Journal of
INTEGRAL THEORY and PRACTICE
A Postdisciplinary Discourse for Global Action

December 2012
Volume 7
Number 4

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JOURNAL of INTEGRAL THEORY and PRACTICE

Journal of Integral Theory and Practice is published quarterly by:

MetaIntegral Foundation
339 South Main Street
Sebastopol, CA 95472
United States of America

Journal of Integral Theory and Practice (JITP) is the official source for material related to Integral Theory and its application. The journal publishes peer-reviewed articles, case studies, integral research, critical dialogues, book reviews, and conference reports. JITP embraces a post-metaphysical and post-disciplinary perspective that is dedicated to articulating the ways ontology, epistemology, and methodology interact and co-arise across various scales of time and space. JITP is managed jointly by Integral Institute and MetaIntegral Foundation.

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ISSN: 1944-5083 (print)
ISSN: 1944-5091 (digital)

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2012 Rates

	United States $US	European Union $US	Rest of World $US
Personal	60.00	90.00	90.00
Institutional	120.00	180.00	180.00

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EDITORIAL

ARTICLES

JOURNAL of INTEGRAL THEORY and PRACTICE
Aims and Scope

Integral Theory is a meta-framework that draws on the key insights of the world's knowledge traditions. The awareness gained from drawing on all perspectives allows integral practitioners to bring new depth, clarity, and compassion to every level of human endeavor—from unlocking individual potential to finding new approaches to global-scale problems.

Articles published in the *Journal of Integral Theory and Practice* (JITP) represent explorations in several modes of discourse: philosophical, theoretical, pragmatic, experiential, and critical. JITP is committed to the refinement, development, and expansion of Integral Theory.

Instructions for Authors

JITP follows American Psychological Association (APA) style guidelines. Visit http://foundation.metaintegral.org/JITP for full submission guidelines and a glossary of Integral Theory terminology. An abbreviated outline of the manuscript review process is listed below.

In light of the fact that both Spiral Dynamics and the Integral model sometimes use a color scheme to describe levels of development, we request that authors specify which color scheme they are using (e.g., orange altitude vs. orange vMeme). Altitude can be used to refer to any developmental line (e.g., orange cognition, orange self-identity, etc.), while Spiral Dynamics, in the context of Integral Theory, specifically refers to levels of values development.

Review Process

Initial Review

Authors must submit articles to Lynwood Lord at llord@integralinstitute.org. In cases where authors do not adhere to JITP submission guidelines, manuscripts will be returned with a request that all components be provided. Theoretical changes, copy editing, and structural suggestions may be suggested at this stage.

Peer Review

The editorial team then assigns manuscripts to external reviewers. Information from submitted manuscripts may be systematically collected and analyzed as part of research to improve the quality of the editorial review process.

Authors are expected to revise their article in light of peer-review comments and provide a revised draft within one month. Changes should be made using the track changes feature in Microsoft Word, so our editorial team can quickly identify edits.

Theoretical Review

Once a draft with peer-review comments incorporated is received, a theory call will be scheduled with Ken Wilber, Editor-in-Chief. Wilber will offer constructive criticism and theoretical clarifications. This is a good opportunity to learn and refine your understanding of Integral Theory. The call will be recorded and a link to download the audio will be provided within a week.

Editorial Review

Accepted manuscripts are edited in accordance with JITP editorial style.

Author Review

Authors will be e-mailed a proof and will have one week to suggest changes.

Critical Presentations

Authors are encouraged to explore hypothetical and critical views in relationship to Integral Theory. When presenting hypothetical material (e.g., the possibility of a new line of development in one of the quadrants), authors should make it clear that a suggestive addition that is not currently part of Integral Theory is being offered, and then provide as much evidence, argumentation, and supportive material as possible to substantiate their position. When presenting critical material, authors must represent the components and claims of Integral Theory within an academically acceptable range of interpretation. JITP views the process of hypothetical and critical engagement as essential to the development of Integral Theory.

EXECUTIVE EDITOR'S INTRODUCTION

Sean Esbjörn-Hargens

This is a noteworthy issue for a number of reasons. First, for the first time since the inaugural issue of the journal we are publishing an article by Ken Wilber. Wilber's piece occurs in the context of an exciting engagement between Critical Realism and Integral Theory. In addition, we have four articles that showcase unique applications of Integral Theory—in sports, biography, healthcare, and leadership. And finally, this issue concludes with a comprehensive research article that takes the integral community as its object of focus and compares it to another community of research and practice. In summary, this issue does an excellent job weaving together material that advances the theory, application, and research of integral studies. For me, it is deeply rewarding to see the philosophical and applied expressions of Integral Theory becoming ever more sophisticated and inspiring.

We begin the issue with Paul Marshall's "Toward an Integral Realism: Part 1: An Overview of Transcendental Realist Ontology." This is a robust philosophical piece that is not for the faint of heart. Despite the density of the material, Ken Wilber remarked during his review of the article that it was one of the most clearly written JITP submissions he had ever read. This article is the first of a four-part series, all of which explore the intersection between Critical Realism and Integral Theory. Marshall is well positioned to provide such a thorough exploration in that he has been a student of Integral Theory for years and most recently has been working on his doctorate under the guidance of Roy Bhaskar, the founder and chief architect of Critical Realism. So stay tuned for future publications of this important material, which is placing Integral Theory in deep dialogue with another integral metatheory.

During the JITP review call, Marshall and Wilber discussed many points concerning the relationship between Critical Realism and Integral Theory. After the call, Marshall summarized Wilber's critiques and comments on Critical Realism in order to provide Roy Bhaskar with an outline of Wilber's positions. We have elected to publish both Marshall's summary, "Ken Wilber on Critical Realism," and Bhaskar's response to this summary, "Considerations on 'Ken Wilber on Critical Realism.'" These two pieces together serve as an important starting point for a more direct conversation between Wilber and Bhaskar. They represent the first time that Wilber has commented on Critical Realism (as summarized by Marshall and presented to Bhaskar) and the first time Bhaskar has responded to Wilber's view and critiques of Critical Realism.

While Marshall and Bhaskar were writing their pieces, Wilber was working on his next book, Volume 2 of the Kosmos Trilogy, and was inspired to include some responses to Critical Realism therein that were originally posted on the Integral Life website. We have reprinted these comments in a slightly edited format in order to provide readers with a complete picture of the emerging exchange between Wilber and Bhaskar, Integral Theory, and Critical Realism. Wilber's piece is entitled "In Defense of Integral Theory: A Response to Critical Realism." At the end of Wilber's piece he engages my own JITP article on "multiple objects" (Esbjörn-Hargens, 2010) where I introduce Integral Pluralism in the context of climate change. I was thrilled to read Wilber's insights and critiques about my own article and see ways I can build on his comments to better articulate Integral Pluralism. When I wrote that article one of my hopes was to get other integral theorists, including Ken Wilber, to engage with Critical Realism. I'm quite pleased this is now happening in a number of ways. The upcoming Integral Theory Conference in July 2013 has been designed in part to deepen and extend the encounter between Integral Theory and Critical Realism, which began in some ways when I first wrote about multiple objects.

The next four articles shift us away from integral philosophy and provide us with some very concrete ways in which the Integral framework is being applied. First we have "The Birth of Integral Sports: Insight into Coaching Parents in Sports," by Nuno Matos, John Thompson, and Sean Wilkinson. This is an inspiring case study of how life coaching for parents can be integrated into a sports training academy for children. Imagine a tennis club where the kids get athletic coaching and their parents get life coaching to help them be fuller and freer parents in service of their children. Well, that is exactly what these individuals have created using their backgrounds in Integral Coaching and sports psychology.

Second, we have Neil Richardson's "Walt Whitman's Vision for a New Person and a New Democracy." This article shows how an integral lens can be used to revisit historical figures and understand them in light of new distinctions. For example, Richardson points out the role that Whitman's meditation practice as well as other practices such as vocalization played in the development of his unique form of poetry. By reconstructing Whitman's Integral Life Practice we gain insight and inspiration into the role that integral practices played in his life and contribution to American ideals.

The next article is Regina Nelson's "Framing Integral Leadership in the Medical Cannabis Community." Nelson does a great job of providing an overview of the challenges medicinal cannabis users face in the current American medical system and in contemporary culture in general. She uses Integral Theory to frame the issues and identify how more effective forms of leadership can address these problems. Her insights have implications for public policy as well as for psychological perspectives related to the medicalization of cannabis. This is a great article that shows the way an integral approach can tend to the individual and collective aspects of a complex contemporary issue.

Our final application article is Mikyö Clark's "Crafting a Cultural Latticework: Weaving Triadic Micro-Communities for Nurturing Tomorrow's Leaders." Like Nelson, Clark focuses on the leadership needs of our current moment. He introduces a social technology that he feels is well suited to facilitate the "development of tomorrow's leaders." Clark draws on four key themes that emerged from a research project he did to explore leadership design. One of the most notable aspects of Clark's articles for me was his discussion of the various types of triads (e.g., horizontal, vertical, pyramidal, and shadow) he enacted to support his growth and development with peers, colleagues, mentors, and mentees. This kind of intersubjective practice feels essential for integral practitioners and complements the all-too-often "solo" style of Integral Life Practice. By creating multiple forms of triadic engagement we can accelerate our capacity to develop emotional, interpersonal, and inquiry skills essential to integral leadership.

In a fitting close to Volume 7, we end with an insightful piece of research that considers the current state of the integral community. In "Reflections on Two Research Communities: Comparing the 'Toward a Science of Consciousness Conference' and 'Integral Theory Conference' Research Communities," David Zeitler, Amanda Haboush, and Tim Cox provide a robust analysis of the integral community in comparison to the consciousness community associated with the well-known Tucson conferences. A number of assumptions about the integral community are confirmed, and a number of insights about the differences between these two communities are highlighted. One of the things I like the most about this article is it is the first time data-driven sociological research has been done on the integral community, and as such it represents the first time the integral community is being examined as an object of critical inquiry and research. I believe such efforts are much needed and will be essential for the integral community to develop the reflective capacity needed to become a healthy and mature collective. Also, this article makes me all the more excited for the upcoming Integral Theory Conference. Speaking of which, I hope to see you there!

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Esbjörn-Hargens, S. (2010). An ontology of climate change: Integral pluralism and the enactment of multiple objects. *Journal of Integral Theory and Practice*, *5*(1), 143-174.

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TOWARD AN INTEGRAL REALISM
Part 1: An Overview of Transcendental Realist Ontology

Paul Marshall

ABSTRACT This is the first part of a series of articles that examines how Integral Theory might benefit from a critical realist ontology, from a potential move to what might be called "integral realism." The article begins by describing the various phases and sub-phases of Critical Realism and then focuses on the philosophical ontology established in the first sub-phase of transcendental realism. It contrasts transcendental realism with Kant's transcendental idealism, considers the critical realist critique of the latter, and then outlines how transcendental realism emerged as an alternative philosophy of science to both transcendental idealism and positivism. It looks at how Roy Bhaskar made use of the various critiques of logical positivism and its account of science to establish his distinction between the transitive and intransitive dimensions and develop his depth ontology. Finally, it considers the specifics of the transcendental realist ontology. Subsequent articles will consider how this ontology is extended as the later phases of Critical Realism unfold; the critical realist historical analysis of the epistemic fallacy in Western philosophy; and finally, the status of ontology in Integral Theory and the possibility of an "integral realism"—an integral theory conjoined with the critical realist ontology, with the latter strengthening the former while at the same time being enriched by it.

KEY WORDS Critical Realism; Integral Theory; ontology; epistemic fallacy; transcendental realism; post-formal philosophy

This is the first part of a series of articles that has two main aims. First, to provide a relatively detailed and accessible overview for integral theorists of critical realist ontology, in all its phases. This is of value in itself, I believe, since no such overview is currently available.[1] Second, to examine the possibilities of cross-fertilization between Critical Realism and Integral Theory, with a special focus on how critical realist ontology might benefit Integral Theory and at the same time be enriched by it. Such attempts at cross-fertilization are of interest, I feel, to critical realists and integral theorists alike, since they both stem from a post-formal, pro-spiritual, and integrative position that aspires to move beyond the modern and postmodern metatheories that currently dominate academia. Joining forces within a "metaintegral" initiative might arguably place both theories in a stronger position to promote such a move. With these two aims, one providing the necessary background knowledge and the other focusing on the potential for mutual enrichment and strengthening in the area of ontology, this series of articles hopes to contribute to the dialogue that has already begun between Integral Theory and Critical Realism and that will play an important part in the Integral Theory Conference in 2013.

The broad similarities between Critical Realism/metaReality and Integral Theory are striking. They are both, for example, concerned with maximum inclusivity, going far beyond the truncated and reductionist visions of other philosophical positions or metatheories (like empiricism and positivism, hermeneutics, social constructionism, and neo-Kantianism); both are staunch defenders of interiority and the subject/agent (unlike modernity and postmodernity); both include the enduring gains of modernity and postmodernity (e.g., respectively, the embrace of individuality and of marginalized voices) while rejecting their less wholesome aspects

Correspondence: Paul Marshall, Placa del Pes 7, 3 1, 08500 Vic (Barcelona), Spain. *E-mail*: paul2marshall@gmail.com.

(e.g., respectively, instrumental rationality/abstract universality and judgemental relativism); both embrace spirituality, thus confronting a taboo that is deeply entrenched within the academy; both have a stratified vision of reality and endorse a directionality in evolution toward the realization of Spirit (or the ground state/cosmic envelope); and both are driven by a deep yearning for emancipation and liberation. They are both, in short, informed by an integral vision that aims to honor and include as much of reality as possible and re-enchant it with a spiritual ground and goal.

Nevertheless, there are inevitably a number of important differences and both philosophies possess their particular emphases which, I have argued elsewhere (Marshall, 2012), lead to both their strengths and weaknesses. This is, in a way, quite fortunate since their respective strengths often coincide with underdeveloped aspects of the other, affording an opportunity for a rich dialogue and exchange that can deepen and strengthen each philosophy, as well as remedy a few absences. All these points were discussed in a previous article published in the *Journal of Critical Realism* (JCR) (Marshall, 2012), which was directed primarily at critical realists who, in general, are not familiar with Integral Theory. This present article in some ways complements the JCR article—expanding on one of the themes, ontology, discussed there—and is directed at integral theorists who, in turn, are generally not familiar with Critical Realism.

As such, it will begin with a brief, broad outline of the various phases of Critical Realism/metaRealism, and will then present a more detailed examination of the first sub-phase of transcendental realism, which provided the philosophical ontology that serves as the cornerstone upon which the whole critical realist edifice is constructed. This will include a comparison with Kant's transcendental idealism and a discussion of how Roy Bhaskar developed his stratified ontology following the demise, and various critiques, of logical positivism. How these critiques paved the way for a number of insights that led to his revindication of ontology, his distinction between the intransitive and transitive dimensions, and his depth ontology, will then be considered. Finally, the specifics of this ontology will be outlined. That will constitute part one. Part two will then discuss the subsequent phases of Critical Realism and metaReality, focusing especially on how the original ontology of transcendental realism is expanded in each, ontology being both the nucleus of Critical Realism and the focus of this series of articles. This will be followed by an examination, in part three, of the critical realist historical analysis of the epistemic fallacy: how ontology—starting with the Greeks (especially Parmenides and Plato) and accelerated by modern philosophy (especially Descartes, Hume and Kant)—has been reduced to epistemology. This insightful critical realist critique of the historical-philosophical irrealism and de-ontologization of the world complements the robust philosophical ontology established by transcendental realism and expanded in subsequent phases. Together they provide a powerful case for a depth ontology. Having presented the critical realist case for depth ontology, part four will then turn to the status of ontology in Integral Theory, focusing on Ken Wilber's pre-postmetaphysical ontology, his stronger social constructionist position in his post-metaphysical phase, and on recent moves within Integral Theory toward a more explicit embrace of ontology. Finally, the question of whether a critical realist ontology could be more fully integrated within Integral Theory, together with the possible consequences and benefits that might have for Integral Theory, will be examined. In other words, part four will discuss the possibility of an "integral realism," an integral theory conjoined with the critical realist ontology, with the latter strengthening the former while at the same time being enriched by it.

Critical Realism/metaReality: A Broad Overview

While there have been many contributors to the development of Critical Realism, especially basic critical realism, its chief architect, and the originator of each of its phases, is Roy Bhaskar.[2] He began, in *A Realist Theory of Science* (1975), with a philosophical ontology that challenged the very roots of the positivist conception of science that had dominated philosophy of science since the turn of the 20th century. From the natural sciences he then broadened his scope to cover the social sciences, establishing, in *The Possibility*

of Naturalism (1979), a "third way" beyond the dominant and antinomic traditions of hyper-naturalistic positivism and anti-naturalistic hermeneutics. Later, in *Scientific Realism and Human Emancipation* (1986), which expanded on themes already begun in *The Possibility of Naturalism*, Critical Realism more explicitly embraced ethics and social emancipation, which would then be deepened in his later dialectical and meta-Reality works. This first productive wave constitutes the first of three major phases, called *basic* (or original) *Critical Realism*, which is typically divided into the sub-phases, outlined above, of transcendental realism (a philosophy of science), critical naturalism (a philosophy of social science), and explanatory critique (an ethical naturalism that permits the move from facts to values).[3] Like Ken Wilber's works, each anterior phase is preservatively sublated, or "transcended and included," in later stages, and they form a consistent whole that is rooted in the robust ontology outlined in the first sub-phase of transcendental realism. As we shall see, Bhaskar's system eventually comes full circle in the final phase of metaRealism, having begun with non-identity or real difference in the world and ending in identity, with each phase expanding the original ontology until it eventually embraces the whole of the relative world of duality and the absolute world of nonduality.

The second major phase is called *dialectical critical realism*, elaborated in *Dialectic: The Pulse of Freedom* (1993) and *Plato etc.* (1994). These works deepen and enrich basic critical realism, provide a sophisticated (critical) realist reworking of the predominantly idealist Western dialectical tradition, and offer a deep critique of the generally irrealist orientation of Western philosophy. A major concern of this phase is the development of an emancipatory ethics, "a general metatheory for the social sciences" that will empower them as "agencies of human self-emancipation" (Bhaskar, 1993, p. 2). The next sub-phase of *transcendental dialectical critical realism*, represented by *From East to West* (2000), marks the beginning of Bhaskar's "spiritual turn" and acts as a bridge to the third major phase of metaReality*,* elaborated in three works all published in 2002: *From Science to Emancipation, Reflections on MetaReality*, and *The Philosophy of MetaReality*. Like Integral Theory, the philosophy of metaReality stresses an absolute reality of nonduality that underpins and sustains the relative world of duality but, unlike Integral Theory, it emphasizes "an esoteric sociology of everyday life" where transcendence is a ubiquitous and vital constituent of social life.[4] It offers a "secular spirituality" that complements Integral Theory's spirituality, which is based more thoroughly on the great wisdom traditions and state-stage (complementing structure-stage development) realization. Each of these phases will be considered from the point of view of ontology starting with the foundational ontology established by transcendental realism.

Transcendental Realism: The Cornerstone of Critical Realism

Transcendental realism provides the foundational philosophical ontology that is later developed in subsequent phases, all the way to the nondual. It is so named to emphasize both its use of transcendental deduction (like Kant) to probe the nature of reality and its belief (unlike Kant) in the objective, mind-independent existence not only of categories like space, time, and causality (*categorial realism*) but also of underlying causal mechanisms and structures that lie beneath the world of immediate or actual experience (*depth or ontological realism*)—and which can be deduced by transcendental argument. Kant believed in the mind-independent existence of the concrete contents of experience (empirical realism), but not the categories (which he claims are imposed on reality by the mind) or underlying causal mechanisms. He was the first philosopher to make systematic use of transcendental arguments, and Bhaskar's use of them was facilitated by their return to respectability in the mid-1960s as the grip of positivism began to loosen.[5] Transcendental argumentation involves taking some human activity and asking what must be true for that activity to exist, to be possible.[6] As we shall see, Kant asked what must be the case for empirical knowledge in general to be possible, while Bhaskar focused on the more specific question of the possibility of experimental activity—what must the world be like for experimental science to be possible. This first section will contrast Bhaskar's transcendental realism with Kant's transcendental idealism, considering the essential nature of the latter and then Critical

Realism's critique of it. This will serve not only to clarify aspects of transcendental realism, but also as essential background for the later discussion, in part four, of Integral Theory's post-metaphysical phase.

