, by contents that go far beyond what is grounded in direct spiritual awareness, and in reaction to what has been perceived as an imperialist encroachment by reason's ardent champions. More often than not, the enemies of reason are also the enemies of free exploration of direct spiritual awareness, and mystics, just like rationalist thinkers, were frequently held in check by the patrons of organized religion. As a general rule, it is articles of faith accepted on authority, and not insights obtained through direct spiritual awareness, which fuel intolerance toward the claims of reason.

Having set aside the specter of irrationalism, our next question ought to be where do we stand with respect to Kauffman's inclusiveness criterion, namely, with respect to the plea for a safe global spiritual space sustaining a potentially sharable sense of the sacred? Here, too, I think our alternative is in good standing. A sense of the sacred grounded in direct spiritual awareness, and in principles and teachings based on such cultivated awareness, is a condition that provides for a unity in diversity, namely, for a global spiritual space which is open for all while capable of accommodating a plurality of perspectives, traditions, and convictions. Not being based on dogma and top-down literal interpretation of sacrosanct canonical texts, it offers no grounds for exclusiveness and partisanship. On the contrary, it highlights the existence of a common core of spirituality and a common potential for growth and transcendence – a core which lies underneath the varieties of symbolism, myth, and explicit religious doctrine. Moreover, by stressing such common foundation, it tacitly affirms pluralism, the existence of multiple embedding of sacredness through multiple avenues of interpretation and worship.

It may be objected that since direct spiritual realization is the prerogative of the few, an approach which puts it at center stage fails to offer a truly global spiritual arena. To this, there are two chief responses. First, strictly speaking, it is not true that only a few of us can hope to achieve heightened spiritual awareness. With proper bearing and training, anyone who takes it upon herself to advance along the path of love and devotion can make meaningful progress. That only a few are prone to reach spectacular heights and depths does not take away the significance of more moderate accomplishments. Second, as mentioned before, the path of direct spiritual awareness is not confined merely to first-hand experiences. Rather, to a large extent, it consists of teachings inspired by first-hand spiritual experiences and, no less important, by the lessons of virtuous conduct. Provided they are not kept secret, such teachings and examples are available to the multitude and are in no way the prerogative of the few.

The real practical problem with the idea of a global spiritual space revolving around direct awareness and its derivatives in action and in theory lies elsewhere: it lies in the difficulty of reconciling genuine inclusiveness with the professed claims and cultivated habits of established religion. Most, if not all, of the major established religions – and certainly those dominant in the West – are replete with contents which could not possibly have originated in direct spiritual awareness and that, followed to the letter, often obscure the very existence of a common spiritual ground, cultivating partisan appropriations, intolerance, and irrationalism, and ultimately culminating in thoughts and actions diametrically opposed to anything integral to the path of direct spiritual awareness. An inclusiveness rooted in the path of direct spiritual awareness requires us to develop a metaperspective, namely, to see each other amid and beyond our differences as fellow pilgrims, taking distinct lines of travel but ultimately sharing the same journey. It also necessitates the ability to prioritize that which unites over that which separates, that is, to try to see through the specific narratives, symbolisms, myths, and decrees topping every major spiritual tradition in order to access the perennial wisdom lying at the core. Surely, an integral perspective of this sort is no mean feat and the day may yet be distant in which it becomes orthodoxy; but this need not count against our proposal, certainly not when compared with Kauffman's constructivism since, as Kauffman well recognizes, his own approach stands little chance of appealing to those of strong religious doctrinal convictions. If anything, our approach has the merit that it could, and should, appeal to a growing number of spiritual seekers, whether affiliated with an established religion or not, who are already, or are in the process of becoming, open to this type of message.<sup>5</sup> As for those who refuse to take part in a shared global space, well, they cannot be forced to do so.

## AN EVOLUTIONARY NATURALISM OF THE SACRED?

In conclusion, let us consider the question: "Where does our realist approach to the revival of the sacred stand in relation to Kauffman's two remaining adequacy criteria: evolutionism, and naturalism?" Naturalism and evolutionism are two staples of the present scientifically minded outlook and, as such, they occupy center stage in the current clash between science and religion. Any spiritual outlook with even the mildest of aspirations for adequacy must therefore come to terms with the question where it stands on such matters, and the approach presented in this article is no exception. In essence, I believe that a realist approach to the sacred grounded in the path of direct spiritual awareness is *consistent* with an evolutionary naturalism but not, however, without some important qualifications and modifications whose general character I will do my best to indicate.