Kant's Transcendental Idealism

Kant's transcendental idealism made use of both transcendental argument and the postulated existence of synthetic *a priori* propositions to combat Hume's skepticism about science (and God).[7] Hume had argued against the objective necessity of causality (and of God and the self), pointing to deep flaws in the other bulwark of empirical science, induction.[8] Kant argued that while Hume's claim that causality can neither be observed nor derived logically from sense observation was true, the fact is we know causality acts in the "empirical world"—Newtonian science shows that—and consequently there must be features in the world that lie beyond observation and logic. So to Hume's (and Leibniz's) analytical *a priori* propositions (whose truth is logically *necessary* and established *a priori*, independently of experience) and synthetic *a posteriori* propositions (whose truth is *contingent* and established *a posteriori* through observation, experience and experiment), Kant added synthetic *a priori* propositions.[9] These applied to the world of experience and added to our knowledge of reality (synthetic); but they were necessary and universal, and could be established by argument alone, not derived from experience (*a priori*). His argument hinged on the distinction between a knowable, phenomenal world of appearances and an inaccessible, transcendent noumenal world of things-in-themselves. Our knowledge of the phenomenal, "empirical world" (as it appears to us in experience), however, is limited not just by what is actually in the world but also by the apparatus through which we experience it. We can only experience or know what our sensory, intellectual, and conceptual apparatus (capacities)—our predispositions or forms of possible experience—permit us.

Kant specified what these predispositions were through synthetic *a priori* propositions and transcendental argument, through his answer to the question: What must be the case for empirical knowledge of the world to be possible? Humans have, argued Kant, forms of Sensibility (the forms of space and time) and forms of the Understanding (or categories, including causality and substance). Kant claimed that space and time, just like Hume's causality, could not be validated by observation or logic.[10] But through his synthetic *a priori* propositions, he argued that space and time were not features of things as they are in themselves (we cannot know or discuss anything about that noumenal realm) but are rather "imposed upon our experience, upon the world as object of experience, by the nature of our sensibility" (Warnock, 1987, p. 176). And the same goes for the forms of the Understanding, for categories like causality and substance. Our sense apparatus (forms of sensibility) is so constituted that we necessarily *perceive* everything as ordered in space and time, while our mental apparatus (forms of understanding) is such that we necessarily *conceive* every thing as being something (as having a real identity) and every event as being causally interrelated.

In this way, Kant supplemented empirical observation (synthetic *a posteriori* propositions) and logical derivation (analytic *a priori* propositions) with forms of possible experience (synthetic *a priori* propositions). And in so doing he claimed to have resolved the problems created by Hume's scepticism—certain knowledge of the empirical world *is* possible (at least subjectively) because it is already saturated with the mind's forms and categories—and accounted for Newtonian science, which depicts an orderly world of causal interrelationships occurring in space and time and specifies scientific laws capable of highly accurate prediction of events. Such a world is inevitable because of the nature of our sensory and conceptual apparatus, which actively digests and comprehends our impressions of the world, imposing their structures on it.[11] All possible experience, then, is determined by our specific sensory and mental apparatus, which set necessary limits to science and human knowledge. All we can hope to gain knowledge of is the actual world of appearances, the phenomenal world of common sense and science; the noumenal world of things-in-themselves exists independently of us, of our sensory and mental apparatus, and is therefore out of bounds. As a result, any attempt to venture beyond the bounds of actual and possible experience into the world of things in themselves will

result in empty metaphysics.

As mentioned, this discussion of Kant's transcendental idealism will provide a necessary background to the later discussion of the Kantian legacy of Integral Theory's post-metaphysics. For the moment, we can mention—as a suggestion that will be examined more fully in part four—that while Critical Realism is right in rejecting Kant's categorial irrealism (his rejection of the objective necessity of space, time and causality, among other categories)[12] and in insisting instead on a transcendental realism that outlines a depth ontology based on natural necessity located in the world, Integral Theory is right in stressing the neo-Kantian structures (developmental stages) of the mind. Further, the two metatheories could become mutually enriched if a) Critical Realism embraces, within an expanded critical realist ontology, these neo-Kantian structures—and the developmental stage conception in general—that play such a key role in Integral Theory (Bhaskar is very open to this and has observed that the developmental logic stressed by Integral Theory is implicit in several aspects of Critical Realism);[13] and b) Integral Theory moves away from the rather strong social constructionist stance of its post-metaphysical phase and toward an adoption of critical realist ontology (there are already moves within Integral Theory in this direction, as we shall see in part four).[14] Kant and his transcendental idealism is the grandfather of modern social constructionism, which, in its weak form, is embraced by both Critical Realism and the works of Integral Theory (e.g., Integral Psychology) that preceded its post-metaphysical phase. It is very clear, as Kant highlighted and as modern science (e.g., neuroscience and developmental structuralism) has refined, that our physical/neurophysiological and mental/conceptual apparatus and structures heavily affect our knowledge of the world—as, of course, does our embeddedness in social and cultural structures. But Integral Theory's post-metaphysical move to a stronger form—perhaps due to an overzealous desire to make spirituality acceptable to modernity and postmodernity?—is arguably unnecessary and could be avoided if it moves closer toward a critical realist ontology, which is fully compatible with the fundamental contributions of postmodernism and social constructionism and foolproof against their excesses (like judgemental relativism).[15]

Critical Realism's Critique of Kant and its Transcendental Realist Alternative

Critical Realism embraces Kant's use of transcendental argument but thoroughly rejects his transcendental idealist conclusion, his embrace of Hume's empirical realism and ontological actualism,[16] and his rationalist criteria that knowledge be certain, universal, and foundational. It also rejects his claim to have initiated a "Copernican revolution" in epistemology, switching the traditional view by explaining the order we perceive in the world by the order the observer imposes on it rather than residing in the world itself. As many commentators have pointed out, this switch actually inverts the Copernican revolution, which was *de-anthropocentric*, since it moves humans to the center rather than the periphery. Bhaskar (1986/2009) claims that the re-vindication of ontology in his transcendental realism involves a true Copernican revolution "in the strict sense (of Copernicus, not Kant) of a de-anthropocentric shift in our metaphysical conception of the place of (wo)man in nature in which the umbilical cord uniquely tying thought to things in traditional philosophy is snapped …" (p. 4).

It is this anthropocentrism and subjectivism that is its most obvious problem, at least from the perspective of Critical Realism. Transcendental idealism can be seen as an advance on empiricism in that it brought structure into the world, but the structure was purely subjective so it ended up separating the knowing subject from objective reality. There is no way of knowing whether the human mind's cognitive categories and concepts are related to the world beyond its phenomenal experience. Ontology, once more, is reduced to subjective epistemology. As Bhaskar (1994) puts it:

> …. to sustain the concepts of the necessity and universality of laws (ontological) structure is *involuted* with the transcendental subjectivity of mind, in a radical de-

> ontologization of the world which is the price Kant pays for resurrecting structure within a fundamentally Cartesian model of man. (p. 204)

Furthermore, adds Bhaskar, Kant fails to show how we can directly know, rather than just think, his synthetic *a priori* propositions; and he adopts Hume's ontological actualism and empirical realism that results from the latter's analysis of causal laws ("constant conjunction plus subjective contribution of mind") (Bhaskar, 1994, p. 204), which means that Kant's transcendental idealism, like Humean empiricism, cannot account for the possibility of experimental or applied science (see final section).[17]

Bhaskar's solution to these problems is to use Kantian transcendental argument to establish the conditions of possibility for experimental (and applied) science, thereby placing structures (generative mechanisms acting as the causal power of things in a stratified ontology) and categories (space, time, causality, identity/substance, etc., and others like emergence, and later absence) in the world itself—not imposed on the world by the human mind. These structures and categories are constitutive features of the world, of the *intransitive dimension* (a theory-independent realm), which can be discovered or described in the *transitive dimension* (consisting of our fallible, socially produced knowledge of the objects in the intransitive dimension). This does not, of course, preclude the existence of such empirically proven neo-Kantian structures in the mind like stages/structures of consciousness or personality structures, which condition our interpretations of the intransitive world. What it does is underline the ontological stratification of the world, the existence of a deeper "real" domain beyond the "actual" and "empirical/subjective" domains stressed by empiricism and transcendental idealism, the reality of emergent strata with emergent properties and causal powers, and so provides an all-inclusive ontology that will eventually embrace everything from illusions to the nondual.

Critical Realism's depiction of a changing, indeterminist, ontologically bivalent[18] world—one which makes room for emergence and absence as causally efficacious, not just an ontologically monovalent world existing of presence alone—allows for true (transformative) ethical agency without the need to posit a noumenal realm of freedom split-off from a deterministic phenomenal realm.[19] With the philosophy of metaReality, Bhaskar brings in an absolute realm of nonduality, but this is inextricably linked to the relative world of duality and in fact sustains it. And dialectical critical realism's insistence on dialectical universality and concrete singularity also avoids the abstract analytical universality that underlies Kant's Categorical Imperative.[20] The overall position of Critical Realism/metaRealism on causal agency (and thus transformative ethics) can be summarized as follows: Consciousness is enfolded as potential in matter, since the Big Bang, and emerges diachronically in life and then as mind with irreducible, causally efficacious powers that act upon the world, in humans, via an intentional agency that is constrained by the structures and context of the natural and social worlds. This position avoids both the "dualistic disembodiment" of idealism and the "reductionist reification" of materialism (Bhaskar, 1994, p. 101), incorporating critical realist and dialectical critical realist positions within a more encompassing metaRealist position that places the relative world of duality within a sustaining realm of nonduality.

Critical Realism, then, critiques Kant's actualism, ontological monovalence (a purely positive account of being; the denial of absence as real determinate being; the belief that only presence, not absence, affects reality), abstract universality and the split between the phenomenal and noumenal worlds (making causal agency impossible), as well as, above all, his transcendental idealist epistemology that de-ontologizes the world. In its place, it offers a robust depth-ontology with structures and categories existing in the world itself. Such a move provides a powerful philosophical basis for transformative ethical agency, geohistorical tendential directionality, and the actualization and realization of ever-deeper potentialities and needs. And it is fully compatible with the existence of neo-Kantian structures in the mind of the type revealed by developmental structuralism (which are now objects of knowledge in the transitive dimension) and highlighted by Integral Theory.

There are, of course, also many reasons for praising Kant. His (albeit failed) attempt to synthesize empiricist (reliance on contingent experience) and rationalist (stress on the *a priori*) positions and to make room for both faith and free will (and thus ethics) alongside the deterministic world of Newtonian science, was unquestionably impressive. He also provided deep insight into how our sensory and conceptual apparatus actively grasps and digests our impressions of the world, imposing their structures on it. This truth has been taken up by neo-Kantians like Piaget and other constructivist developmental psychologists and by social constructionists and is embraced by both Critical Realism and Integral Theory. What we do not need to take on board, however, is either Kant's categorial irrealism that places the forms of sensibility (space and time) and categories (like causality) in the mind, rather than in the world; or a strong social constructionism, and consequent judgemental relativism, that some elements of postmodern philosophy have fashioned out of Kant's initial insights.[21] Furthermore, Kant was a key spokesman of what Wilber (1995) calls the *Ego camp*, which championed the worldcentric, rational autonomous ego-subject/will that could rise above lower egocentric and ethnocentric impulses and heteronomy. This was clearly a developmental advance, but, as we saw, it embodied an abstract universality that ignored concrete singularity; and it also created a rift between an atomistic subject and the world of nature and a dessication of life (which the opposing *Eco camp* of the Romantics reacted against). While Kant cannot, of course, be held solely responsible for what happened to the Ego camp, it ended up, in Wilber's view, "absolutizing the noosphere" and becoming a truncated Eros that degenerated into Phobos (fearing and repressing the lower: nature, body, sexuality) (Wilber, 1995, p. 477).[22]

Finally, as Wilber (1995) also stresses, Kant's three critiques clearly differentiated the three value spheres (art, morals, and science), which broadly correspond to the four quadrants or "Big Three" (I, We, It/s). This differentiation was an irreversible move of modernity and allowed each to develop according to its own criteria without colonization by the others. What was then required, and what Wilber aims to do with his AQAL model, is to integrate these value spheres—which Kant tried, but failed to do, in his third critique. The task of integration, argues Wilber, must be undertaken by vision-logic (or post-formal, dialectical thinking, *Vernunft*—speculative reason) rather than formal operational, analytical thinking, *Verstand* (the understanding). "What rationality had put asunder, vision-logic would unite … *What modernity differentiated, postmodernity must integrate*. And if rationality did the differentiation, then postrationality must do the healing (and postrationality, I have been maintaining, is predominantly vision-logic)" (Wilber, 1995. p. 403). Wilber mentions a number of attempts via vision-logic to achieve such an integration, including Gebser's integral stage; Habermas' theory of communicative action; Heidegger's "centauric" being-in-the-world and, above all, the pioneering German Idealists, Schelling and Hegel.

Today, it could be argued that Integral Theory and Critical Realism, together perhaps with Edgar Morin's Complex Thought (e.g., 2008), are the three philosophies best positioned to achieve such a postmodern—or rather post-postmodern—integration. They all stem from post-formal thought, deploy dialectical thinking (Integral Theory more implicitly, Critical Realism and Complex Thought explicitly, both reworking Hegelian dialectic), are driven by a deep integrative and emancipatory impulse, embrace interiority and, to differing degrees, spirituality, and reject the exclusive use of analytical thinking, its reductionism and tendency towards instrumental rationality.

The Emergence of Transcendental Realism

Having outlined the critical realist critique of Kant and its transcendental realist alternative, the historical/philosophical background and developmental process, and finally the specifics, of transcendental realism's depth ontology can now be considered. At the time Bhaskar devised his transcendental realism—*A Realist Theory of Science* was published in 1975—ontology was taboo. Logical positivism had dominated the philosophy of science from the turn of the century until the late 1960s, receiving a number of fatal blows only some years before. It adopted Hume's implicit ontology of empirical realism, which, as we saw, equates real-

ity with actual experience or perception, and causal laws with "constant conjunctions of events plus subjective contribution of mind" (Bhaskar, 1994, p. 204). In other words, ontology is reduced to epistemology (the epistemic fallacy) and being to attributes of human being (the anthropic fallacy).

As a result, ontology had been reduced to epistemology since at least Hume, and Bhaskar (1993, 1994) argues that the seeds of the epistemic fallacy had in fact been planted at the very beginnings of Western philosophy, tentatively by Parmenides and then more overtly by Plato. In modern philosophy, Descartes then consummated the Greek move toward epistemology and the epistemic fallacy, argues Bhaskar, by making "our access to reality [take] definitive precedence over —and indeed [determine]—the question of the nature of reality." He "sets the cast of the representationalist view of knowledge" and of what Bhaskar calls "the Cartesian-Lockean-Humean-Kantian paradigm," assuming that we can know reality only "from the immediate data of consciousness, so sowing the seeds for the scepticism, subjective idealism, classical empiricism and solipsism to come" (1994: 185-186). The critical realist historical analysis of the epistemic fallacy, especially of the Greeks, will be examined in fuller detail in part three.

Bhaksar's revindication of ontology was thus a radical departure from mainstream Western philosophy. It challenges the epistemic fallacy and implicit ontology (empirical realism) that underlies, and is presupposed by, all current metatheories in both the natural and social sciences: not only Humean empiricism and positivism but also Kantian and neo-Kantian transcendental idealism and the radically anti-positivist traditions in the social sciences of hermeneutics, social constructionism and postmodernism in general—and Integral Theory, which also fails to disambiguate clearly between ontology and epistemology and lacks the critical realist notion of ontological stratification. While Integral Theory has elaborated a deep critique of "flatland" (the reduction of interiors to exteriors), it has failed to spot the reduction of ontology to epistemology and also the other "flatland" reduction of the real to the actual and empirical domains.

Logical positivism was the latest manifestation of the positivist conception of science that had dominated Western philosophy since Hume (and via Mill and Comte), and Bhaskar's *Realist Theory of Science* provides an anti-positivist alternative that built upon a series of fatal blows to the positivist account from a number of philosophers of science, and added its own powerful contribution of a new depth ontology. The overview of logical positivism will be followed by an examination first of Popper's crucial contribution to its demise and later of the further blows delivered by other philosophers of science in the 1960s, including Kuhn, Lakatos, and Feyerabend. This will be paralleled by an account of how Bhaskar used these "cognitive resources" to develop his critique not only of positivism/empiricism but also of neo-Kantianism, his distinction between the transitive and intransitive dimensions, and his stratification of reality into the real, actual, and empirical domains.

Logical Positivism

In essence, the logical positivist conception was a Humean empirical realist reduction of reality to atomistic sensory experience and of causal laws to constant conjunctions of events combined with turn-of-the-century innovations in logic (Frege, Russell, and Whitehead), using the criterion of verifiability to distinguish meaningful from meaningless propositions, sense from nonsense. It was a liberal-scientific reaction against theology and the German philosophical tradition, especially its idealism, Romanticism and Hegel, with the main figures all being from Vienna (hence the Vienna Circle). They took their starting point from the Austrian physicist and philosopher of science Ernst Mach, whose epistemology was very similar to Hume's, seeing knowledge as coming from the senses and science as basically a "description of sensation" (Ayer, 1978).[23] So logical positivism contained no real innovations in epistemology; what was new was both its tools of logic and its zealous scientism.[24] With respect to the latter, it took the attack on metaphysics that had begun with the British empiricists and especially Hume to its ultimate extreme, reducing all religion and much of past philosophy to metaphysical nonsense.

After Hume, Kant had tried to salvage the subject matter of traditional metaphysics (for him: God, freedom and immortality of the soul) which, while inaccessible to pure reason (reason unattached to sense experience), nevertheless remained coherent with practical (dialogical, moral) reason.[25] But he fully agreed that metaphysics had become embroiled in endless disputes, having found no reliable method (unlike mathematics and science) and thus no reliable knowledge. He therefore, as we saw, subjected it—and the scope of pure reason—to a critical appraisal. We gain knowledge of the world, he argues, through sensory experience of objects that trigger the mind, with its *a priori* structures, which then digests and orders its experience. More precisely, as Copleston (1960/2010) describes it, external objects or things-in-themselves are received through the senses and synthesized "in the *a priori* sense intuitions [forms of sensibility] of space and time" (p. 229); the understanding "then further synthesizes the data of sense intuition under its own pure (non-empirical) concepts or categories." This means that the categories of the understanding cannot be applied to supersensible realities, making any metaphysics that attempts to do so a hollow pseudo-science. But, insists Kant, asking such questions about the ultimate nature of reality, God, and the soul is *metaphysics as a natural disposition*, which he distinguishes from *metaphysics as science*. It is actual and therefore possible. These "transcendental Ideas" are the result of a natural tendency of the mind "to seek unconditioned [i.e., 'as transcending the subjective conditions of sensibility and understanding'] principles of unity," the result of *Vernunft* (speculative reason).[26] This natural disposition of reason toward metaphysics and transcendental Ideas (which have a "regulative" not a "constitutive" function) is of positive value, but it cannot be used as the basis for metaphysics as science. To do so, to apply pure reason to supersensible realities, argues Kant, only leads to logical fallacies, contradictions, and antinomies.

So Kant accepts the value of metaphysics as a natural disposition (but not as science), since it urges us on to ever-wider conceptual schemas. Hegel then expands on these insights and gives a greater role for *Vernunft* and dialectical thinking, which takes the dialectical contradictions, antinomies, and oppositions exposed by the formal logic of the understanding (*Verstand*), recognizes the mutual interdependence of opposites, and searches for a more encompassing, expanded concept that can include both (as distinct but inseparable elements) in a larger rational totality—and so on recursively in a sequence of ever-more inclusive totalities.[27] For Bhaskar (1993), this is Hegel's "U-D-R schema," where U stands for the understanding, D for dialectical comment (recognition of the contradictions and their mutual interdependence, which is provoked by their analytical unacceptability), and R for speculative reason/*Vernunft*. From this U-D-R perspective, Kant's position is an advance in that it moves beyond U (understanding/*Verstand*/formal analytical thinking) to D (dialectical comment), "but [it] fails to take the further leap into speculative reason, fails to resolve [the antinomies]….so falling back as a philosopher of understanding" (Bhaksar, 1993. p. 21).

For Bhaksar, Hegel's great contribution was to isolate the logical structure of a dialectical process of learning and development. Bhaskar then takes this logical structure (the U-D-R schema)—which he also calls the "rational kernel" (following Marx) of Hegel's dialectic—liberates it from its "mystical shell" (its lack of a notion of real determinate absence, which led to Hegel's closed totality, "end of history" and denial of future change) and refines it in an "epistemological dialectic" that is driven by real determinate absence (instead of Hegel's indeterminate absence and negativity) and can be applied not just to epistemology but all processes of change (Bhaskar, 2002b). This results in a dialectic of learning, development, and freedom that is open, (critical) realist, non-linear, and moving in the direction of the eudaimonistic society.[28]

Kant, then, and even more so Critical Realism,[29] was far more open to metaphysics than the logical positivists. The latter were hostile to both religion and the Romantic idealism and metaphysics of German philosophy and so went much further than Kant, arguing that "any statement that wasn't either a formal statement (a statement in logic or mathematics), or empirically testable, was nonsensical. And so they cut away all metaphysics, in Kant's sense of the term" (Ayer, 1978, p. 96). This makes for three possible kinds of statements: a) meaningful (empirically verifiable—their verifiability criterion); b) analytic (tautologies if

true, self-contradictions if false); and c) meaningless (neither a nor b). All religion and theology, and much of past philosophy, belonged to c), to metaphysics, and was therefore nonsense. Science covered all knowledge: "science describes the world, the only world there is, this world, the world of things around us; and there isn't any other domain of philosophy to occupy itself with" (Ayer, 1978, p. 97). Philosophy, as the "handmaiden of science," was therefore reduced to examining the theories and concepts of science; to analyzing, clarifying, and exposing nonsense—coinciding here again with Wittgenstein.

The focus was thus very much on language, more so than ever before, and this was part of a general linguistic turn in philosophy of the 20th century to which the structuralists and post-structuralists added their own perspectives. For analytical philosophers like Ayer it is quite acceptable to essentially reduce philosophy to linguistic analysis, to the analysis of propositions, since "our investigation of the use of language *is* an investigation of the structure of the world *as experienced by human beings*" (Ayer, 1978, p. 104). For Critical Realism this is the linguistic fallacy in pure form, defined by Bhaskar as "the analysis of being as our discourse about being," and follows Wittgenstein's *Tractatus* claim: "To give the essence of propositions means to give the essence of all description, therefore the essence of the world" (both quotes in Hartwig, 2007, p. 174). The linguistic fallacy is the most common form today of the epistemic fallacy, found not just in analytic philosophy but also in postmodernism and Marxism.

Popper and the Demise of Logical Positivism

The first philosopher to incisively critique logical positivism was Karl Popper who, ironically, despite arguably doing more than anyone else to inter logical positivism, is often mistakenly placed among its ranks. This irony is deepened by the fact that Popper's critiques were published (in German, in *Logik der Forschung*, 1934) before the book that actually introduced logical positivism to the English-speaking world (A.J. Ayer's *Language, Truth and Logic*, 1936), where it became most entrenched. The English translation of *Logik der Forschung* (*The Logic of Scientific Discovery*) was not published until 1959.[30]

Popper's (1959) immanent critique showed that, according to logical positivism's own central tenets, not only religion and metaphysics but also science itself is nonsense—a devastating critique for such a scientistic philosophy. Most scientific laws are universal statements, yet universal statements are not empirically verifiable. This was based on the problem of induction that had been highlighted by Hume. For empiricism, universal statements or laws are inductive generalizations from accumulated observations of particular instances. However, this is problematic since we have no guarantee that such instances will always conform to the law and because no finite number of positive verifications can confirm a law. "All swans are white" seemed to be a confirmed generalization until black swans were found (in Australia). Critical Realism claims that its transcendental realist depth ontology solves the problem of induction (see final section, endnote 55). The problem for Popper was that the logical positivists, following Wittgenstein's *Tractatus*, were concerned with demarcating science from metaphysics via a criterion of meaning and sense, with the *verifiability criterion* aimed at *distinguishing meaningful from meaningless statements*. Popper (1959) proposed instead a *criterion of falsifiability* to *demarcate scientific from non-scientific theories* "without asserting the meaninglessness of metaphysics (which from a historical point of view can be seen to be the source from which the theories of the empirical sciences spring)" (pp. 315-316).[31] Popper was opposed to the whole notion of laying down a criterion of meaning, and found the focus that logical positivism, and later linguistic philosophy, placed on the meaning of words unproductive and even harmful.[32]

So despite sharing a number of commonalities with the logical positivists—Popper was also from Vienna, he too found German Idealism and especially Hegel distasteful, was very pro-science and saw it as a normative enterprise, and was concerned with finding a criterion of demarcation—his overall position was very different. And he coincides with Critical Realism and Integral Theory on a number of points. His ontology (a word Popper, in line with the general taboo on ontology, avoids) was quite broad, especially given the

hegemony of empiricist realist ontology when he first expounded his ideas, and included as real all objects in his Three Worlds (which broadly coincide with four-planar social being and the four quadrants, as Wilber notes).[33] This was based, like critical realist ontology, on a causal criterion whereby anything that "act[s] upon physical things" is real (Popper, 1974/2010, p. 215). He defended metaphysics (meaning, for Popper, that which is untestable), which he saw science developing out of: speculative ideas that were later shown to have a basis in reality—for example, the atomism of Democritus and Leucippus. This, incidentally, resonates with the position of Bhaskar's epistemology, his logic of scientific discovery, where a speculative, explanatory theory can, *a posteriori*, be shown to refer to a real entity. But due to his focus on falsifiability and lack of a depth ontology—Popper remained an empirical realist—such a move is not formally contemplated within his epistemology. Furthermore, Popper rejected narrow disciplinarity, defended indeterminism, emergence (when this notion was very academically suspect) and an open universe, and made clear the fallible, uncertain nature of knowledge. This last contribution is of crucial importance as it broke with the long quest (since Parmenides) in Western philosophy for certain, foundational knowledge. Both Critical Realism and Morin's work highlight its significance.[34] Finally, Popper's critical rationalism, which emphasizes the importance of transparency in one's theories and an embrace of constant criticism and self-criticism as a means of facilitating progress in knowledge, is a healthy goal (which Popper often only managed to espouse) to aim for.[35]

There are, of course, also many crucial differences between Popper and the post-formal philosophies discussed here. He had no interest in spirituality, was firmly bound to formal logic, despite his critiques of aspects of it, and was quite hostile to dialectics (despite modelling his own trial-and-error "epistemological dialectic" based on Hegel's dialectic triad).[36] He objects to, especially Hegelian, dialectic on a number of grounds, above all the dialectical tolerance of contradictions.[37] Nevertheless, he is a great admirer of Heraclitus (like Bhaskar and Morin)[38] and Imre Lakatos, who developed Popper's philosophy of science and strove to reconcile Kuhn and Popper, and developed a Hegelian-inspired "epistemological dialectic" that captured an underlying dialectical logic of the history of science. And while Bhaskar coincides with several elements of Popper's philosophy, and has benefited from, incorporated, developed, and recognized a number of his insights, he is also critical of many aspects of his philosophy.[39] But overall, Popper can perhaps be seen as clearing away some of the conceptual rubble that facilitated the move toward a more post-formal philosophy, as manifested in Integral Theory, Critical Realism, and Complex Thought.

Further Critiques of Logical Positivism

After Popper came a number of further critiques of logical positivism and the positivist account of science from philosophers of science like Thomas Kuhn, Imre Lakatos, and Paul Feyerabend, which will now be considered alongside Bhaskar's account of how his transcendental realist ontology unfolded.

Bhaskar (1998, p. x) characterizes the positivist vision of science as being supported by two pillars: "a monistic theory of scientific development" and "a deductivist theory of scientific structure." The former saw science developing linearly through the gradual accumulation of positive knowledge that is consistent with pre-existing theory. This was challenged first by Popper (who, as mentioned, stressed falsifiability and the revolutionary breakthroughs that accompanied it) and later by Kuhn (whose notion of paradigms challenged the consistency and even rationality of scientific development), Lakatos (a Popperian who, as noted above, attempted a synthesis/reconciliation of Popper and Kuhn, defending the rationality of theory choice and scientific change), and Feyerabend (an ex-Popperian who disputed the rationality of scientific change and, like Kuhn, highlighted the potential for incommensurability between competing theories). The second pillar ignored the non-deductivist element of the scientist's imagination involved in theory construction, and was challenged by "Scriven, Hanson, Hesse and Harré" who pointed to "the stratification of science … stress[ed] the difference between explanation and prediction and emphasize[d] the role played by models in scientific thought" (Bhaskar, 1975, p. 9). Bhaskar took the rational insights of each critical strand to develop his notions

of the transitive and intransitive dimensions, and ensured their coherence by adding a new depth ontology. Each of these critical strands will now be considered.

Critiques of the Monistic Theory of Scientific Development

Popper supported his hypothetico-deductive account of science, based on his falsifiability criterion, on logical grounds as well as historical (Einstein's theory of relativity had shown that not even the most solid theory in science—Newtonian mechanics—was certain) and moral grounds (it was easy to find confirmations of any theory—he was thinking, in the 1920s, especially of Marxism and psychoanalysis—so the "hallmark of a scientific attitude [morality] was to look for refutations") (Bhaskar, 1989/2011, p. 29). This new vision of science saw scientific knowledge emerging out of scientists' "creative intuition," which become hypotheses or conjectures that can then be tested and confirmed or refuted and remain until another hypothesis of greater explanatory power emerges. Induction plays no part, argues Popper, in this process. Scientific knowledge advances through its mistakes as stronger theories replace refuted ones, allowing in this way for non-linear, inconsistent development and revolutionary breakthroughs like Einstein's theory of relativity. This is why theoretical transparency and a critical (and self-critical) attitude are so important for Popperians and critical rationalism since they both facilitate the realization of error and thus progress.

Bhaskar (1989/2011, p. 26) argues that by recognizing the historical discontinuities in scientific knowledge and the rift between scientific knowledge and common experience (a recognition largely due to Popper; see endnote 39), we have to accept that scientific knowledge cannot result from either the common perception of given objects (empiricism) or from the imposition of human thought onto things (idealism)—or any combination of the two. Instead, there needs to be a clear distinction "between the unchanging real objects that exist outside the scientific process [intransitive objects residing in the intransitive dimension] and the changing cognitive objects that are produced within science as a function of scientific practice [transitive objects residing in the transitive dimension]" (Bhaskar, 1989/2011, pp. 26-27). It is to Bhaskar's lasting credit that he grasped the full philosophical implications of this "revolutionary fact," and worked it into a new depth ontology that is clearly disambiguated from epistemology.

To fully do so, however, he still needed the help of further insights from other philosophers of science. In 1962, Thomas Kuhn published his classic *The Structure of Scientific Revolutions*, which has been hugely influential in both the philosophy of science and the philosophy of social science—and in the humanities in general.[40] As is well known, Kuhn describes scientific development as moving through a cycle of *normal science* (a conservative period where there is a general, largely unquestioning acceptance of theory, methodology, experimental techniques, etc.), then *crisis* (where the number or type of anomalies that conflict with the accepted theory—which, in manageable numbers, is common and untroublesome and are not seen as falsifications á la Popper—has reached a point where normal science can no longer continue), which leads to *revolution* (where a new theory is proposed), and finally back to a new period of normal science where the new theory and accompanying methodology becomes the norm. He then explained this description of cyclical development through his (albeit vague and varied) notion of paradigm. In Kuhn's broader sense, paradigm refers to the general procedures, theories, and methods on which there is a consensus during normal science—also called a *disciplinary matrix*. In its more narrow sense, a paradigm is an exemplar, which is the most important element within the disciplinary matrix and can act as a model for research into which students are trained. Both meanings of paradigm explain the conservative nature of normal science, and we can see that what counts as a decisive refutation of the existing theory is less clear-cut, less formal and logical, than with Popper. Furthermore, whereas for Popper's critical rationalism the essence of science is to criticize accepted theories and welcome such criticism so as to facilitate progress, Kuhn's "normal scientists" are trained to maintain and apply accepted theories and view anomalies as largely unproblematic.

So Kuhn's account of scientific development, based on the history of science, clashed with both the

logical positivist and Popperian accounts. Popperians accused Kuhn of conservatism, of undermining the rationality of science and of promoting relativism, since "scientific acceptability is defined relative to a paradigm, rather than by reference to some fixed standard" (Bird, 2010, p. 70). Imre Lakatos, a Popperian, accepted Kuhn's historical criticism of Popper's falsificationism but sought to uphold the rationality and progressive nature of science by providing a new criterion of rational choice between theories. Bhaskar (1989) summarizes Lakatos' "brilliant development of Popper's philosophy of science" as follows:

> Every theory was always immersed in an "ocean of anomalies"; so that, strictly speaking, every theory was always falsified. In this context actual scientists had to be much more dogmatic, or tenacious, than the Popperian model allowed. Moreover, as Duhem had pointed out, every theory was formulated subject to an implicit ceteris paribus clause, so that the hypothesis of an intervening or disturbing influence could always be invoked to explain away apparent counter-instances. (p. 31)

Furthermore, Lakatos argued, the history of science shows that falsifications always occurred between two (or more) theories (not between one theory and some facts, as Popper's theory held), with the new theory replacing and refining the existing theory rather than completely refuting it:

> The original Popperian model had left a mystery: after the refutation—what? Or to put it another way, it could not account for the genesis of any new conjecture of research line. In real history, scientific theories do not spring from the void, but from the development and reworking of cognitive material that pre-exists them (Bhaskar, 1989, p. 31).

We can see from the passage above how Lakatos' reworking of Popper—together with Kuhn's emphasis on the social embeddedness of scientific practice—enabled Bhaskar to see scientific knowledge as a transitive dimension containing transitive objects of knowledge. As Bhaskar (1975/2008) describes in *A Realist Theory of Science*, these transitive objects are the:

> Aristotelian material causes … the raw materials of science—the artificial objects fashioned into items of knowledge by the science of the day. They include the antecedently established facts and theories, paradigms and models, methods and techniques of inquiry available to a particular scientific school or worker. (p. 21)

Popper's falsificationism had envisaged a universal generalization (a hypothesis) in logical relation with a single empirical statement that might falsify it. Lakatos, however, saw the research object as "a dynamic entity that may change over time—the research program—not a theory understood as a static set of propositions. At its heart is the hard core, the leading theoretical idea" (Bird, 2010, p. 72). A research program progresses if it adds to hard core auxiliary propositions (in what Lakatos called the *auxiliary belt*) that lead to "some corroborated excess empirical content" (i.e., predicts new facts that are not refuted when empirically tested) (Bhaskar, 1975/2008, p. 32). And it degenerates if it fails to add empirical content, or "reduces its scope (e.g., by building in exceptions) or adds uncorroborated ad hoc hypotheses" in order to "protect the hard core" (Bird, 2010, p. 73). Lakatos' *hard core* and development of the *auxiliary belt* roughly correspond, respectively, to Kuhn's paradigm-as-exemplar and normal science. But what is different is that Lakatos uses this distinction between progressive and degenerating research programs as his criterion for rational choice between theories. The theory or research program that has more "corroborated excess empirical content"—

predicts and explains more facts than another—is to be preferred.[41]

Lakatos' synthesis of, or attempt to reconcile, Kuhn and Popper was still insufficient to stop the ominous slide into relativism that Kuhn—and the zealous (mis)appropriation of his ideas by the humanities, strong social constructionists and postmodernists (see, e.g., Wilber, 1995)—and later Feyerabend had facilitated. This is because, argues Bhaskar, they lacked an intransitive dimension to complement and balance the transitive dimension that, together, they had all made apparent. Critical to this move toward judgemental relativism was the fact that both Kuhn and Feyerabend had emphasized not only inconsistency in scientific development but also pointed to the possibility of such a degree of conceptual difference between competing theories as to lead to incommensurability (no means of comparison via a common measure) (Bhaskar, 1989).

Relativist attitudes toward science have been inspired by postmodernism and poststructuralism (Foucault, Derrida, Lyotard), where science and its tools are portrayed as a means of perpetuating the structures of power and domination already in place in society. (The pros and cons of postmodernism and poststructuralism have been examined extensively in Integral Theory, and also Critical Realism). And there is a relation between Foucault's episteme and Kuhn's paradigm, although the former is broader and more radical than the latter, covering culture as a whole (Morin, 1992). Nevertheless, as Baghramian (2010) points out, "much of the philosophical inspiration behind relativism about science comes, not from French postmodernism but from the Duhem-Quine thesis of underdetermination of theory by data and the Kuhn-Feyerabend thesis of incommensurability" (p. 240).

A scientific theory is underdetermined if the evidence for it can also be used to support rival theories—fails to provide proof for it alone. The Duhem-Quine thesis goes further, claiming that:

> since it is only with the help of auxiliary hypotheses that we can decide if a specific set of observational consequences follow from given theory, it is always possible for any theory, together with suitable auxiliary hypotheses, to accommodate all recalcitrant data and experimental results … As a result 'any statement can be held true, come what may, if we make drastic enough adjustments elsewhere in the system' [Quine, 1953—The Two Dogmas of Empiricism]. (Baghramian, 2010, pp. 240-241)

Feyerabend used the underdetermination thesis to support his "democratic relativism"—that each society has their own way of seeing the world and deciding what is acceptable (i.e., cultural relativism)—and complemented it with his thesis of incommensurability (in *Explanation, Reduction and Empiricism*, published in 1962, the same year as Kuhn's *Structure*, which also discussed incommensurability). Both Kuhn and Feyerabend highlight that "the history of science is characterised by meaning-change as well as inconsistency (i.e., falsification)," which leads to the possibility of competing theories being so different that "they shared no statements in common, so that they were literally 'incommensurable'" (Bhaskar, 1989, p. 32). As a result, they argue, rational choice between competing theories (judgmental rationalism) is not possible. Bhaskar accepts that meaning-change characterizes the history of science and even that two theories might be (partially) incommensurable, but not that we therefore have to renounce judgmental rationalism. And he can do so because he posits a depth ontology and an intransitive dimension.