The question is complicated by the fact that the path of direct spiritual awareness is rooted in nonconceptual knowing and, as such, does not dictate a specific, elaborated, and exact metaphysics. Its conceptual natural outgrowth – the so-called perennial philosophy – is certainly consistent enough to rule out some metaphysical outlooks, contemporary mainstream materialism (or physicalism) included, but it would be an exaggeration to say that it speaks in complete unison on all matters metaphysical, or that it specifies a detailed, unique metaphysical system. To a large extent, it is more like a schema which leaves many details underspecified and open for interpretation. Interpretation also comes into play in examining the philosophically loaded concepts of naturalism and evolutionism which can be understood in different senses – some stricter, some more liberal. Therefore, to adjudicate on whether, and to what extent, an approach to the sacred rooted in the path of direct spiritual awareness coheres with a naturalistic and evolutionary worldview, we must proceed carefully, knowing full well that our conclusions are based on an interpretative effort which, though arguably well-motivated, constitute no unshakable proof.

Consider, first, evolutionism. An evolutionary metaphysics, in the sense that I shall presuppose here and which Kauffman seems to have in mind also, is one that depicts a cosmology of change, growth, self-organization, the emergence of novelty, and a time arrow leading from the simple to the complex and from the generic to the unique (two photons may be identical but no two persons or societies are). Evolution, in this sense, is not confined to the biological realm proper; it is a cosmic process which includes prebiotic phenomena, such as the inflationary burst following the Big Bang, as well as postbiotic phenomena such as the dynamics of market economy, or the development of societal moral codes (see Chaisson 2001, Jantsch 1980). Biological evolution by natural selection is but a part of this cosmic drama of formation and ascendance. Moreover, on this picture, the world in which cosmic evolution takes place is a dynamic world in flux,

a place where change is the underlying reality and stability a derivative construction predicated on the temporary balancing of opposing forces and tendencies. Finally, this dynamic process of unfolding is irreducibly *creative*: it conforms to no final set of prespecifiable Bauplans, algorithms, or eternally immutable laws; it constructs its own rules of construction even as it unfolds.

As for naturalism, this concept is often interpreted strictly, to imply that a naturalistic metaphysics is one which accounts for all there is in terms of physics and chemistry alone. Kauffman, however, seems to be receptive of a more relaxed conception of naturalism according to which a naturalistic metaphysics is one which strives to explain all phenomena as integral parts of a single dynamical unity which is neither afflicted with irreducible dualisms, nor suffused with supernatural miraculous intervention. It is this more relaxed sense of naturalism that I shall assume hereafter.

The combination of evolutionism and naturalism, understood as per above, yields an evolutionary naturalism which portrays reality as a dynamical unity, forever in the process of creative transformation. As mentioned earlier, Kauffman's pantheism is tailor-made to fit this picture since, in his view, God is presumed to be nothing but this natural process of creative evolutionary unfolding. From our alternative standpoint, however, things are not as simple and straightforward. In general, the path of direct spiritual awareness leads one to go beyond Spinozistic pantheism. It leads to the panentheistic affirmation of an absolute source of being which although immanent to the manifest, space-timed, order of nature also far transcends it (see, e.g., Bracken 1975, Clayton 2004, Griffin 2004, Hartshorne and Reese 1953, Peacocke 2004). Moreover, it is often (though not always!) maintained that the divine, or the absolute, is, in itself (that is, in its essence), immutable. Naturally, such admissions raise serious questions: How can a being which transcends space-timed nature be reconciled with a naturalistic ontology? How can the idea of an immutable absolute be reconciled with an evolutionary metaphysics? The difficulty, then, consists of the fact that a metaphysics which allocates center stage to a notion of the sacred that implies such attributes runs the risk of being incompatible with evolutionary naturalism, and, ipso facto, of becoming unattractive to the scientifically minded.

In responding to this challenge, it is useful, first, to pay attention to that which the path of direct spiritual awareness does *not* imply. It does not imply a commitment to the existence of a supernatural supreme being, an omnipotent and omniscient creator God whose relation to his creation is intentional and external, in the same sense in which an artist is intentionally and externally related to her work of art; who is capable of performing miracles at will, in defiance of any natural constraints; and who takes personal care in the specifics of creation, in particular, in the fine details of the lives of moral subjects. This is not to deny, of course, that many

who made progress along the path of direct spiritual awareness sincerely believed in the reality of such divine attributes; it is simply to say that none of these contents constitute the kernel of direct spiritual awareness or of the perennial wisdom which most closely reflects it.