The argument against incommensurability is of interest, not only because of its stance against relativism but also because it illustrates the coherence of several key critical realist concepts as well as the problems that result from the denial of (or lack of an explicit) ontology. It shows the vital importance of clearly distinguishing between the intransitive and transitive dimensions, ontology and epistemology; and of the "holy trinity" of Critical Realism: *ontological (depth) realism* (Critical Realism's stratified ontology); *epistemic relativism* (all knowledge is socially produced, and thus transient and fallible, and is conditioned by a geo-historically determined epistemic framework); and *judgemental rationalism* (the ability to make a ra-

tional choice between competing theories).[42] These key critical realist concepts, incorporated within Integral Theory, would boost its own immune system against relativism (e.g., its "principle of unfoldment," where theories are judged based on the relative developmental unfolding of both the method and knowledge) quite considerably (see also Marshall, 2012).

Bhaskar discusses the problem of incommensurability in a number of places, most fully in *Scientific Realism and Human Emancipation* (1986, pp. 70-93). His essential argument can be summarized as follows: a) meaning-change does occur in science and incommensurability can occur (i.e., there is epistemic relativism)[43]; b) the very formulation of the problem of incommensurability between two theories itself presupposes that the two theories are talking about/describing/referring to the same world (i.e., there is ontological realism). Those who pose the problem but deny there is a theory-independent world are caught in a theory-practice (performative) contradiction;[44] c) as a result, we can use a Lakatosian criterion for rational choice between theories, choosing that theory which "can explain under its descriptions almost all the phenomena that [the other(s) theory] can explain under its descriptions, plus some significant phenomena that [the other(s) theory] cannot explain" (Bhaskar, 1986, p. 73) (i.e., there is judgemental rationalism). By invoking the three notions of epistemic relativism, ontological realism, and judgmental rationalism; and by distinguishing clearly between ontology/an intransitive dimension (a theory-independent world that is the common referent that the theories describe) and epistemology/a transitive dimension (a socially produced body of fallible knowledge, which includes the pertinent theories and their descriptions) the problem of incommensurability, and the slide toward judgmental relativism, is avoided. The example of Newton's and Einstein's theories illustrates these points. They both describe the same world/phenomena (ontological realism) but in radically different ways (epistemic relativism); nevertheless, we can rationally choose Einstein's as the superior theory because it wins out if we apply a Lakatosian criterion (judgmental rationalism): "there are … about eight or nine test situations in which Newtonian theory comes unstuck in its terms. But Einsteinian theory can explain them in its terms. So we have a purely quantitative criterion for preferring Einsteinian to Newtonian theory" (Bhaskar, 2000a, p. 13).

The various critiques of this first pillar of the positivist account of science, then, allowed Bhaskar to view scientific knowledge as fallible, as a fundamentally social process, and whose development is non-linear and inconsistent yet remains, despite challenges to the contrary, rational and follows a certain dialectic or developmental logic.[45] They enabled him to envisage scientific knowledge as the result of the creative use, by trained scientists in a thoroughly social and practical process, of cognitive resources and transitive objects (pre-existing knowledge in the form of facts, theories, methods, and paradigms) in what he came to call a *transitive dimension*. The problem with these critiques was that they lacked an intransitive dimension—a clear, explicit (depth) ontology of a theory-independent real world—to complement and balance the transitive one. This left them with the implicit ontology of empirical realism (which basically conflated ontology with epistemology) and consequently exposed to judgmental relativism. Epistemic relativism without ontological (depth) realism inevitably leads to judgmental relativism. But at that time, in the early 1970s, ontology was still taboo, and so before Bhaskar could elaborate an explicit (depth) ontology and intransitive dimension, he first needed the help of further transitive objects of knowledge, of cognitive resources that included critiques of the deductivist theory of scientific structure, the other pillar of the positivist account of science that will now be considered, as well as structuralist critiques of empiricism and the use of transcendental argument.[46]

Critique of the Deductivist Theory of Scientific Structure

The attacks on the second pillar of the positivist account of science, observes Bhaskar (1994), focused on "the lack of sufficiency of Humean criteria for causality and laws [and] the Popper-Hempelian criteria for explanation" (p. 38). As we have seen, in the Humean empiricism that underlies logical positivism, causal laws are equated with empirical regularities or constant conjunction of events and the problem of induction

already shows its insufficiency. Furthermore, the transcendental idealism of Kantians and neo-Kantians, like Rom Harré, stressed that causal laws contained something beyond constant conjunctions, "cognitive items," or structures in the form of artificially constructed "paradigms, heuristics, conceptual schemata, models or ideals—irreducible to syntactical operations upon sense experience, and which are essential for both the intelligibility and the empirical extension of theory. Such items function, as it were, as surrogates for natural necessity [the intrinsic structure or nature of a thing that governs its behavior]" (Bhaskar, 1986, p. 12). For transcendental idealism such structures are imposed on the world by the human mind (of the scientific community) and so constant conjunctions of events, while insufficient, still remain necessary for the ascription of natural necessity or operation of a causal law.

A similar Kantian critique of the Popper-Hempelian criteria for explanation was made, based as it was on the implicit ontology of empirical realism and on Hume's criteria for causality and laws. In fact, the Popper-Hempel explanatory model (also called the deductive-nomological or covering law model), which Bhaskar (1998, p. xi) identifies as "the lynchpin of deductivism," has been severely critiqued from a number of quarters and yet remains influential.[47] In essence, it says that an explanation involves the deduction of the *explanandum* (the event that requires explaining) from the *explanans* (which involves a set of premises that explain the explanandum).[48] These premises include a set of initial conditions (that which causes or enables the event) plus at least one universal law (conceived as Humean empirical regularities—"a is always followed by b").[49]

Bhaskar (1994, 1998) lists a number of problems with this model. First, it equates explanation with prediction—the knowledge required to deduce an event after it happens could be used to predict it before it happens. This assumes the ubiquity of closed systems which Critical Realism roundly rejects (see below). Second, it fails to distinguish between necessary and accidental sequences of events. "There may be a perfect correlation between the consumption of mangoes in Manchester and the Japanese birthrate, but there is no connection between them. A rash may be a good symptom, but it is not the cause of measles" (Bhaskar, 1994, p. 21) (i.e., the well-known "correlation does not imply causation"). Third, it fails to explain, and instead merely generalizes, the problem: "to say this acid turns litmus paper red or that this metal conducts electricity because all do is hardly explanatory" (Bhaskar, 1994, p. 20). It does not get to the real reason for something, its natural necessity, but simply remains with an inductive generalization, which as we saw is problematic. Moreover, the Kantian critics argued that true explanation required introducing new concepts, in the form of explanatory models, that are not present in the actual phenomena being explained. And then Bhaskar (1994) went further than the Kantian "model theorists," suggesting that these explanatory models might, in some cases, capture real generative mechanisms that exist at a deeper level of reality:

> On this vertical existential realism,[50] science is seen as a continuous and reiterated process in motion from manifest phenomena, via creative modelling by what the French philosopher Gaston Bachelard called "scientific loans" and experimentation … to their generative structures, which now become the new phenomena to be explained. (p. 21)

This is the essence of Bhaskar's "logic of scientific discovery," his epistemology that is fully based on his depth ontology. It is the very stratification of nature that imposes on science this necessary logic of discovery (and is reflected in the stratification of the sciences themselves: physics, chemistry, biology, psychology, etc.—which also reflect, as Integral Theory points out, the "Great Chain of Being"). The transcendental realist epistemology, and its accompanying model of explanation, will be discussed in more detail in part two of this series of articles (see also the final section of this article).

The anti-deductivists, then, had exposed the lack of *sufficiency* of Humean criteria for causality and

laws and the Popper-Hempelian criteria for explanation, pointing to the role played by explanatory models in scientific practice. What Bhaskar then did was expose the lack of *necessity* of Humean criteria for causality and laws and the Popper-Hempelian criteria for explanation, based on the philosophical ontology that emerged from his transcendental analysis of experimental activity. In so doing, he explicitly rejected the implicit ontology of empirical realism that was endorsed by positivists and transcendental idealists alike, arguing that the theoretical structures or analogical explanatory models of the Kantians could, *a posteriori*, be established, via either perceptual or causal criteria, as real entities. This brings us to the final section of part one, which will outline systematically—many have already been briefly touched upon—"the specifics" of the transcendental realist depth ontology.

The Specifics of the Transcendental Realist Depth Ontology

The key to establishing the new transcendental realist depth ontology was to refute the all-pervasive Humean theory of causal laws, which underlay both empirical realism and the Popper-Hempel explanatory model. Doing so would deal a severe blow not only to positivism/empiricism but also to transcendental idealism (which endorses empirical realism) and all the metatheories that derived from these two principal philosophical visions. And it would provide the starting point of establishing not only a vindication of ontology, for so long suppressed or reduced to epistemology, but also of the creation of a new depth or stratified ontology that would provide a robust base from which to develop an emancipatory philosophy.[51]

Bhaskar's Transcendental Analysis of Experimental Activity

Bhaskar's first step was to make use of transcendental analysis or argument—first used systematically by Kant and recently brought back into respectability by Peter Strawson (see endnote 5)—and combine it with an immanent critique of something that not only the positivists and empiricists but also the neo-Kantians accepted as an essential part of science: namely experience or, more specifically, experimental activity. As we saw, transcendental argument involves taking some human activity and asking what must be true for that activity to exist, to be possible. Specifically, Bhaskar asked: "What must the world be like for experimental science to be possible?" And what he found was that the empirical realist ontology and the Humean theory of causal laws on which it was based could not be true.

In an experiment, the scientist actively intervenes in nature by creating special laboratory conditions (a closed system) that enable an invariant sequence of events and the generative mechanism that produces it to be identified. Danemark and colleagues (2002) give the example of a Nobel Prize–winning experiment by Otto Loewi, in 1920, that clearly illustrates this. To show that nerve control of bodily functions came not directly from electrical impulses (as was generally believed) but from chemical substances after stimulation by electrical impulse (as Loewi believed), he set up the following experiment (which actually came to him in a dream):

> He took two frogs hearts, one with all the nerves intact and one without any nerves. He put the first heart into a salt solution and stimulated the vagus nerve, which has a retarding effect and the number of heartbeats was reduced. If his hypothesis was correct, the chemical substance should now have been released and be present in the solution, which should be able to effect the other heart, even if this heart had no nerves at all. [He then] appl[ied] the salt solution to the second heart [whose] pace was reduced, as if the vagus nerve it no longer possessed had been stimulated. He could now conclude that the chemical substance operated through the muscle. He then varied the experiment by stimulating, in a new salt solution, the nerve that has

> an accelerating effect. When he put down the heart without nerves in this solution its pace, too, increased. (Danemark et al., 2002, p. 19)

Loewi thus created a closed system that enabled him to isolate a generative mechanism (the chemical substances)—by neutralizing the effects of other mechanisms (electrical impulses)—and so observe its effects (an empirical invariance: each chemical substance always affects heart pace in the same fashion—"whenever a, then b"). Outside the laboratory there are no closed systems (except in astronomy, which produces the only naturally occurring closed system since no countervailing mechanism is powerful enough to affect the trajectory of the planets) and therefore no empirical invariances. The natural (and even more so social) worlds are open systems where there is a multiplicity of mechanisms all operating together, all intermeshed and interfering with each other. As a result, empirical invariances are not to be found in nature, they do not occur spontaneously; they have to be produced.[52] The artificially produced closed system of the laboratory allows empirical invariances to be identified, and the generative mechanism that produces them to be detected, by neutralizing the effects of countervailing mechanisms. Each time Loewi, or anyone else (scientific experiments are repeatable), puts a nerveless frog's heart into a salt solution with the chemical substance produced by stimulating the vagus nerve of another frog's heart, the pace of the nerveless heart will slow down.

Loewi's experiment was necessary because without it the pattern of events (or empirical invariance) he revealed would not have occurred spontaneously. This shows that scientists are "the causal agents of the sequence of events but not of the causal law which the sequence of events, because it has been produced under experimental conditions, enables us to identify" (Bhaskar, 1975/2008, p. 33). The scientist produces (or creates the enabling conditions for) the sequence of events, but he does not produce the generative mechanisms or natural causal structures that are the basis for the causal law. As a result, "the real basis of causal laws cannot be sequences of events; there must be an ontological distinction between them" (ibid). Furthermore,

> experimental activity can only be given a satisfactory rationale if the causal law it enables us to identify is held to prevail outside the contexts under which the sequence of events is generated. In short, the intelligibility of experimental activity presupposes that a constant conjunction is no more a necessary than a sufficient condition for a causal law. (ibid)

Bhaksar's transcendental analysis therefore leads to a number of key conclusions. First, there is a reality that exists independently of our knowledge and concepts of it—an intransitive dimension. This intransitive dimension must be distinguished from the transitive dimension (which contains our fallible, socially produced knowledge of the intransitive dimension). If it is not, we are reducing ontology to epistemology; reifying our fallible, socially produced knowledge and concepts. Second, reality has hidden structures, mechanisms and powers that cannot be experienced directly. There is thus a "real" domain that underlies and produces the "actual" domain of events, some of which we experience in the "empirical" domain. And the real and actual domains would exist even if humanity did not. So the "empirical world" of empirical realism is fundamentally anthropocentric and captures only a tiny portion of reality. Empirical realism reduces reality to actual events that we experience. Third, causal laws cannot be equated with Humean constant conjunction of events. If they were, because the latter generally occur through the active intervention of scientists, then we would be "logically committed to the absurdity that human beings, in their experimental activity, cause and even change the laws of nature!" (Bhaskar, 1979/1998, p. 9). Rather, the basis of causal laws are generative mechanisms with causal powers that reside in the real domain. And these mechanisms operate transfactually (i.e., not at the empirical level but at the "real" level, independently of the closed system in which they were identified). Fourth, that reality consists almost entirely of open systems, which explains why empirical invariances are not spontaneously found in the natural or social worlds since there are always a host of mechanisms

operating together and affecting each other.

It should be noted that Bhaskar, adhering to the principle of epistemic relativism and the fallible nature of all socially produced knowledge in the transitive dimension, does not claim that the conclusions of his transcendental argument are certain or are the only possible ones. But he does claim that "they are the only plausible ones he knows of" and "are demonstrably superior to the non-realist alternatives that currently hold the floor in contemporary philosophy." And "the resulting realist account of science provides a clear and consistent alternative to positivism, which allows us both to save the cumulative character of science without restoring a monism and to rescue the 'surplus' component of scientific theory without plunging into subjectivism" (Bhaskar, 1986, p. 15)

Bhaskar's transcendental analysis of scientific experimentation, then, has highlighted a number of key elements: an intransitive and transitive dimension; three domains of reality (the real, actual, and empirical); open and closed systems; and causal laws based on the workings of causal structures and generative mechanisms that act transfactually and tendentially. These, and a number of other related notions like natural necessity, emergence, the stratification of reality and the sciences, and a causal criterion for reality, will now be considered more fully.

The Two Dimensions, Three Domains, and a Causal Criterion of Reality

The distinction between the intransitive and transitive dimensions and the three domains of reality, together with the view of causal laws as being based on causal structures and mechanisms that operate transfactually, constituted a radical break with empiricist ontology. The intransitive dimension, equated with ontology, consists of the transfactual structures and generative mechanisms of things, which are independent of our knowledge of them. The transitive dimension, equated with epistemology, consists of this knowledge in the form of scientific theories, models, paradigms, and methods—the "Aristotelian material causes" with which the scientist works to produce further and deeper knowledge of the independently existing intransitive dimension. This explicit distinction between ontology and epistemology and the two dimensions[53] enables Critical Realism to ground knowledge in a depth ontology and thus avoid ontological actualism, the epistemic fallacy and judgmental relativism, and also embrace the Popperian/Kuhnian/social constructionist insights into the fallible, relative, and social nature of scientific knowledge (epistemic relativism) while at the same time upholding judgmental rationalism.

The three domains overlap, with the real domain (comprising generative mechanisms, events, and experiences), including the actual domain (events and experiences), which in turn includes the empirical domain (experiences—later expanded to include the subjective). Thus: Dr ≥ Da ≥ De (Bhaskar, 1975/2008: 56). The three domains are normally "out of phase" with each other since events occur without us experiencing/perceiving them, and real structures (generative mechanisms) that cause a pattern of events require scientific experiments to be identified. Empirical realism tacitly assumes that the alignment of the three domains (Dr = Da = De) occurs spontaneously, whereas in fact all three domains coincide only during the socially produced scientific experiment: the scientist experiences the invariant conjunction of events and the generative mechanism that produces it. Skilled training and perception is required for Da = De, while the skilled creation of a closed system (an actual experiment) is required for Dr = Da (Bhaskar, 1975, pp. 56, 229). By reducing Dr to Da and by considering events and their conjunctions, rather than causal structures, the object of scientific study, Hume "[misidentifies] causal laws with their empirical grounds" (Bhaskar, 1979/1998, p. 9) and falls into ontological actualism, which reduces necessity and possibility to actual events and states of affairs. The real domain and thus natural necessity (the truth or intrinsic structure in things that cause their particular behaviour) are denied and so certainty in knowledge is sought for in epistemology rather than ontology (i.e., ontological actualism promotes the epistemic fallacy).

To incorporate this deeper real domain of causal structures and generative mechanisms into reality,

Critical Realism invokes a causal criterion—not just a perceptual one as empirical realism does. There are a number of justifications for adopting such a criterion. First, as Bhaskar (1979/1998, p.12) points out, science uses both perceptual and causal criteria, the latter turning on the object's ability to effect changes in matter. Magnetic and gravitational fields, for example, cannot be perceived but they affect matter. And we saw how Popper also adopted a causal criterion for reality. Second, the history of science has repeatedly shown how postulated causal entities, which were assumed to reside in a deeper, extra-empirical level of reality, have, *a posteriori*, been shown to exist. This is the very essence of Critical Realism's "logic of scientific discovery." Third, the technological advances (microscopes, telescopes, etc.) that have extended the scope of our senses have revealed realities that were previously unperceivable—so a deeper realm of hidden causal mechanisms and entities is clearly warranted. To use a purely perceptual criterion for reality not only restricts us to a tiny portion or reality; it also reveals startling anthropocentricity.

A causal criterion also allows critical realist ontology to be expanded into the social world (where emergent mind and its concepts and beliefs are causally efficacious on matter), and to embrace real determinate absence (in dialectical critical realism) and nonduality (in metaReality). In fact it leads to an all-inclusive ontology that includes everything that is causally efficacious. Such a criterion covers interiors as well as the exteriors, all four quadrants, all eight zones—the whole AQAL matrix, in fact. And by adding the real domain to the actual and empirical domains, Critical Realism moves beyond current anthropocentric awareness and knowledge to include everything that exists (material, non-material, social, cultural), even if we humans do not (yet) perceive, know or understand it.

Causality, Transfactuality, and Natural Necessity

For Critical Realism, causality is real; it is not a mental category imposed on the world, as in transcendental idealism. As we saw, Critical Realism defends categorial realism, in which not just causality but also space, time, absence, process, and totality are deemed real.[54] Neither does it equate causality, causal laws, with empirical regularities, with constant conjunctions of events observed by humans, as in Humean empiricism. Rather, it is the result of natural necessity, of the real essence or intrinsic structures and mechanisms of things and processes that cause their characteristic behavior. These structures and mechanisms belong to the real domain and produce, through their causal powers, actual events that we may or may not experience. By insisting on the ontological distinction between Dr and Da, Bhaskar (1975/2008) can define casual laws not as empirical statements but as

> ...statements about the forms of activity characteristic of the things in the world. And their necessity is one of natural connection, not a human rule. There is a distinction between real structures and mechanisms of the world and the actual patterns of events that they generate. And this distinction, in turn, justifies the more familiar one between necessary and accidental sequences. For a necessary sequence is one that corresponds with, or is in phase with, a real connection: that is, it is a real connection actually manifest in the sequence of events that occurs. (pp. 46-47)

This real structure of nature, this natural necessity, must clearly exist independently of human theory and experience, and would continue to exist irrespective of whether there were any humans to observe or theorize about it. The causal structures and mechanisms of things would continue to generate events and processes. And they of course endure and operate, even though we cannot observe the events they generate, outside the closed system created by scientific experimentation; in open systems where they exist alongside a multiplicity of other mechanisms that interfere with, and perhaps prevent, their normal workings. In other words, they exist *transfactually* (i.e., extra-empirically). The transcendental realist embrace of natural necessity and

transfactuality, incidentally, provide a solution, Bhaskar argues, to the perennial problem of induction that has haunted empiricism.[55]

The generative mechanisms of nature possess causal powers that may or may not be exercised. Further, because they operate transfactually, in open systems alongside countervailing mechanisms, their causal powers may be exercised but not manifestly so. As a result,

> causal laws cannot be simply analyzed as powers. Rather, they must be analyzed as tendencies. For whereas powers are potentialities that may or may not be exercised, tendencies are potentialities that may be exercised or as it were "in play" without being realized or manifest in any particular outcome. They are therefore just right for the analysis of causal laws... It is the idea of continuing activity, as distinct from that of enduring power that the concept of tendency is designed to capture. In the concept of tendency the concept of power is thus literally dynamized or set in motion. (Bhaskar, 1975/2008, p. 50)

Things and processes, then, contain structures, mechanisms, powers, and tendencies. Structures contain generative mechanisms that "exist as the causal powers of things" (Bhaskar, 1975/2008, p. 50) whose essential workings, because of the open systemic nature of the world, are best conceived as tendential: their powers may be unexercised (e.g., a seed without water or soil); exercised but not (or only partially) realized (a footballer's capacity to score a goal is prevented by a good save); and realized but unperceived (all events outside people's experience). As a result, "to invoke a causal law is to invoke a normic conditional," which says not "what would happen [a subjunctive conditional], but what is happening in a perhaps unmanifest way …. A normic statement is a transfactual statement, with actual instances in the laboratory that constitute its empirical grounds" (Bhaskar, 1975/2008, p. 51).

Open and Closed Systems

The difference between laboratory conditions and the natural (and social) world has been made clear. The former is a closed system, the latter an open one where a whole host of competing, interfering, and countervailing mechanisms clash and coincide in an incompletely fathomable whole. Hence the need for scientific experiments, which are designed precisely to avoid this tendential nature of causal mechanisms and the complex and distorting interactions found in the open systemic nature of the world. What they do is a) trigger the mechanism being studied (make sure its causal powers are activated, being exercised); and b) ensure that no other mechanisms interfere with or prevent these powers from being exercised and thus manifested. Loewi's experiment was a clear illustration of this.

In the natural sciences it is often possible to artificially create a closed system, whereas in the social sciences it is not. This is why Critical Realism argues that the social sciences should not be concerned with constant conjunctions of events as positivism requires, nor with a predictive criterion through test situations for theories (which is only possible in closed systems). Rather, social scientific theories should be judged on purely explanatory grounds—through their explanatory power with respect to the multiple causal mechanisms of social phenomena (Bhaskar, 1989/2011, pp. 82-85). While this takes us a bit beyond transcendental realism, the question of open systems and the inevitable complexity they entail is worth mentioning in connection to systems theory and, especially, Morin's Complex Thought, which is a complexification of systems thinking.[56] Both highlight the importance of context, of the whole which cannot be reduced to its parts, although systems thinking tends to reduce the parts to the whole while Morin insists, along with Integral Theory and Critical Realism, that neither can be reduced to the other. Morin (2008) points to the "pathology" of the "paradigm of simplicity," which is characterized by Cartesian "clear and distinct" ideas, analytical re-

ductionism of wholes into parts, and the isolation of objects from their environment and contexts. Scientific experimentation is a direct outcome of this paradigm, and while he of course recognizes the enormous scientific advances in the natural sciences it has led to, he rejects its exclusive use. The denial, or ignoring, of the open systemic nature of the world, is symptomatic of this paradigm of simplicity and is untenable if one is to gain knowledge of reality in all its complexity.

Furthermore, not only does the open systemic nature of the world mean there are competing and interfering mechanisms so that constant conjunctions do not occur naturally, but also, as Critical Realism stresses, virtually all phenomena are subject to a number of causal structures and generative mechanisms, very often from a number of distinct ontological levels. It talks of "open system phenomena" and "laminated systems" (Bhaskar, 2010b; Bhaskar & Danemark, 2006) which contain multiple strata or levels, each with their different emergent mechanisms, that often include the physical, biological, psychological, psychosocial, socioeconomic, cultural, and normative levels—so that a full understanding of such phenomena requires an understanding of all these levels and causal mechanisms.[57] It also implies the need for interdiscipinarity (stressed by both Integral Theory and Critical Realism) or, as Morin prefers, transdisciplinarity.[58]

Part of the complexity of open systems, then, is the multiple strata or emergent levels that most open systemic phenomena possess. And it is this stratification and emergence that will now be discussed.

Stratification and Emergence

Transcendental realism highlights three different kinds of depth or stratification in reality, two of which have already been considered—the distinction between the two dimensions and three domains. The third involves the division of reality into *strata,* or layers, and is intimately linked with the epistemology that follows naturally from transcendental realist ontology. Epistemology will be discussed more fully in part two, and only briefly touched upon here.

As was mentioned in the discussion on the anti-deductivists, transcendental realist ontology leads to a "logic of scientific discovery" that involves a reiterative movement from manifest phenomena (invariants/regularities) to the causal structures and mechanisms producing them. Bhaskar (1975/2008) describes it as a three-stage process whereby "a regularity is identified, a plausible explanation for it is invented and the reality of the entities and processes postulated in the explanation is then checked" (p. 145). Scientific knowledge thereby progresses through the discovery and explanation of ever-deeper layers or strata of reality, leading to always fallible but progressively truer knowledge—a process in principle without end. Bhaskar (1975/2008, pp. 168-169) gives an example of science's plumbing of ever-deeper strata of reality to illustrate the historical development of chemistry: an observable chemical reaction is explained first by one theory (of atomic number and valency), which is then in turn explained by another theory (of electrons and atomic structure), which is then explained by competing theories (of sub-atomic structure) yet to be established—and which will most likely eventually be provided with is own explanatory causal mechanism. Each successive explanation or theory is established, *a posteriori*, as a real causal mechanism.

This stratification of knowledge is also revealed by other sciences, and for transcendental realism it

> reflects a real stratification in the world. Without the concept of real strata apart from our knowledge of strata we could not make sense of what the scientist, striving to move from knowledge of one stratum to knowledge of the next, is trying to do: viz. to discover the reasons why the individuals which he has identified (at a particular level of reality) and whose behavior he has described tend to behave the way they do. Without this concept the stratification of science must appear as a kind of historical accident, lacking any internal rationale in the practice of science. (Bhaskar, 1975/2008, p. 170)

So scientific experimentation reveals a multiplicity of mechanisms that are ordered into strata or layers, with each specific science revealing ever-deeper strata that explain, without explaining away, previous, higher-order strata. And the sciences themselves are ordered into successive strata of ever more complex, or less basic, subject-matter, moving, in accordance with the evolution of the cosmos or ontological emergence of each successive levels of complexity, from physics to chemistry to biology to psychology; matter, life, mind. In other words, the sciences follow the Great Chain (Nest) of Being, as stressed by Integral Theory. And since each subsequent level "transcends and includes" its previous level, each time adding something new, higher-order strata and sciences cannot be reduced to lower order ones. Higher-order sciences are more complex, involving causal mechanisms from their own and all antecedent levels—especially the one in which they are "rooted." Higher-order levels are thus "emergent," and their operations "cannot be accounted for solely by the laws governing the lower order level in which we might say the higher-order level is 'rooted'" (Bhaskar, 1975/2008, p. 113). Emergence and anti-reductionism is of course a key notion endorsed by all three post-formal philosophies.

Transcendental realism thus provides a robust philosophical ontology based on a transcendental analysis of scientific experimentation that gives support to the broad holarchy of developmental stages stressed by Integral Theory. And the strata, or levels, that Critical Realism outlines consist of ontologically distinct levels, each with their own unique set of mechanisms, all conjoining in open system phenomena (or laminated systems) that require complex, dialectical, and integral thought, and inter-/transdisciplinarity, to fully capture.

Conclusion

This article has attempted to give a relatively detailed picture of transcendental realism, considering its foundational position within the context of Critical Realism as a whole and its emergence as a powerful alternative to both empiricism/positivism and transcendental idealism—and their offshoots. It examined the philosophical roots of both these positions, the transcendental realist critique of them and the cognitive resources within the philosophy of science that Bhaskar used as raw materials to forge his alternative depth ontology. It pointed to similarities with Integral Theory, as well as ways in which they might mutually enrich each other. Specifically, it highlighted elements of critical realist ontology that would strengthen, or supplement, existing components of Integral Theory: for example, a robust philosophical ontology based on a transcendental analysis of scientific experimentation; a clear disambiguation of ontology and epistemology, which would buttress its own existing defenses against relativism; the three members of the "holy trinity" of Critical Realism (ontological realism, epistemic relativism, and judgmental rationality) that provide a solid alternative that avoids the pitfalls of existing metatheories; and a notion of emergent strata or levels, again derived from a transcendental analysis of science, that parallels and supports Integral Theory's developmental stage conception.

It outlined the key elements of the transcendental realist ontology, including the notions of *natural necessity* (the truth or intrinsic structure in things that cause their particular behavior); *transfactuality* (the universal causal powers of generative mechanisms/structures that exist whether or not those powers are exercised, realized or manifested); *ontological depth/stratification* (reality consisting of a multiplicity of mechanisms that are ordered into strata or layers); *emergence* (higher order levels of this ontological stratification are emergent from lower-order levels in which they are rooted, but cannot be reduced to); *overlapping domains of reality* (the real: mechanisms, events and experiences; the actual: events and experiences; and the empirical: experiences); an *intransitive dimension* (consisting of the transfactual structures and generative mechanisms of things which are independent of our knowledge of them) alongside a *transitive* one (knowledge in the form of scientific theories, models, paradigms and methods which the scientist works with to produce further knowledge of the intransitive dimension); the notion of *open systems* (where a multiplicity of competing mechanisms interfere with each other and which inhere in the natural and social worlds); and a *causal criterion* for the ascription of reality which allows, eventually, for an all-inclusive ontology.

The base has therefore been set for further exposition, in the second part of this series, of critical realist ontology as it gradually unfolds through the subsequent phases of critical naturalism, explanatory critique, dialectical critical realism, and the "spiritual turn" of metaReality. During the exposition, suggestions will be made as to how the two philosophies might enrich and strengthen each other in specific aspects. Part three will then consider the critical realist critique of Western philosophy, which focuses on its generally irrealist orientation and its reduction of ontology to epistemology, and compare it with Integral Theory's own analysis of the broad strokes of Western philosophy. Together, parts one, two, and three will hopefully reveal a convincing case for depth ontology, in preparation for part four's discussion of Integral Theory's ontology, its potential strengthening by critical realist ontology, and the ways in which it might in turn enrich critical realist ontology, and obstacles that might inhibit a possible move towards "integral realism."

NOTES

[1] Critical Realism is less accessible than Integral Theory and lacks the latter's more general overviews. While there are a number of accessible introductions, these deal only with basic critical realism (e.g., Collier, 1994; Danemarrk et al., 2002) or dialectical critical realism (Norrie, 2010) and in much more detail. The *Formation of Critical Realism* (Bhaskar, with Hartwig, 2010a) provides the only overall consideration of Critical Realism in all its phases, and its dialogic nature makes it much more accessible than Bhaskar's written works. It is arguably the best place to start for the newcomer to Critical Realism, and has the additional bonus of providing insight into Roy Bhaskar's personal story as well as the story of Critical Realism's emergence and development, which I have made use of in this overview. However, it still assumes a fair amount of previous knowledge on the part of the reader and is not a systematic overview of the specific content (or developing ontology) of each phase. Moreover, none of the above craft their overviews with an eye on Integral Theory. The *Dictionary of Critical Realism* (Hartwig, 2007) should also be noted as an invaluable resource that includes condensed accounts of a whole array of key critical realist elements and concepts. Finally, Roy Bhaskar is currently writing *A Brief Introduction to Critical Realism* (http://www.routledge.com/books/details/9780415583794/); and Mervyn Hartwig's introductions to recently republished books by Roy Bhaskar are available online (http://independent.academia.edu/MervynHartwig), providing valuable overviews of each work.

[2] There is lively debate within Critical Realism, with many embracing some aspects but rejecting others, especially with respect to the different phases (see below). While some embrace all three major phases, many adherents of basic critical realism are uninterested in, or antagonistic to, dialectical critical realism and, especially, to metaReality.

[3] Critical Realism gets its name from the combination of *critical* and *realism* from the first two sub-phases. It also denotes both a relation with ("critical") and distinction from ("realist") Kant's philosophy.

[4] Wilber (personal communication, December 4, 2012) points out that Integral Theory talks about different degrees of transcendence, from the macro to the micro: from actual practices geared towards transcending the separate self-sense to developmental transcendence from one stage to the next to "moment-to-moment transcendence." In this last "micro" sense, Wilber explains that: "every moment (I have a kind of neo-Whiteheadian view), a subject comes to be. That subject prehends and includes its predecessor and in prehending it it has a consciousness and even an epistemic felt component embracing the being of its predecessor and then it adds its own amount of novelty and creativity … so that means that each moment transcends and includes the previous moment so transcend and include is something that's occurring at literally every moment of existence." This more nuanced breakdown is important to highlight, and points to types of transcendence that are not emphasized by Critical Realism/metaReality. But the everyday transcendence stressed by metaReality points to another kind of transcendence that, in turn, is not emphasized by Integral Theory. MetaReality distinguishes three ways in which nonduality underpins and sustains the relative world of duality: as its ground, as the ontological foundation of the cosmos; as the "deep interior or fine structure" of being; and as an essential constituent of social life, as "the mode of constitution of everyday life." This last way is where the stress on everyday transcendence comes in, since without nonduality, without certain features of transcendence, argues Bhaskar, we could not communicate with others, perceive or in fact do anything at all, even think. In other words, transcend-

ence is an ordinary, commonplace, in fact ubiquitous and central occurrence in our everyday lives. Bhaskar distinguishes four kinds of "everyday" transcendence with respect to this modality of nonduality: a) *Transcendental identification in consciousness*, which is essential for perception and basic forms of social interaction like reading, watching TV, understanding written or spoken communication, etc.; b) *Transcendental agency*, involved in spontaneous or mindful action; c) *Transcendental holism*, present in group activities like the team work involved in playing football or performing in an orchestra; and d) *Transcendental retreat or clearing*, entailing a "retreat into subjectivity," a pause in or suspension of one's activity that opens up a space or "clearing" to enable the emergence of something new.

For a summary of Wilber's core and secondary criticisms of Critical Realism, together with Bhaskar's response to them, see pages 35-38 and pages 39-42, respectively, in this issue. For Wilber's comments on Critical Realism, written before having seen Bhaskar's response to his core and secondary criticisms, see pages 42-55 in this issue.

[5] Thanks largely to P.F. Strawson's *Bounds of Sense*. Bhaskar (2010a, p. 40) recounts how Strawson had "established the respectability of something like a transcendental argument" in *The Bounds of Sense*, which was "a systematic attempt to understand Kant in Kantian terms." This stretched the existing methodological terrain beyond the hegemony of empiricism/positivism.

[6] Transcendental argument is a form of retroduction (see, for example, Bhaskar [2010a, 63]), where one starts from an actual observed event and then infers what structures, or transfactual (not just observable/empirical) conditions would best explain it. Both transcendental arguments and retroduction play a crucial role in Critical Realism since they are ideally suited to conceptualizing the underlying structures of the intransitive dimension, with retroduction acting as a key cognitive tool in critical realist explanation in the social sciences.

[7] The following account of Kant's transcendental idealism makes use of the following sources: Magee (1987, 1997); Bowie (2003); MacIntrye (1967/2002); Tarnas (1991).

[8] With respect to causality, Hume argued that the human mind consisted of sense impressions and ideas (faint copies of sense impressions) and that we cannot know anything beyond our immediate direct experience (of these ideas and sense impressions). This included not just God and the self but also causality since there is no sensory impression that corresponds to our idea of causality. As to induction, see the section below on Popper and the Demise of Logical Positivism and the final section.

[9] Hume (and Leibniz) had asserted that these are the only two types of meaningful propositions.

[10] Since nothing infinite could be experienced by humans and reason alone ended in antinomy when trying to prove their infinity or finitude.

[11] Alisdair MacIntrye (1967/2002) succinctly puts Kant's synthesis of Newtonian physics and Humean empiricism—his whole theory of knowledge—thus: "The empiricists had argued that we have rational grounds for belief in nothing beyond what our senses have already encountered; Newton's physics offered us laws applicable to all events in space and time. How to reconcile them? We can, Kant argues, be assured a priori that all our experience will turn out to be law governed and to be law governed after the manner of Newtonian causality, not because of the character of the external world but because of the character of the concepts through which we grasp that world. Experience is not a mere passive reception of impressions; it is the active grasping and comprehension of impressions, and without the concepts and categories by means of which we order and understand perceptions, it would be formless and meaningless. 'Concepts without perceptions are empty; perceptions without concepts are blind'."

[12] In dialectical critical realism, Bhaskar talks of the "tri-unity of space, time and causality" that extends the critical realist causality based on natural necessity to a notion of causality that involves absence as process.

[13] Bhaskar (personal communication) fully agrees that the developmental stages of Integral Theory and constructivist developmental psychology (CDP) need to be included within a critical realist ontology. He also points out that there are several aspects of Critical Realism that reflect an implicit recognition of the developmental stages highlighted by Integral Theory. The very system of Critical Realism, which moves through a series of phases that "transcend and include" each previous stage, is one example. Also, the phases outlined in the philosophical discourse of modernity (see Bhaskar, 2002b) similarly reflect such a developmental logic. And the levels of freedom outlined in dialectical critical

realism (Bhaskar, 1993, 1994) involve a "logic of dialectical universalisability," which kicks in especially at the level of emancipation and takes the individual from a desire to absent personal constraints to a desire to absent constraints on others and eventually on all of humanity (and all beings in the philosophy of metaReality). (The metaReality notion of co-presence, in which the alethic truth of all being is enfolded in every being, also reflects this.) It thus outlines a personal and geo-historical directionality—"from the primal scream to the eudaimonistic society"—which broadly follows the developmental logic outlined by CDP and Integral Theory. But the concrete, structural stages that individuals have to go through and the difficulty involved in moving from one stage to the next, together with the myriad lines of development (each at different stages) that an individual has to navigate, is absent—and that's where Integral Theory can enrich Critical Realism.

[14] See Esbjörn-Hargens (2010).

[15] Commenting on critical realist ontology, Wilber (personal communication, December 4, 2012; this is the source of all quotes below unless stated otherwise) expresses an overall position that is slightly different to that of his published/available writings to date. (He mentions how the latter is somewhat outdated—e.g., the excerpts of Volume 2—and there are more recent works awaiting completion.) One such change seems to be a greater *emphasis* on Integral Theory's panpsychism—although that was clearly fully there before; and another is what appears to be a greater acceptance of ontology. In *Integral Spirituality* (2006, p. 231), for example, Wilber states that "ontology per se just does not exist" and that to believe so was to "fall prey to the myth of the given," whereas he now argues that "of course ontology is real." He also pointed out that his distinction between "ex-isting" and "subsisting," which he had already made in *Integral Spirituality* (footnote, pp. 250-251), is "very similar" to Critical Realism's transitive and intransitive dimensions, respectively. Nevertheless, he does insist that while "ontology is there" … "whatever it is it's the co-creation of consciousness and being of sentient beings at that level."