This qualification already mitigates some of the concerns of the scientifically minded since it rules out supernaturalism of the familiar, Abrahamic sort. In fact, by doing so, it removes what Kauffman finds most objectionable in the metaphysical commitments of traditional Western monotheism. However, it does not remove the reconciliation difficulties mentioned a short while ago. The answer to these concerns is that while a metaphysics which accommodates the perennial philosophy is unlikely to be reduced without residue to an evolutionary naturalism of even the liberal sort described above it is, in an important sense, *consistent* with such an outlook—albeit with some qualification. Put differently, I wish to argue that a metaphysics based on the path of direct spiritual awareness can *subsume* evolutionary naturalism without, however, being exhausted by it.

All metaphysical systems based on the path of direct spiritual awareness take emptiness, often also referred to as pure consciousness, as their starting, as well as their terminal, point. Emptiness, it is presumed, was there at the beginning; it surrounds and underlies all material forms; it is the ultimate foundation lying underneath individual minds; and it is the omega point into which every finite being must eventually return. Moreover, emptiness is intrinsically dynamic, intrinsically creative, and intrinsically hylozoic or potentiated toward life and mind. This basic ontological commitment rules out materialism of any standard sort. It points in the direction of either *absolute idealism*, or *neutral monism* – depending on whether "emptiness" is interpreted explicitly as pure consciousness or whether one stops short of that, pointing to emptiness as the *inscrutable* source of everything that exists in the manifest order of nature - of life, mind, and matter. It also involves a commitment to *panpsychism*, or at the very least panprotopsychism (for this latter term, see Chalmers 1995), namely, to the idea that nature is aboriginally endowed with mental, or protomental, attributes (thus rejecting the materialist hypothesis that nature is, at the bottom, devoid of any life-like or mind-like characteristics).6

Does this rule out naturalism? Well, it certainly rules out standard interpretations of naturalism according to which a naturalistic ontology is one in which life and mind are seen as exceptional offshoots of a lifeless and mindless mechanistic universe. But it is, I believe, consistent with a *revisionist* naturalism, namely, with an ontology which while rejecting supernatural intervention of the Abrahamic sort also rejects the mechanistic hypothesis at the other extreme of the spectrum, affirming instead an *organic* approach to nature from which perspective nature as a whole begins to look more and more life-like and mind-like (and hence hospitable to such

features as holistic interdependency, internal relatedness, self-organization, value, purpose, agency, and meaning). Recall that nothing in our previously given schematic characterization of a naturalistic metaphysics as one which strives to explain all phenomena as integral parts of a *single dynamical unity* (which is neither afflicted with irreducible dualisms, nor suffused with supernatural miraculous intervention), compels, or even inclines us to associate naturalism with materialism. The dynamic evolving process of nature may well turn out to be organic rather than mechanistic. In fact, if this cosmic process is genuinely *creative*, as Kauffman maintains, then this counts heavily in favor of the organic hypothesis (cf. Bohm 1980, Rosen 2000, Ulanowicz 2006, Whitehead 1929).

But, the skeptic may protest, does not naturalism imply, at the very least, existence in space-time? How can a naturalistic ontology be consistent with the idea of an absolute being transcending space-time and the manifest, empirically traceable order of nature? The response to this concern is that science itself indicates rather clearly that existence in space and time cannot be the whole truth about reality. A scientifically oriented metaphysics must take into account singularities - black holes, white holes, the Big Bang, and the Big Crash – in which space and time disappear, and the laws of physics lose all familiar meaning; it must recognize the nonapplicability of the usual conceptions of space and time on scales shorter than Planck's distances and durations; it must come to terms with the a-causality and nonlocality of the quantum world; and it must take seriously such strange possibilities as the existence of extra dimensions and of multiple universes, or even the possibility that the whole known universe is but a holographic projection (see Bousso 2002, Greene 2003). Faced with these facts, the rational attitude, I think, is to humbly admit that we cannot dictate a *priori* what nature or the general structure of reality must be like. The idea that reality is wholly enfolded in familiar space and time belongs to the Laplacean world image of yesteryear. A metaphysics that wishes to keep up with the science of today ought to be far less decisive against the idea that space and time are derivative expressions of a more basic reality.