And this gets to the core of his main criticism of critical realist ontology, which stems from his fully panpsychist position in which the universe is made up of sentient beings with perspectives, "all the way down" to sub-atomic particles (in the form of Whiteheadian prehension). These "being-consciousness wholes" or "ontic-epistemic non-reducible entities" or "sentient, semiotic holons with prehension" co-create reality for each other through their behavior. This behavior eventually settles into habits (following Charles Sanders Peirce, also a panpsychist), which become engrained and appear as "unchanging laws in the realm of the real." As a result, being and consciousness, the ontic and epistemic, are inextricably linked, "two dimensions of the same wholeness," with both being fully real. "Epistemology and ontology are inseparable aspects of the being/consciousness of every holon—all the way down. And that fundamentally changes the nature of what we consider the real."

His main criticism of Critical Realism, then, is that it started off, in transcendental realism, with just being—leaving consciousness out and only later, with metaReality, "pouring consciousness in." The real domain, for Wilber, is made up of being and consciousness, not just being. What is real is "sentient beings with consciousness and being," all the way down. And once Critical Realism's domains of the actual and of experience are adjusted to that definition (of the real) he finds them useful.

This is a clear difference, and even in metaReality there is a distinction between implicit and explicit consciousness. The theory of transcendental identification in consciousness (Bhaskar, 2002b, 2002c) argues that consciousness is implicitly enfolded as a potentiality in all matter, immanent in all objects/beings (hence the possibility of transcendental identification in consciousness), but that this consciousness becomes explicit only at a certain stage of evolution. Critical Realism/metaReality stresses that there is a difference between immanent potentiality (implicit consciousness) and actual self-unfoldment (explicit consciousness), whereas Integral Theory highlights explicit consciousness ("living beings that create habits") right from the start with sub-atomic particles.

As to the respective distinctions between ex-ist/subsist and transitive/intransitive, there is clearly some overlap here and both obviously agree that when it comes to human beings examining the world, "human consciousness is not involved in co-creating the ontology of atoms and molecules and cells and socially constructing them" (although "the atoms', the molecules' and the cells' consciousness is involved in its being"). These exist in an intransitive dimension that is theory-independent (Critical Realism) or *subsist* (Integral Theory). For Integral Theory, while atoms subsist

before orange altitude, they "ex-ist for the first time at orange"—and then "become subatomic particles at green altitude… strings at teal altitude… (and) 11-dimensional strings at turquoise altitude." Integral Theory emphasizes how each structure of human consciousness "discloses different ontologies," focusing on the enactment of ontology via epistemology and methodology; and Critical Realism stresses how the social process of science in the transitive dimension produces ever-deeper (fallible) knowledge of the intransitive dimension, focusing on a depth ontology.

These various points of convergence and divergence, and differences in emphasis, will be addressed in part four, which will examine how ontology has faired during the pre-postmetaphysical post-metaphysical phases of Integral Theory—including Wilber's latest position, only briefly outlined in this endnote—and consider how critical realist ontology might strengthen, and be strengthened by, it.

See pages 35-38 in this issue, "Ken Wilber on Critical Realism," for a fuller summary of the comments on Critical Realism made by Wilber in this personal communication. These criticisms are followed by Bhaskar's point-by-point response (pp. 39-42). For Wilber's comments on Critical Realism, written before having seen Bhaskar's point-by-point response, see pages 42-55.

[16] Empirical realism denies the existence of underlying "real" mechanisms and structures that are not "actual" (appear in experience) but that cause "actual" events and phenomena (i.e., it equates what is real with what is "actual"). It is the implicit ontology (ontological actualism) of empiricism, and also of Kantian, neo-Kantian, hermeneutic, and social contructionist metatheories, all of which accept the Humean equating of causal laws with a "constant conjunction of events" (see below). Empiricist epistemology is thus conjoined with an actualist ontology, involving the epistemic fallacy (ontology reduced to epistemology) and the denial of ontological stratification.

[17] Actualism (the reduction of the real to the actual) presupposes closed systems, which are artificially created in experimental science but do not generally exist in the real world, which is made up of open systems where a multiplicity of interacting mechanisms affect each other. According to transcendental realism, in experimental science there is, on the one hand, a sequence of events that exists in the actual domain and, on the other hand, deeper causal laws (generative mechanisms and structures that act as the causal powers or tendencies of things) that reside in the real domain outside the closed system of the laboratory conditions. This will be discussed in more detail in the final section.

[18] Including the possibility of polyvalence, in the sense that there are boundary or transition areas between presence and absence (e.g., between raining and not raining or, quantum mechanical indetermination between particle and wave). Or fuzzy logic.

[19] Kant has to do this if he is to account for free will and moral agency, and it is his solution to the third antinomy—that between nature and freedom. Here he argues that humans are, as physically embodied beings, part of the phenomenal world and thus subject to the laws of nature and scientific determinism and also, as moral beings, noumena and so free from such laws. It is thus a freedom that exists outside the determined world of nature, one where free decisions (e.g., freely acting in accordance with an "ought," an idea, rather than being determined by self-interest or pleasure) occur beyond space and time (Bowie, 2003). And Bhaskar (1994) argues that "because of the systematic interconnection of the world, established by the Third Analogy," we are all "individually responsible for everything that has ever happened and will ever happen in virtue of a primordial choice made in the noumenal realm … prior to our birth and outside time" (p. 205). This is a "recipe for inactivism, the displacement of geo-history onto a heavenly *Jenseits* [afterlife], where a benevolent god will dispense happiness in accordance with virtue. But on the basis of what principles? For if we are all responsible for everything, we must all equally be so. Morality thus loses its agent-directing power, along with its rationale" (Bhaskar, 1993, p. 324).

[20] The categorical imperative invokes a universal law that is abstract ("I ought never to act except in such a way *that I can also will that my maxim should become a universal law*" [as quoted in Bowie, 2003, p. 32]) and ignores concrete differences and singularity. Critical Realism, however, insists on a universality that is both *dialectical* and *concrete*. For Critical Realism "there are no universal rules" but "rather, universal needs and potentials, rights and freedoms at the level of the real" which manifest in concrete forms and are geo-historically mediated. Critical Realism "agrees with the universalists that moral judgements are logically or necessarily universalisable" but "insists that the universality involved must always be *dialectical*—i.e., transfactual, (1M), concrete (3L), actionable (4D) and directionally

transformative or evolving (2E).” Concrete means “oriented to *these* agents in *these* contexts in *these* processes—assertorically, not categorically, imperatival or prescriptive” (Hartwig, 2007, pp. 491-492).

[21] Both Integral Theory and Critical Realism strongly endorse judgmental rationalism as an antidote to judgmental relativism: Integral Theory via a more epistemological focus, judging theories based on the relative developmental unfolding of both the method and knowledge (its principle of unfoldment); and Critical Realism with a more ontological focus, on the fact that all socially produced scientific theories (transitive dimension) are concerned with the same theory-independent world (intransitive dimension). Both could benefit from the other’s antidote. This article focuses especially on the benefit to Integral Theory of Critical Realism’s ontological antidote.

[22] The Eco camp, meanwhile, argues Wilber (1995/2000) “absolutized the biosphere” and represented a shrunken Agape that regressed into Thanatos—“the lower in flight from the higher … not just embracing the lower but regressing to the lower” (p. 350).

[23] Bhaskar (1993) often quotes Mach’s statement, which “epitomize[s] Humean empiricism,” that natural laws are nothing but “the mimetic reproduction of facts in thought, the object of which is to replace and save the trouble of new experience” (p. 224).

[24] Forged, as mentioned, by Frege, Russell, and Whitehead. One of Frege’s main insights, if not *the* main insight, was that logic was not a set of laws that governed thought, as had previously been thought since Aristotle, but independent of thought itself—“entirely objective” and “quite independent of psychology. The propositions of logic were objective truths which of course the mind was capable of grasping, but they didn’t depend for their validity upon features of thinking” (Ayer, 1987, p. 302). This had the effect of placing emphasis in philosophy away from epistemology, which had been subjectivized and psychologized since Descartes, as we saw, and on to logic—hence the rise of logical positivism. Frege and Russell also thought that mathematics could be reduced to logic, with Russell then moving to general philosophy and attempting to provide the same rock-solid logical foundations for knowledge of the external world. The project of both failed, with Frege’s system of logic collapsing through a paradox in set theory discovered by Russell himself (“Russell’s paradox”) and also Gödel’s incompleteness theorems; and Russell’s more general foundational search became beset with serious difficulties, from the start, with his logical analysis of the meaning and truth of simple propositions (Ayer, 1987). His approach and logical rigor, however, led to the birth of analytic philosophy and was adopted and developed by logical positivism.

[25] Wilber (1998/2000) puts this concisely: “… in his second critique … Kant attempted to show that where *monological reason* fails to prove (or disprove) Spirit, *dialogical reason* can succeed, at least in certain suggestive ways. For if scientific reason (it-rationality) cannot grasp God, dialogical reason (moral, ethical, practical reason) does tend to show us a type of transcendental or spiritual knowledge. Moral reason (not it-knowledge but we-knowledge) can, he believed, operate only under the assumption that Spirit exists, that freedom makes sense and that there is a type of immortality to the soul. His argument, basically, is that the interior ‘ought’ of moral reasoning could never get going in the first place without the postulates of a transcendental Spirit: the stomach would not hunger if food did not exist. And where monological it-knoweldge can tell us precisely nothing about this spiritual domain, dialogical we-knowledge operates with its postulates all the time!” (p. 157).

[26] Kant uses the word *Vernunft* in a broad sense, to cover sensibility, the understanding and (speculative) reason, and in a narrow sense to distinguish it from understanding (*Verstand*) and to refer to “the human intellect as seeking to unify a manifold referring it to an unconditioned principle, such as God” (Copleston, 1960/2010, p. 230).

[27] In this way, “the dialectical fertility of contradictions depends on their analytical unacceptability” so that “any dialectical logic must incorporate an analytical one as a special—and vitally generative—case.” There is thus a “constellational identity of understanding and reason, within reason, which fashions the continuously recursively expanding kaleidescope tableaux of absolute idealism” (Bhaskar, 1993, p. 20).

[28] Morin’s (1974, 1992, 2008) dialogic principle is also a reworking of Hegel’s dialectic. It involves a dialogic between two simultaneously complementary and antagonistic principles, such as stability and instability, or order and disorder. Like Bhaskar’s reworking of Hegel’s dialectic, Morin’s embraces certain aspects (e.g., its acceptance of contradictions and their generative nature) but rejects others, like its mechanistic nature that ignores the role of chance in the devel-

opment of dialectic and its lack of an "internal corrective" which leaves it open to abuse.

[29] The position of Critical Realism and Integral Theory toward metaphysics will be considered more fully in part four.

[30] Magee (1973/1994, 1997) points to this irony.

[31] In the same Appendix of *The Logic of Scientific Discovery*, Popper laments how his attempts, in a letter (of 1933) to the editor of a philosophical journal from which the above comments were taken, and ever since, to correct the misunderstanding by positivists that he was advocating a falsifiability criterion of meaning, rather than as a demarcation between scientific and non-scientific theories, have been to no avail.

[32] As Magee (1973/1994) puts Popper's position: "Language is an instrument and what matters is what is done with it—in this case its use to formulate and discuss theories about the world. A philosopher who devotes his life to concern with the instrument is like a carpenter who devotes all his working time to sharpening up his tools but never uses them except on each other" (p. 49).

[33] Wilber (1995) states: "The Right [quadrants are] Karl Popper's World I (the objective world of it); the Upper Left, World II (the subjective world of I); and the Lower Left, World III (the cultural world of we, which can also, as Popper points out, be embodied or embedded in *material* social institutions, or the Lower Right)" (149).

[34] For Critical Realism, Western philosophy has been "historically determined by rationalist epistemology" (with the criteria of certain, universal and foundational knowledge) and "structurally dominated by empiricist ontology" (Bhaskar, 1993, p. 16)—which it calls the primal squeeze. Popper's falsifiability criterion dealt a severe blow to the rationalist criteria for knowledge, as well as attacking one of the foundations of empiricism: induction. Morin (1988) notes how logical positivism had clung fiercely onto its new foundationalism based on logic and empirical verification, while Wittgenstein constructed a parallel foundationalism based on language—and that it was Popper who "revealed that … the scientific nature of a theory resided [not in certainty but] in fallibility" (Bhaskar, 1993, p. 23). He adds, however, that Popper still clung to the decisive, foundational truth value of deductive logic.

[35] See, for example, Magee (1997), on his autocratic tendencies.

[36] Popper (1974/2010) sees the scientific method as a refinement of the method of "trial and error," which can be expressed by the following formula: $P1 \rightarrow TT \rightarrow EE \rightarrow P2$ (where *P* is problem, *TT* tentative theory, *EE* elimination of error, and *P2* equals new problem), which Popper arrived at while "trying to make sense of the famous 'dialectic triad' (*thesis: antithesis: synthesis*) by interpreting it as a form of the method of trial and error-elimination" (p. 152).

[37] Popper (1963) makes a number of minor objections to dialectic (the thesis does not "produce" the antithesis—the normal process of science (via critical minds) does; it is not the struggle between thesis and antithesis that produces the synthesis but rather innovative ideas (Popper) or qualitative leaps / *transforms* [Bhaskar]) which affect Hegel but not Morin or Bhaskar's reworking of Hegel. In fact, they would agree with him. But his major objection is the dialectical tolerance of contradiction. He accepts that contradictions are fertile and facilitate progress, but only because of our refusal to accept them and our identification and criticism of them. Tolerating contradiction would, for Popper (1963), "[amount] to an attack upon the so-called 'law of contradiction' (or more fully, the 'law of the exclusion of contradictions') of traditional logic," would vitiate all criticism (which for him involves pointing out contradictions) and thus a threat to the very essence of his critical rationalist worldview, rationality itself and intellectual progress (p. 425). But as Bhaskar (1993) stresses, 'logical contradiction is not the same as dialectical contradiction, although the two classes intersect. Moreover, by no means all dialectics depend upon contradiction, and even less violate the logical norms of identity and non-contradiction" (p. 56). "*Dialectical contradictions* …may best be described as a species of the more general category of *dialectical connections*. These are connections between entities or aspects of a totality such that they are in principle *distinct* but *inseparable*, in the sense that they are both synchronically and conjuncturally internally related, i.e both (some, all) or one existentially presuppose the other" (Bhaskar, 1993, p. 58).

[38] Morin (1974, p. 578) describes Heraclitus as "the greatest dialectician of the Western world."

[39] For example, Bhaskar critiques his ontology for being implicit and largely empirical realist and his acceptance of the embargo on ontology; his deductive-nomological model of explanation (see below), which cannot be applied to social science without being historicist; his philosophy of social science and methodological individualism for being false; his belief in a rational model of economics. He considers his critique of historicism, on the other hand, as essentially

correct, and his falsifiability criterion a significant contribution (though refuted by the history of science) and a trenchant critique of the monistic theory of scientific development (Bhaskar, personal communication, n.d.). He also pays tribute to Popper for, along with Bachelard, being "more than any others responsible for the seeping into the general consciousness … of the fact, profoundly revolutionary for philosophy, of the phenomenon of scientific discontinuity (with respect to common-sense and experience) and change." This "recognition snaps the privileged relation between subject and object which, in classical philosophy, uniquely ties thought to things" (Bhaskar, 1989/2011, p. 26).

[40] The overview of Kuhn and Lakatos makes use of Alexander Bird's *The Historical Turn in the Philosophy of Science* (2010) and also Steve Fuller's "Kuhn versus Popper" (2003).

[41] Bird (2010) comments that "Kuhn accused Lakatos of rewriting history when it came to showing how history vindicated his position" (pp. 73-74). But he adds that Lakatos' Hegelian perspective led him to a "rational reconstruction of history" that captured the deeper underlying dialectical logic (thesis, antithesis, and synthesis) of history. The current research programme (or Kuhn's normal science) is the thesis; an anomaly represents the antithesis, and expansion of the auxiliary belt to integrate the anomaly represents the synthesis. This "epistemological dialectic" shows similarities with Bhaskar's, but the latter's is much more fully elaborated and incorporated within a whole new dialectical system and reworking of Hegel.

[42] Ontological depth realism contrasts with empirical realism (the reduction of reality to what we experience, of the real to the empirical domain), which is the implicit ontology of all metatheories of the natural and social science. Epistemic relativism contrasts with epistemological foundationalism (e.g., empiricism's theory-independent facts and hermeneutics' incorrigible lay interpretations); and judgmental rationalism with the judgmental relativism of postmodernism, post-structuralism, strong social constructionism, etc., that claim that we cannot choose between competing theories and so all beliefs are equally valid.

[43] Bhaskar (1979/1998) argues that partial, not complete, incommensurability exists since the latter is nonsensical: "Communication is impossible unless some descriptive and practical pre-suppositions are shared in common" (p. 153). See also Bhaskar (1989/2011; footnote 114, p. 71). But if we were to assume complete incommensurability, complete lack of shared meaning between two theories, it would not effect the possibility of judgmental rationalism. The key point is that "we distinguish clearly between the sense (in the TD) and reference (to the ID) of expressions and to admit that difference of meaning does not preclude identity (or at least commonality) of reference" (p. 73).

[44] While "superidealists" (those, like Kuhn and Feyerabend, who see real objects as products of human thought) deny the existence of a theory-independent world (the intransitive dimension), their practice contradicts their theory. For the very act of posing the problem of incommensurability between two theories presupposes that they "share a referential overlap" (Bhaskar, 1986, p. 74), that "there is something—a domain of real objects or relations existing and acting independently of their descriptions—*over* which they clash" (Bhaskar, 1989/2011, p. 33). If there is no referential overlap, the problem of incommensurability does not arise: "No one bothers to say that physics and cricket are incommensurable, or that Newtonian theory is incommensurable with classical music. Why? Because they are not describing the same world" (Bhaskar, 2000a, p. 12).

[45] Other critiques to the monistic theory of scientific development that Bhaskar mentions include 1) "Quine's decisive attacks on the analytical/empirical and theory/fact distinctions and arguments for a holistic view of knowledge"; 2) "Wittgenstein's critique of his early philosophy, and in particular the possibility of a private language, which fatally undermined the sociological individualism implicit in the model"; and 3) "Wittgensteinians, such as Hanson, Toulmin and Sellars" who "latched on … to the non-atomistic and changeable character of 'facts' in science. Facts were social products not to be confused with things, state-of-affairs and the like." This connected to 4) the "rejection of the idea of immediate knowledge (most usually of reified facts interpreted as raw data) and the critique engaged by Chomsky of autonomized ('empty') minds" (Bhaskar, 1994, pp. 37-38).

[46] Structuralists like Levi-Strauss and Chomsky were dealing with objects of knowledge that were something more than just the atomistic events of empiricism and this helped Bhaskar to see that "'the other thing' that was the bearer of tendencies and powers would have to be structures," which possessed as properties mechanisms that generated events (Bhaskar, 2010a, p. 39). Within structuralism there was no "clear disambiguation between scientific structure, onto-

logical structure and structure in the mind… But nevertheless you had the concept of structure there." And Bhaskar distinguishes three different conceptions of structure in transcendental realism: 1) the contrast between structure and event, the former generating the latter. In the dialectical deepening of critical realism, structures in this sense were seen as moving and changing; 2) the "multi-tiered stratification of reality" where the "distinction between structure and event is applied iteratively and so extended in principle indefinitely"; and 3) within this multi-tiered stratification structure can be seen as emergent (Bhaskar, 2010a, p. 56).

[47] Woodward (2010) asks why it is that while most researchers working in the specific field of explanation and causation reject the D-N model, it is still very influential in other areas of philosophy. His answer is that none of the alternative models is generally accepted and often difficult to apply. Critical Realism offers its own alternative based on its transcendental realist ontology (see part two of this article), but it is still outside the mainstream.