Finally, let us address the tension between an evolutionary metaphysics and the idea of an immutable absolute. Some of the tension must already be resolved courtesy of the discussion in the last paragraph. In the usual modern sense of the word, "evolution" refers to a concrete spatiotemporal process. It is therefore natural to think that "evolutionary metaphysics," or "evolutionary cosmology," pertain to directional changes in space-timed reality. But if the manifest order of existence in space time is not the whole of reality, if there is more to reality than cosmic temporal evolution, then, in principle, there is room for entities which transcend existence in space-time and, therefore, which are not subject to change – at least not in any regular sense of "change." Hence, insofar as evolution is confined to processes within the manifest order of space-timed reality, it stands in

no direct contradiction to the idea of an immutable absolute transcending these confines.

That being said, I do not deem such an answer to be wholly satisfactory. If reality is a unity, as any integrative metaphysics must hold, and if change is real, then the idea of an utterly immutable absolute makes little sense. One way of resolving this tension is to follow in Parmenides' footsteps and declare change an illusion. But although this proposition has had its followers from among the ranks of practitioners of the path of direct spiritual awareness, it seems rather unattractive to the modern mind. The alternative is to follow Heraclitus in maintaining that change is fundamental, with the implication being that we need to search for a more comprehensive dynamical metaphysical picture from whose vantage point it may be possible to derive the manifest space-timed order as a special case. David Bohm's exploration of the idea of an *implicate order* (Bohm 1980) is an interesting investigation in this direction. Bohm's explicate order, which corresponds to the familiar world of entities occurring in space-time, is a projection of an unmanifest sphere of undivided totality - the implicate order. For our present concerns, the interesting point is that although the implicate order is beyond ordinary space-timed reality it, too, is dynamic. Rather than being frozen and immutable, it is responsive to changes in the explicate order, in a manner which is roughly analogous to that in which changes in the patterns of waves on the face of the ocean transform the ocean as a whole, which in turn generate new wave patterns, and so on. If we take this idea of a dynamic totality, which is nevertheless partitioned into manifest and unmanifest realms, and apply it to the notion of a divine absolute underlying all there is, we end up with the notion that reality as a whole, hence God itself, is subject to evolution.<sup>7</sup>

In general, however, those who are sympathetic to the dynamic evolution of spirit do not go so far as to claim that absolute spirit, or the divine, is itself an incomplete "work in process." Rather, they embrace a more dialectical view according to which the divine is both incomplete and complete, both evolving and nonevolving. It is complete and nonevolving insofar as it contains, implicitly, all the *potential* for realization, change, and development in the explicate process of cosmic evolution, but it is incomplete and evolving insofar as it expresses itself as this actual, explicit process of evolution. This, at any rate, seems to better express the views of modern thinkers sympathetic to the perennial philosophy – from Schelling ([1800] 1993) and Hegel ([1807] 1967) to Teilhard de Chardin (1959) and Ken Wilber (1995).

In sum, there are various ways in which to tackle the problem but they all converge onto one conclusion, namely, that there need be no contradiction between a realist view of the divine predicated on the path of direct spiritual awareness and an evolutionary metaphysics. Put differently (and throwing naturalism into the equation), there are plausible interpretations

of the perennial philosophy which render it compatible with a revisionist evolutionary naturalism. Kauffman may be well motivated in his search for a notion of the sacred compatible with evolutionary naturalism but the search does not rule out our realist alternative to his prudent constructivism. As argued earlier, other considerations count favorably on behalf of such an alternative.

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## **NOTES**

1. Of course, by describing Kauffman's intuitions as postmodernist in this rather general sense, I do not intend to suggest that he would endorse antirealism, or the method of deconstruction, or other familiar features usually associated with postmodernism. Instead, what I have in mind is akin to David Ray Griffin's notion of *constructive postmodernism* (see Griffin 1992)

2. Here and elsewhere in this article, I associate the path of direct spiritual awareness with, primarily, *personal* experience. It ought to be stressed, however, that there are also powerful and authentic forms of direct spiritual awareness attained on a *social* level, via communal forms of spiritual and religious practice. My emphasis on personal access to the sacred is motivated, in part, by the conviction that the most profound and historically influential spiritual realizations are rooted in solitary experiences. Although I believe there is good support for this judgment, I admit that it may well be affected by the contingencies of my personal background and individual dispositions. In any event, I have no intention to either ignore, or to belittle, communal forms of spiritual realization.

3. In espousing evolution on such a cosmic scale, Kauffman's view is reminiscent of Peirce's *Tychism* (Peirce 1893) and of Whitehead's process philosophy (Whitehead 1929).

4. This theme concerning ascending levels of logical, mental, and spiritual integration is highlighted in the writings of such authors as Aurobindo ([1914–1921] 2005), Gebser (1985), Radhakrishnan (1952), and Wilber (1995, 2000)

5. The *emerging church*, a contemporary reform movement within Christianity, provides an interesting illustration of real-life practicing of principles of the kind I have in mind, namely, principles such as pluralism, decentralization, intensive dialogue, and the search for common spiritual foundations.

- 6. Some authors understand panpsychism in a rather *atomistic* fashion, taking it to be tantamount to the view that some fundamental physical entities (e.g., a quark or a photon) are loci of microexperience, and that all macroexperiences (as, for example, in humans) are grounded in such microexperiences (see, e.g., Chalmers, forthcoming). However, I use "panpsychism" in a somewhat different sense, namely, as referring to the view according to which experience and subjectivity are fundamental (irreducible) attributes of nature, existing throughout the universe. This latter interpretation has the advantage that it does not exclude *holistic* approaches to the question of panpsychism and to the so-called "combination problem" (i.e., the problem of relating microexperiences to macroexperiences). It is also in better accord with the term's literal sense and historical usage (see, e.g., Seager and Hermanson 2010).
  - 7. Whorf (1956) attributes a very similar conception of the universe to the Hopi Indians.
- 8. Arguably, one could also defend such a dialectical conception of the divine using more technical concepts borrowed from systems theory. For example, one could appeal to such notions as *bierarchy* and *time scale*, as developed in systems ecology (e.g., Salthe 1985), and argue that the divine, which spans all levels of organization, can appear at once as changing and as unchanging:

changing insofar as it is immanent to levels of organization in which science and everyday experience can detect change; unchanging insofar as it embodies higher levels of organization which, given our location in the cosmic hierarchy, appear to us unchanging.

## REFERENCES

- Aurobindo, Ghosh S. [1914–1921] 2005. *The Life Divine*. Pondicherry, India: Sri Aurobindo Ashram Trust.
- Bickhard, Mark H. 2003. "Some Notes on Internal and External Relations and Representation." Consciousness and Emotion 4:101–10.
- Bohm, David. 1980. Wholeness and the Implicate Order. London, UK: Routledge and Kegan
- Bousso, Raphael. 2002. "The Holographic Principle." Review of Modern Physics 74:825-74.
- Bracken, Joseph. A. 1975. "Panentheism from a Trinitarian Perspective." Horizons 22:7–28.
- Capra, Fritjof. 1982. The Turning Point. New York, NY: Simon and Schuster.
- Chaisson, Eric J. 2001. Cosmic Evolution: The Rise of Complexity in Nature. Cambridge, MA:
- Harvard University Press.
  Chalmers, David. 1995. "Facing up to the Problem of Consciousness." *Journal of Consciousness Studies* 2:200–19.
- (Forthcoming). Panpsychism and Panprotopsychism. The Amherst Lecture in Philosophy. Available at http://www.consc.net/papers/panpsychism.pdf
- Clayton, Philip. 2004. "Panentheism in Metaphysical and Scientific Perspective." In *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God's Presence in a Scientific World*, ed. Philip Clayton and Arthur Peacocke. Grand Rapids, MI: William B. Eerdmans.
- Depew, David J., and H. Bruce Weber. 1995. *Darwinism Evolving: Systems Dynamics and the Genealogy of Natural Selection*. Cambridge, MA: MIT Press.
- Gebser, Jean. 1985. The Ever Present Origin. Athens: Ohio University Press.
- Goodwin, Brian C. 1994. How the Leopard Changed Its Spots: The Evolution of Complexity. London, UK: Weidenfeld and Nicolson.
- Greene, Brian. 2003. The Fabric of the Cosmos: Space, Time, and the Texture of Reality. New York, NY: Alfred A. Knopf.
- Griffin, David R. 1992. "Constructive Post-Modern Philosophy." In Founders of Constructive Postmodern Philosophy: Peirce, James, Bergson, Whitehead, and Hartshorne, ed. David Ray Griffin, John B. Cobb Jr., Marcus P. Ford, and Pete A.Y. Gunter. Albany: State University of New York Press.
- . 2004. "Panentheism: A Post-Modern Revelation." In *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God's Presence in a Scientific World*, ed. Philip Clayton and Arthur Peacocke. Grand Rapids, MI: William B. Eerdmans.
- Hartshorne, Charles, and W. Reese. 1953. *Philosophers Speak of God*. Chicago, IL: University of Chicago Press.
- Hegel, Georg W. F. [1807] 1967. *The Phenomenology of Mind*, trans. J. B. Baille. New York, NY: Harper Torchbooks.
- Jantsch, Erich. 1980. The Self-Organizing Universe: Scientific and Human Implications of the Emerging Paradigm of Evolution. Oxford, UK: Pergamon Press.
- Katz, Steven T. 1978. "Language, Epistemology, and Mysticism." In Mysticism and Philosophical Analysis, ed. S. T. Katz. New York, NY: Oxford University Press.
- Kauffman, Stuart. 1993. The Origins of Order: Self-Organization and Selection in Evolution. New York, NY: Oxford University Press.
- 1995. At Home in the Universe: The Search for the Laws of Self-Organization and Complexity. New York, NY: Oxford University Press.
- ——. 2000. *Investigations*. New York, NY: Oxford University Press.
- ———. 2008. Reinventing the Sacred: A New View of Science, Reason, and Religion. New York, NY: Basic Books.
- Laszlo, Erwin. 1996. The Systems View of the World: A Holistic Vision for Our Time. Creskill, NJ: Hampton Press.