[48] This brief description is based on Popper (1959), Woodward (2010), Hartwig (2007), and Danermark et al. (2002).

[49] Hartwig (2007) gives the following example: "A car radiator contained ice this morning (the explanandum). A possible explanation could include the facts that a) there was water in the radiator yesterday, b) the radiator doesn't leak and c) last night the temperature fell below zero. These are the initial conditions. Then we add the universal law that water freezes at 0º C" (p. 193).

[50] This vertical existential realism was given further support by "the linguistic arguments of Kripke and Putnam that the use of natural kind terms, such as 'gold' and 'water', presupposed that the substances had real essences although not necessarily known to us" (Bhaskar, 1994, p. 38).

[51] Collier (1994, pp. 15-16) enumerates four ways in which depth realism is "transformative and potentially emancipatory." First, by "allow[ing] that knowledge may be counter-phenomenal, it makes a place for our liberation from enslaving appearance." Second, by "call[ing] for theories to be judged by objective criteria, it promotes theories that can transform, rather than merely rationalize, existing practices." Third, by "recogniz[ing] that states of affairs are brought about by the working of relatively enduring structures, it directs the attention of people who want to make the world a better place to the task of transforming those structures." And fourth, by "recogniz[ing] that theories must make claims about what the world is like independently of those theories, it treats all theories as fallible, and open to transformation." Collier is dealing here only with basic critical realism, not dialectical critical realism or metaReality. Dialectical critical realism expands on the depth realist foundation and extends the emancipatory scope of Critical Realism to include a transformative ethics and a dialectical conatus towards freedom and the eudaimonistic society. MetaReality takes emancipation even further. While Critical Realism, by unveiling the deeper structures and potential transformation of relative reality, indicates how a non-oppressive duality is possible, it is still a philosophy divorced from nonduality and, as such, is limited in its emancipatory power. By completing his system with the nondual philosophy of metaReality, Bhaskar gives far greater strength to its emancipatory, eudaimonistic intent. By bringing into full view and focusing on the nonduality that underpins the relative world of duality, metaReality enhances the possibilities of the nondual in "the struggle, in our present epoch, of nonduality and demi-reality [duality sharpened into oppositional dualism] for the realm of relative (dual) reality" (Bhaskar, 2002c, p. xxiv). This is done by an expansion of the nondual in our lives and the shedding of the demi-real, of "heteronomous orders of determination."

[52] A simple example Bhaskar (2000a) gives is that of the law of gravity, which operates on anyone sitting on a chair but fails to pull the sitter to the ground because the chair prevents it. So in this situation, the law of gravity is "empirically false … but transfactually true," as one of the tendencies at work (p. 217). To test the law of gravity requires creating a "laboratory situation and then measure the rate at which a heavy object falls to the ground. That we can only do in a few special contexts" (p. 7).

[53] Hartwig (2007) points out that "Bhaskar initially overstated th[is] distinction," and that "the two dimensions, whilst distinct, are not discrete; dialectically speaking, they … constitut[e] a constellational identity"…where "epistemology/the TD is seen as constellationally contained within [embraced by] ontology/the ID; or, better, there is epistemic/ontic non-identity within ontology … There is not a transitive dimension 'in here', and an intransitive one 'out there', though of course the causal laws of nature endure and operate independently of us. Everything —including the knowledge-seeker—is within being, of which epistemology/the TD is an emergent stratum" (p. 265).

[54] "The philosophers really from Aristotle, but particularly Kant and more recently Popper, have thought of categories as subjective classifications of the mind imposed on the phenomena of the empirical manifold. But transcendental realism said categories were real … part of the general furniture of the world…. It is obviously absurd, when you think about it, not to accept categorial realism. Because what would be the point of saying that Ohm's law and all the other laws known to physics and chemistry are real but not lawfulness as such. That would be like saying, OK, we have knives, forks and spoons but we do not have cutlery because cutlery is a higher order concept. Or … we have rupee notes, 10, 20, 50, 100 rupee notes, but we do not have the money system as such because money is a category" (Bhaskar, 2000a, p. 15).

[55] The notion of natural necessity, the ontological distinction between the real and actual domains and the consequent basing of causal laws on causal structures in the former rather than constant conjunctions in the latter, enables Bhaskar to overcome a number of entrenched philosophical problems, including the problem of induction. We saw in the section on *Popper and the Demise of Logical Positivism* that Hume and then Popper had highlighted the inadequacy of induction to uphold universal laws. Most scientific knowledge consists of universal laws which, for empiricism, are inductive generalizations from accumulated observations of particular instances. But as Hume pointed out, we can never be sure that the next instance will conform to the law, that the course of nature may change (all swans were white until black swans appeared). And Popper had pointed out that the logical positivist criterion of verifiability is untenable since no finite number of verifications can confirm a law. But for transcendental realism, as we have seen, laws are not statements about empirical regularities but statements about things and their nature, about the generative mechanisms and structures with their causal powers and tendencies that cause the empirical regularities we observe. What is involved are necessary sequences, not accidental ones. In this way, for example, an emerald will always be green as a result of "its crystalline structure of chemical composition… [that] differentially reflects light the way it does." There is thus no danger that one day we will come across a blue emerald (Bhaskar, 1975/2008, pp. 224).

[56] Morin (2008) points to three "virtues of systemism": its central notion of system as a complex unity rather than an elementary one, a whole that cannot be reduced to the sum of its parts; its notion of system as ambiguous; and its natural affinity with transdisciplinarity, allowing for both "the unity of science and the differentiation of the sciences" (p. 10). However, systems theory itself was essentially a "dialectical" reaction to atomistic thinking, an antithesis of Cartesian reduction to parts that ended up with its own reduction to the whole. This "holism arose not only from its blindness to the parts as parts but its myopia with respect to organisation as organisation and its ignorance of the complexity at the heart of any complex unity" (p. 101). Both types of reductionism avoid complexity by reducing one pole to the other, and both stem from the same paradigm of simplicity. Both the whole and the parts, together with their interrelationship, need to be integrated in an explanatory complex whole. Neither is reducible to the other.

Wilber has written extensively on systems theory, basing his tenets on it but sharply criticizing its subtle reductionism, its ecocentrism, its reduction of parts to the whole (like Morin), and for being a "flatland paradigm." He highlights their failure to distinguish between individual and social hierarchies (which is what his Upper and Lower-Right quadrants do), and their failure to account for half of the Kosmos (i.e., the interior). This he remedies with his Left-Hand quadrants. Critical Realism's notion of totality, the 3L of dialectical critical realism, discusses "holistic thinking" and shares much in common with both Morin and Integral Theory.

[57] These notions are based on Critical Realism's robust ontology, something that Morin's Complex Thought lacks, and are complexified by further notions like the "four social planar being," "seven scalar social being," the "multiple quadruplicity" that underlies its "concrete universal <-> singulars" and the "triple logic of inner complexity" (see Bhaskar, 2010b; Marshall, 2012). All of these notions can enrich both Morin's Complex Thought and Integral Theory further.

[58] Nicholas Hedlund-de Witt (personal communication) rightly points out that Integral Theory "also stresses the need for 'post- or metadisciplinarity,' and technically considers itself to be postdisciplinary and metadisciplinary." In fact, all three philosophies have slightly different approaches and emphases that provide the basis for a mutually enriching cross-fertilization. Morin stresses above all transdisciplinarity, with *La Méthode* designed to enable a move beyond the current hyperspecialization and toward the unification of disciplines within a *unitas multiplex* in which the various disciplines retain their particular identity but within a unity where the boundaries that separate them loosen and open

up. It offers a number of principles that help capture the complexity of reality. Critical Realism (Bhaskar, 2010b) talks of the need for multidisciplinarity (which adds together knowledge of generative mechanisms from different emergent levels of reality), interdisciplinarity (which synthesizes and integrates the knowledge of these different generative mechanisms, leading to an emergent integrative outcome), intradisciplinarity (that recognizes changes in the actual generative mechanisms that result from the interdisciplinary synthesis), transdisciplinarity (which creatively deploys cognitive resources from a variety of different disciplines and fields) and cross-disciplinary understanding (between teams composed of members from different disciplines). For Integral Theory, Stein (2007) focuses both on the cognitive complexity that each type of research might require, postulating "a hierarchical taxonomy of types of inquiry" that moves from disciplinary to multidisciplinary to cross-disciplinary to interdisciplinary to transdisciplinary; and an "epistemological taxonomy" related to validity claims and based on the four quadrants and their complexification into the eight zones of Integral Methodological Pluralism (IMP). This cognitive developmental perspective, together with the basic "meta-disciplinary" model of IMP, can enrich Critical Realism's approach to interdisciplinarity, just as Critical Realism's depth ontology and notion of laminated system can enrich Integral Theory's. And Morin's approach can help refine, and be refined by, both.

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PAUL MARSHALL is a doctoral candidate at the Institute of Education, London University, under the supervision of Roy Bhaskar. He is working on an appreciative critique and synthesis of Integral Theory, Critical Realism, and Complex Thought. His core interest is in a broad notion of eudaimonia (flourishing), which is reflected in both his Msc (in Applied Positive Psychology) and Ph.D. research, which is designed to construct the philosophical base from which to build an "integrated eudaimonics." His publications include *Noam Chomsky's Anarchism* (Our Generation, Vol. 22, 1991), *La Conciencia Integral y el Mundo Académico* (book chapter of *Evolución Integral*, Kairos, Barcelona, 2009), and "The Meeting of Two Integrative Metatheories" (*Journal of Critical Realism*, 2012). He lives in Catalonia, Spain, and has worked as a translator and at a number of Catalan universities teaching English language.

KEN WILBER ON CRITICAL REALISM

Paul Marshall

The following is a summary of the core and secondary criticisms of Critical Realism made by Ken Wilber during a phone call (December 4, 2012), where he discussed my article "Toward an Integral Realism" (pp. 1-34 in this issue). The summary was written merely to provide an outline for Roy Bhaskar, not with an eye for publication. It is reproduced here, however, since it is the source on which Bhaskar's "Considerations on 'Ken Wilber on Critical Realism'" (pp. 39-42 in this issue) is based. It therefore gives the reader the necessary context to Bhaskar's response to Wilber's comments. The call was recorded and transcribed, and all the quotes, unless otherwise mentioned, are from the transcription/recording. It should be noted that both the summary of Wilber's comments and Bhaskar's response to them were written before Wilber's Integral Life posting (reprinted on pp. 43-52 in this issue); and that Wilber had not read Bhaskar's response to the comments he had made in the call with me. This is why, in his post, Wilber repeats the criticisms and does not address Bhaskar's rejoinder. Bhaskar's and Wilber's comments and considerations constitute the beginning of an interesting dialogue, one that will no doubt continue and develop.

Core Criticisms

1. Wilber's main criticism of Critical Realism is based on his panpsychism (or pan-interiorism, as he prefers to call it in his writings). For him, the universe is made up of sentient beings with perspectives, "all the way down" to sub-atomic particles (in the form of Whiteheadian prehension). These "being-consciousness wholes" or "ontic-epistemic non-reducible entities" or "sentient, semiotic holons with prehension" co-create reality for each other through their behavior. This behavior eventually settles into habits (following Charles Peirce, also a panpsychist), which become engrained and appear as "unchanging laws in the realm of the real." This forms a hierarchy of reality, but "the hierarchy is made of sentient beings with being and consciousness and that is what is real." And then "the level of the actual and the level of experience can be adjusted to fit that definition—and then I find it to be very useful."

He insists that "all being is inseparably connected with consciousness" so that the epistemic and ontic cannot be separated. "They are two dimensions of the same wholeness," both being fully real:

> An atom's prehension is a part of its ontological make up at the atomic level. But if we ignore prehension, that just leaves ontology …. being without consciousness, and then often epistemology and consciousness is given only to humans, and not all sentient beings, so they only get being, not knowing. And if human consciousness is not involved in co-creating the ontology of atoms and molecules and cells and socially constructing them and all of that—and I agree it's not; nonetheless the atoms', the molecules' and the cells' consciousness is involved in its being—and that goes all the way down because being and consciousness are inseparable.

His main criticism of Critical Realism, therefore, is that it started off with just being—leaving consciousness out and only later, with metaReality, "pouring consciousness in." He argues that Critical Realism needs to "redo the entire arguments because the first ones were done based on not having consciousness," arguments which he disagrees with. And "by previously sucking consciousness out of all being and then making being the basis of the real, and then the actual and then experience, and then consciousness comes in

somewhere up there around experience—that's categorically unacceptable."

He summarizes as the central point he would like to convey as: "Epistemology and ontology are inseparable aspects of the being/consciousness of every holon, and that goes all the way down. And that fundamentally changes the nature of what we consider the real."

2. The above is the crucial point for Wilber. A related point is that he talks of *ex-isting* (standing out) and *subsisting*, which he says are "very similar to the transitive and intransitive dimensions." [In *Integral Spirituality* (2006, pp. 250-251), Wilber talks of something subsisting as being "present as intrinsic features of the Kosmos not cognized" by specific structures of consciousness. The "*intrinsic features themselves* are not pregiven but are simply the co-products of the highest level of consciousness making the claim. In other words, intrinsic features themselves are, in part, interpretive and con-structed."]

So an atom *ex-ists* (stands out) only at the "orange" (initial scientific, formal operational) level and beyond, although before that atoms *subsisted.* And the same goes for sub-atomic particles ("green" cognition), strings ("teal" cognition), and 11-dimensional strings ("turquoise" cognition).

> …when we explain what the subsistence reality is, or in a sense when we explain what the intransitive reality is, it changes with each new structure …. We can't say what the atomic level is except from some structure. And each structure [of consciousness] discloses different ontologies. This is not to reduce one to the other. …. it is to say that they are complementary aspects of the same whole occasion. So at least until he dumps consciousness onto everything, I disagree with both Kant and Bhaskar. This is in some sense similar to Varela's enactment paradigm but not entirely. Ontology is real but what Bhaskar describes as ontology is the product of turquoise consciousness. There's no question. He's describing turquoise [not an orange or green, etc.] reality. They bring forth each other. And what Bhaskar describes as ontology wasn't always taken as real—3,000 years ago, for example, a different ontology prevailed. Again, I'm not saying ontology isn't real. It just can't be separated from a corresponding level of being-consciousness and its knowing.

So the subsistence level (his intransitive dimension) changes with each new developmental structure (so there are no unchanging laws, "no unchanging intransitive reality"), and what ex-ists is disclosed by structures of consciousness.

To conclude: Wilber's (and Peirce's) panpsychism means that sentient beings (all the way down)

> form habits because they are conscious beings (conscious-beings). And therefore instead of being just ontologies that blindly follow laws they are living beings that create habits—and that's what's real. And it just so happens that because each moment transcends and includes its predecessor, transcendence going all the way down, then we get a constantly growing and evolving and literally changing (i.e., changing in being and consciousness) series of worlds. And what's being described as ontology now by most sophisticated people, again, is what the world looks like from turquoise. And I'm saying it's actually there, it's real.

Note on recent refinements in position: Wilber says his position has developed since his latest published writings (e.g., *Integral Spirituality*, 2006), and it is true that now he has gone from saying "ontology per se just does not exist" (*Integral Spirituality*, p. 231) to, as we have seen, statements like:

- "Of course ontology is real—but it can't be separated from a corresponding level of being-consciousness and its knowing"; or
- "Ontology is there, but whatever it is it's the co-creation of consciousness and being of sentient beings at that level"
- "Even if we are at, say, turquoise and we're saying: is there a subatomic reality that exists outside the theoretical?—yes, absolutely. But I'm saying its not just ontology. It's that the atoms themselves are prehending each other and that prehension and their being go together; they can't be separated. There's never been an atom that had being that wasn't prehending and there's never been a prehension that wasn't being done by a being. They can't be separated. That's wildly anti-integral."

So there seems to be a slight backtrack, or at least a more accepting/less dismissive stance, toward ontology, although Wilber insists this is inseparable from epistemology ("a corresponding level of being-consciousness and its knowing"). And his distinction between *ex-ist and subsist*, and his comparison of them with the transitive and intransitive dimensions, is also an opening toward Critical Realism. (Wilber already makes this distinction, as mentioned—but not the comparison—in *Integral Spirituality*.) And he also highlights the panpsychic nature of his philosophy more, it seems to me.

Secondary Points

1. Transcendence

Wilber commented on the following point in my article: "Like Integral Theory, the philosophy of metaReality stresses an absolute reality of nonduality that underpins and sustains the relative world of duality but, unlike Integral Theory, it emphasizes 'an esoteric sociology of everyday life' where transcendence is a ubiquitous and vital constituent of social life" (p. 3).

Wilber says he talks about different degrees of transcendence from the macro to the micro; from actual practices aimed specifically at transcending the separate self-sense to developmental transcendence from one structure to another; and "moment-to-moment" transcendence. In this last, "micro" sense:

> every moment (I have a kind of neo-Whiteheadian view), a subject comes to be. That subject prehends and includes its predecessor and in prehending it, it has a consciousness and even an epistemic felt component embracing the being of its predecessor and then It adds its own amount of novelty and creativity … so that means that each moment transcends and includes the previous moment so transcend and include is something that's occurring at literally every moment of existence.

But this is very different from your stress on everyday transcendence, where you say that without nonduality, without certain features of transcendence, we could not communicate with others, perceive or in fact do anything at all, even think.

2. Real Domain

Wilber agrees that there is a real domain, but that it is made up of being and consciousness, not just being. What's real is "sentient beings with consciousness and being," all the way down. And then "the level of the actual and the level of experience can be adjusted to fit that definition—and then I find it to be very useful." And because, for Wilber, Critical Realism (at the beginning) leaves consciousness out, then its ontology is "not all-inclusive."

3. Causality

Here Wilber highlights quantum mechanics ("the most successful scientific theory in history" … "a million times more precise [according to one estimate] than Newtonian physics") and the Heisenberg Uncertainty Principle, which shows that "uncertainty is built into the fundamental reality of the Kosmos." Critical Realism can fully endorse that. But then he adds that as a result:

> Causality is out. It doesn't exist in quantum reality. That's one of the problems with working with science to deduce what you are going to call real for the simple reason that the bloody thing changes as soon as a new discovery is made. And one of the things you can't do is to put causality down to reality, or certainty down to reality. Not if you are going to go up against the most successful scientific theory in history…. But given the fact that starting with Popper, Critical Realism was developed in a sense as a way to explain how scientific experiments can be true, then under those circumstances you ought to line your theory up with the latest science.

I assume that although causality may in some sense not exist in quantum reality, it clearly does to some degree in our everyday meso/macro reality, so that would not be a problem for Critical Realism.

4. Stratification

Wilber would like you to clarify your position on stratification, "because [Bhaskar's] at the very least undergone a major shift from a reality denuded of consciousness to one swamped in it and yet he hasn't redone his fundamental arguments to include consciousness. When he does that then in some ways he's going to be closer to Integral Theory."

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CONSIDERATIONS ON "KEN WILBER ON CRITICAL REALISM"

Roy Bhaskar

Here are my comments on your summary of Ken Wilber's points on Critical Realism. I have divided my response into two sets, those relating to his core criticisms, including those pertaining to his "crucial" or "central" point (turning on the concept of panpsychism), and secondary criticisms pertaining to subsidiary though related points. I am needless to say very pleased that Ken Wilber is engaging in this friendly and creative way with Critical Realism, and very much look forward to continuing the dialogue, especially when we meet in person before the 2013 Integral Theory Conference.

Wilber's Core Criticisms of Critical Realism

1. Being and Consciousness

I do not "suck consciousness out of all being and then make being the basis of the real." On the contrary, I start with consciousness—in experimental activity—and ask what it presupposes. Unlike hermeneutics, experimental activity does not presuppose the consciousness of what it studies. It takes an argument, and a long evolutionary process, to come to the view that atoms may have "prehension," or I would say "implicit" or "enfolded consciousness," an argument which cannot presuppose what it is trying to prove, and a process that does not begin with (but on the contrary culminates in) the accomplished unfolding of consciousness (of consciousness).