- Peacocke, Arthur. 2004. "Articulating God's Presence in and to the World Unveiled by the Sciences." In In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God's Presence in a Scientific World, ed. Philip Clayton and Arthur Peacocke. Grand Rapids, MI: William B. Eerdmans.
- Peirce, Charles S. 1893. "Evolutionary Love." Monist 3:176–200.
- ——. 1962. "The Concept of God." In *Philosophical Writings of Peirce*, ed. J. Buchler. New York, NY: Dover.
- Prigogine, Ilya, and Isabel Stenger. 1984. Order out of Chaos: Man's New Dialogue with Nature. New York, NY: Bantam Books.
- Radhakrishnan, Sarvapalli. 1952. *The Philosophy of Sarvepalli Radhakrishna*, ed. P. A. Schilpp. New York, NY: Library of Living Philosophers.
- Rosen, Robert. 2000. Essays on Life Itself. New York, NY: Columbia University Press.
- Salthe, Stanley N. 1985. Evolving Hierarchical Systems: Their Structure and Representation. New York, NY: Columbia University Press.
- Schelling, Friedrich W. J. [1800] 1993. System of Transcendental Idealism, trans. Peter Heath. Charlottesville: University of Virginia Press.
- Schuon, Fritjof. 2010. "The Perennial Philosophy." In Fritjof Schuon and the Perennial Philosophy, ed. H. Oldmeadow. Bloomington, IN: World Wisdom.
- Seager, William, and Sean A. Hermanson. 2010. "Panpsychism." *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta. Available at http://plato.stanford.edu/archives/fall2013/entries/panpsychism
- Smith, Huston. 1976. Forgotten Truth: The Primordial Tradition. New York, NY: Harper Collins. Teilhard de Chardin, Pierre. 1959. The Phenomenon of Man. London, UK: Collins.
- Ulanowicz, Robert E. 1997. *Ecology, the Ascendent Perspective*. New York, NY: Columbia University Press.
- . 2006. "Reconsidering the Notion of the Organic." In Systems Biology: Principles, Methods, and Concepts, ed. A.K. Konopka. Boca Raton, FL: CRC Press.
- ———. 2009. A Third Window: Natural Life beyond Newton and Darwin. West Conshohocken, PA: Templeton Foundation Press.
- Whitehead, Alfred North. 1929. Process and Reality: An Essay in Cosmology. New York, NY: Free Press.
- Whorf, Benjamin L. 1956. Language, Thought, and Reality. Cambridge, MA: MIT Press.
- Wicken, Jeffrey S. 1987. Evolution, Thermodynamics, and Information: Extending the Darwinian Program. New York, NY: Oxford University Press.
- Wilber, Ken. 1995. Sex, Ecology, Spirituality: The Spirit of Evolution. Boston, MA: Shambhala.
  ———. 2000. Integral Psychology: Consciousness, Spirit, Psychology, Therapy. Boston, MA: Shambhala.