All the transcendental and dialectical arguments I develop start with consciousness, so that it is not smuggled or "poured" back in. What they establish is that science presupposes for the most part a world without human consciousness or self-consciousness, as Wilber acknowledges when he says that we do not "co-create" the ontology of atoms.

What we may be now concerned with, as a matter of the substantive scientific ontology of the atomic or subatomic, is what kind of consciousness might be attributed to atoms, and on what grounds. What is blurred in Wilber's view is precisely the fundamental difference between *imputed* or *enfolded consciousness* and *actual* or *achieved* or *explicit* or *self-consciousness*. The implicit consciousness of the electron or quark is not explicit, reflexive or self-conscious, and not (in the same way as human consciousness) "sentient."

This blurring of the difference between *imputed* or *implicit* and *actual* or *achieved* or *explicit consciousness* (and between consciousness and self-consciousness) scouts the long evolutionary, historical process whereby the implicit, if and when it does, unfolds.

I return to this in a moment.

2. Existence and Subsistence

Wilber says that atoms *ex-ist* (stand out) only at the orange level of cognition, but before that merely *subsist*. However, before our knowledge of atoms, they certainly had causal effects, and certainly continue to have causal effects on those who do not understand (or have no awareness of) them. It is not atoms, but at most our knowledge of atoms, that may be said to have "subsisted." Moreover, he says "each structure [of consciousness] discloses different ontologies." But this is to confuse philosophical and scientific ontologies. We need a metatheory or philosophical ontology to allow us to describe the process of scientific change.

We can now see more clearly why it is vital to differentiate the *transitive dimension* (TD) or epistemology and the *intransitive dimension* (ID) or ontology. For without this distinction we can neither describe the historical process of scientific change nor the evolutionary process of the (real historical) development of being and the unfolding, if and when it occurs, of consciousness. So when Wilber says "what Bhaskar describes as ontology wasn't always taken as real," he confuses the TD with the ID, what we take to be real (TD/epistemology) with what *is* real (ID/ontology) whether we know it or not. And in saying "the subsistence level" (Wilber's surrogate for the ID) changes with each new developmental structure, he is coming back to the view that he says he now rejects, namely that "human consciousness co-creates non-human ontology."

This is, of course, the epistemic fallacy. The only way not to commit the epistemic fallacy is to allow that the object exists *independently* of human consciousness. This immediately situates two real possibilities, namely of change in the knowledge of a relatively unchanging object, and change in the object, including the unfolding or development of consciousness. Not making the distinction between, on the one hand, 1) the imputed (or enfolded) consciousness of the atom or electron, together with its implicit or imputed epistemology, and, on the other hand, 2) the actual or achieved consciousness (and epistemology) of contemporary science, leads to the anthropocentric obliteration of the evolutionary process of the unfolding of consciousness. This thus results in the elision of time and change, and therefore *ontological monovalence* (i.e., the generation of a purely positive, present, and actual account of reality).

But what is perhaps not so obviously also obliterated is the very difference between ontology and epistemology. For only if this difference is regarded as real, and so as falling within ontology, can it be sustained. (If it falls at the same time within epistemology, then we are back to the epistemic fallacy.) Note also that if one does not sustain an ID, the TD collapses too.

Similarly, the stratification of being and the asymmetries crucial to historical/evolutionary directionality can only be sustained on the basis of the separation and difference of epistemology and ontology, TD and ID (and the constellational overreaching of this difference or gap within ontology), and the supposition of the reality of time and change—that is, of the possibility of evolution and unfolding.

3. The Role of Philosophy

Crucial to the coherence of Critical Realism is the distinction between *scientific* and *philosophical* ontologies. What the transcendental and dialectical arguments of the philosophy of Critical Realism establish are the existence of categorial features of the world that are presupposed by forms of scientific inquiry. So philosophy is not dissolved into science (as in positivism), nor is it transposed or relegated to another world (as in Plato). It considers rather the most general, high-order, or abstract features of this world. However, the scope and prospects for such an enterprise (i.e., of a transcendental ontology) are by no means limited to an examination of the presuppositions of the procedures of classical physics and chemistry. Indeed, the development of Critical Realism, and more especially of its ontology, reveals a sevenfold deepening of ontology, as we progressively come to think of being as process, as internally related, as incorporating transformative praxis and reflexivity, as enchanted and as nondual in the categorial structure of 1M-7Z (see, e.g., Bhaskar & Hartwig, 2010, pp. 123-124).

Now supposing it was possible to activate and cognize the implicit consciousness or prehension of atoms or of a subatomic level of being, then this would be an exercise within time and an achievement of human epistemology. In practice it would probably presuppose newly uncovered elements within or aspects of atomic being, an achievement that would necessitate a new theory and scientific ontology for physics, but which may well be caught within the 1M-7Z categorial structure of Critical Realism, which extends far beyond the simple world of classical physics and chemistry and can readily accommodate holistic, interior, re-enchanted and nondual realities as part of the fabric of our cosmos. However, supposing the expanded philosophical ontology could not accommodate it, then the 1M-7Z schema would certainly need revision.

4. Panpsychism

My "panpsychism" is ontologically differentiated. It is not committed to any doctrine of the inseparability of being and knowledge of being (ontology and epistemology). Furthermore, it respects the distinct evolutionary processes of being and knowledge, and of beings of different types, in distinct evolutionary "rhythmics" and trajectories and at different moments of them.

Summary

I can summarize my response to Wilber's "core criticisms." What Wilber is not as yet allowing for are:

1. The differences in powers between different kinds of beings (humans, atoms), as manifested in the world of duality, in historical time
2. The growth, development, and unfolding of powers in the evolution from one form (e.g., atoms) to another (e.g., humans)
3. The development of human knowledge of the powers (both explicit and enfolded) of other beings

Wilber's Secondary Points on Critical Realism

I do not have time at present to deal at the same length with Wilber's other points, interesting though they are. So I will restrict myself now to a few brief comments:

1. Transcendence

I postpone a full discussion of transcendence and spirituality until a later occasion. However, it is important to note regarding the figure of "transcend and include" that actual sublations often involve some "Kuhn-loss," that is to say are not totally preservative. Second, while it is true that the metaReality emphasis on the "esoteric sociology of everyday life" nicely complements Wilber's more traditional account of nonduality, it has not so often been recognized how in keeping this project is with the critical realist strategy of immanent (and Achilles Heel) critique. It is precisely in the most mundane contexts and quotidian environments, where one would least expect it, that metaReality uncovers transcendence and nonduality, and (albeit at a remove) the ground state and cosmic envelope too! (see my contributions to Hartwig & Morgan, 2012).

2. Causality

I think Wilber is wrong to suppose that quantum mechanics does not operate with an idea of causality, although it is not of course of the Newtonian, even less the Humean kind. Critical Realism differentiates, in line with its 1M-7Z schema, different kinds and levels of causality; and 3L holistic causality certainly embraces uncertainty (recognizing indeed precisely "its wisdom") and radically non-atomistic thinking in which neither particles nor points, but distributions and successions come to the fore.

3. The Domain of the Real

As I have argued, Critical Realism does not leave consciousness out, but on the contrary starts with it. Moreover it explicitly thematizes consciousness at 4D, where it understands human social being as at once conceptual and material, and at 7Z, where it understands it as both nondual and dual. The differentiation between the real, actual, and empirical applies to consciousness as much as purely material being; absence, negativity, and change are as real as the present, positive, actual and unchanging, tense is as real as the timeless; and the

world of duality, and its dominance by categorial untruth and illusion in what I have called "demi-reality," remains real and in need of transformation, even when we come to understand how it is sustained by the world of nonduality.

The 1M-7Z categorial structure of CR can certainly accommodate a variety of panpsychist universes, but in addition it can accommodate aspects of our universe that are not panpsychist or not uniformly panpsychist, which are differentially or asymetrically panpsychist or not panpsychist at all. I fail to see how this renders it "less inclusive" than the arguably, at least tendentially, monotone, symmetrical, uniform, unchanging, and anthropocentric panpsychism of some Integral Theory schemata.

4. Stratification

I think Wilber's remarks are based on the fundamental misapprehension that we do not start from consciousness. We do, but classical physics and chemistry certainly do not immediately presuppose it. However, Critical Realism does not stop there, but goes on to develop a set of categories that allow one to be as panpsychist as you will, but sees such panpsychism as, if you like, an act of intellectual daring, one which still needs to be successfully integrated into the scientific culture generally. However, it may be rendered plausible by positing a cosmology of a developing integrative pluralistic world (see Bhaskar, 1986/2009, pp. 106-107) containing differentiated and developing consciousnes, of which human self-consciousness and the epistemology of the received sciences are a developing and differentiated part.

Critical Realism is very concerned to do justice to process (both of being and consciousness), for which the critique of ontological monovalence is so important; to the existence of different levels of understanding, analysis and critique; to asymmetries in strata and the mess in the maelstrom of existence, to the loose ends and untidy flotsam, that, at a flash and in a geohistoric perspectival switch, may reveal the seeds of a new intellectual or social formation.

Critical Realism/metaReality is also very concerned with the forces behind our current planetary impasse, and in generating understandings that can help to resolve it. Neither blinkered empiricism nor fanciful, ungrounded speculation can rescue us from this impasse, but friendly and creative dialogue conducted in seriousness and warm and loving solidarity of the sort that we began in September 2011 in San Francisco at the John F. Kennedy University Symposium on Critical Realism and Integral Theory, and which Ken Wilber is further taking forward here, can go far to creating the clearing from which resolutions may eventually emerge.

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IN DEFENSE OF INTEGRAL THEORY
A Response to Critical Realism

Ken Wilber

The following are two long endnotes ("Integral Theory vs. Critical Realism"; "Panpsychism"), and one excerpt ("Integral Pluralism"), from my recently finished book, *Sex, Karma, Creativity*, which is Volume 2 of the Kosmos Trilogy, whose first volume is *Sex, Ecology, Spirituality*. These notes were written, in part, in response to Paul Marshall's article "Toward an Integral Realism" (pp. 1-34 in this issue), and, while appreciating certain aspects of Critical Realism, come out strongly in favor of Integral Theory.

Integral Theory vs. Critical Realism

Integral Theory (IT) and Critical Realism (CR) share many items in common, but there are some deep differences as well. To begin with, CR separates epistemology and ontology, and makes ontology the level of the "real"; whereas, for Integral Theory, epistemology and ontology cannot so be fragmented and fractured, but rather are two correlative dimensions of every Whole occasion (part of the tetra-dimension of every holon). CR maintains that there are ontological realities that are not dependent upon humans or human theories—including much of the level of the "real"—including items such as atoms, molecules, cells, etc.—and IT agrees, with one important difference: IT is *panpsychic* (a term I'm not fond of, preferring "pan-interiorist," meaning all beings have interiors or proto-consciousness, à la Whitehead, Peirce, Leibnitz, etc.)—to wit, atoms do not depend upon being known by humans, but they do depend upon being known by each other. The "prehension" aspect of atoms (proto-knowing, proto-feeling, proto-consciousness) helps to co-enact the being or ontology aspect of the atoms for each other—their own epistemology and ontology are thus inseparable and co-creative. The atom's prehension is part of its very ontology (and vice versa), and as each atom prehends its predecessor, it is instrumental in bringing it forth or enacting it, just as its own being will depend in part on being prehended/known/included by its own successor. If, for the moment, we leave quantum mechanics out of the picture (see below), none of this depends on humans for its existence or being, and yet the atom's prehension-feeling-knowing is an intrinsic part of this level of the "real." Consciousness is not something that can be sucked out of being to leave an awareness-free "ontology" lying around waiting to be known by some other sentient being; *consciousness, rather, goes all the way down*, and forms part of the intrinsic awareness and intrinsic creativity of each ontological being or holon. Whitehead's "ultimate category"—namely, "the creative advance into novelty"—is part of the prehension of each and every being in existence, and the creative-part cannot be ripped from the being part without severe violence. To postulate the most fundamental level of reality as merely ontology—being without knowing or consciousness or creativity—is basically a first-tier move that shatters the Wholeness of this and every real occasion.

Likewise, spiritual transcendence (Eros) reaches all the way down as well. In IT's neo-Whiteheadian view, each new moment comes to be as a subject (with all four quadrants), and it prehends (tetra-prehends) its predecessor, which is now an object (in all four quadrants) for this new subject. The new subject "transcends and includes" the old subject (now as object), and thus they mutually co-create each other: the old subject that is now object and is included in the new subject helps shape the new subject itself, by the simple fact of being included in it, actually embraced by it, and thus to some degree determining it. Likewise, the new subject, in including the old subject, is instrumental in bringing it forth or enacting it, co-creating its very being as a new object as it does so—and the new subject then adds its own degree of creativity, consciousness, or

novelty, and thus actually co-creates a new being in the very act of prehensive unification. This "transcend and include" goes all the way down to the smallest microsubatomic particles, and all way through the actual meso-developmental levels (where, as Kegan puts it for human development, "the subject of one level becomes the object of the subject of the next"—which is the meso view of Whitehead's prehension—namely, that "the subject of this moment becomes the object of the subject of the next"—but acting now on a larger, higher, more complex, more conscious level), and all the way to the macro practices of meditation, where transcendence is the overall goal and occurs through the objectification of state-stages from gross to subtle to causal to True Self to ultimate Spirit (with each state-stage transcending and including its predecessor—the subject of one becoming the object of the next). This Eros (which certainly can be viewed as spiritual) is a primary driver of evolution itself, starting all the way back with the Big Bang and all the way through to ultimate Enlightenment. As Erich Jantsch put it, evolution is "self-organization through self-transcendence," and that "transcend and include" is the very form of the moment-to-moment unfolding of reality.

Further, what CR describes as "real"—or "the intransitive level"—is actually and mostly turquoise reality. This is not the same "real" that is found at the red level, the amber level, the orange level, the green level, or the indigo level. If CR described what it meant by "ontology" to someone at red, they would flatly disagree, with CR's version of ontology being "over their heads." In fact, what most sophisticated thinkers today call "ontology" is actually the turquoise level of being-consciousness—and not as a mere description, but a real ontic-epistemic structure of the universe. These levels of being-consciousness are not just levels of a human being, but levels of the Kosmos itself (and those different levels *are* different worlds!). So I am certainly not saying that this "turquoise reality" or ontology isn't real, only that it is inseparable from the prehensive-knowing-consciousness of the turquoise level of being-consciousness itself. There is no way around this—precisely because of panpsychism (such as subscribed to by Leibnitz, Whitehead, or Peirce). The turquoise level looks at the atomic level, the molecular level, the cellular biological level, etc., and concludes they have a reality in and of themselves—an ontology—but not only is it describing those levels as what they look like from turquoise—even if we ignore that part—they are overlooking the prehensive-consciousness-knowing dimension of the atoms, molecules, and cells themselves, an epistemic dimension that co-creates the ontic dimension with the being aspect of those holons (and vice versa)—again, epistemology and ontology are two different dimensions of the same Wholeness of the real occasion, and cannot be fragmented without genuine violence to the Kosmos.

Thus, for example, take molecules during the magic era. "Molecules" did not "ex-ist" (meaning, "stand out") anywhere in the magic world—there was nothing in the consciousness of individuals at magic that corresponded with "molecules." But we moderns—we at turquoise—assume that the molecules existed nonetheless—if they didn't ex-ist, they did what we might call *subsist* (I agree). This is similar to CR's transitive (ex-ist) and intransitive (subsist) with one major exception: as noted, IT is panpsychic—epistemology and ontology / consciousness and being cannot be torn asunder. What we call "pre-human ontology" is actually a *pre-human sentient holon's epistemic-ontic Wholeness*, and not merely a disembodied, floating, "view-from-nowhere" ontology. A molecule's prehension-knowing-proto-feeling is an inseparable part of its being-ontological makeup at the molecular level, and both are necessary to co-create each other. Ignoring prehension (and consciousness) just leaves ontology-being for the molecule, and epistemology-consciousness is just given to humans (or higher mammals), not to all sentient beings—they only get being, not knowing. But if a human consciousness-knowing is not involved in co-creating the ontology of atoms, molecules, or cells, *their own* consciousness-prehension is involved, all the way down (à la Peirce and Whitehead).

Further, when we actually get down to explaining what this subsistence reality is—the "real"—it changes with each new structure (red, amber, orange, green, etc.). What we glibly call "atoms" ex-ist at orange; those become sub-subatomic particles at green (mesons, bosons, gluons, etc.); those become 8-fold-way quarks at teal; those become 11-dimensional strings at turquoise. We can't *say* what the atomic level is except from some structure of being-consciousness, and each structure discloses a new ontology, a new world. (That

ontology is there, is real, but is co-created by the prehensive holons at that level.) Again, this is not to reduce ontology to epistemology, but rather claim they are complementary aspects of the same Whole occasion. (In short, I disagree with both Kant and Bhaskar—or I agree with them both, depending on how you look at it.)

This reminds me of Humberto Maturana and Francisco Varela's brilliant analysis of the world (the "reality") of a frog. Prior to Maturana and Varela, most biologists followed some form of ecosystems theory and described the reality of the frog as existing in various systems of nature. But Maturana and Varela pointed out that that was actually what the frog's reality looked like *from the scientist's* point of view, but not from the frog's. The frog's "view from within" (zone 1) consisted only of various patches of color and motion, smells and sounds; it did not have the cognitive capacity to stand outside itself and picture the entire system of which it was a part—only the scientist did that (using zone 8). Reality, for the frog, was the immediate view from zone 1, and the best the scientist could do was attempt to capture that using zone 5—a 3p x 1-p x 3p—namely, the objective scientist, while studying an objective organism (3p), attempts to take the organism's "view from within" or "biological phenomenology" (1-p)—two phrases Varela often used. Varela pointed out that this "view from within" was not the actual first-person view of the frog itself that the scientist is directly observing (that would be the frog's zone 1), but the exterior version of the frog's inner view (or zone 5; i.e., the view from the inside of the Upper Right, not the inside of the Upper Left). The point is that the frog enacts its own reality—its own epistemology or consciousness brings forth and co-creates its own ontology or world (the closest to which the scientist can get is zone 5)—and the scientist himself likewise enacts, or can enact, his own view of the frog's reality, which many scientists believe is generally a systems view (zone 8), but more truthfully is a zone-5 version. But in both cases, the being and knowing are two dimensions of the same actual occasion, whatever it is. But merely using a systems view is a deeply anthropocentric view of the frog's real world, and claiming to know the frog's actual world (zone 1) by using the scientist's tools (zone 8) does grave violence to the frog's actual interior.

Thus, according to IT, the level of the "real" described by CR doesn't exist as CR describes it. Rather, in IT's view, in actuality it is either the product of both the prehensive-feeling-knowing plus holonic-being-isness of each of the holons at the particular level of the real being described (e.g., quarks, atoms, molecules, genetics) and their relations—all of which are tetra-enacted and tetra-evolved; and/or it is the result of the way the world emerges and is tetra-enacted at and from a particular level of consciousness-being (e.g., turquoise) of the scientist. In the latter case, the real is not created by its mere description by the particular level of consciousness-being, but rather actually emerges as a level of the real with the emergence of the deep structures of the particular level of being-consciousness. (Again, these levels of being-consciousness are not just levels of human beings but levels of the real Kosmos.) These levels of being-consciousness (red, amber, orange, green, turquoise, etc.) are not different interpretations of a one, single, pregiven reality or world, but are themselves actually *different worlds* in deep structure (an infrared world, a red world, an amber world, an orange world, a green world, a turquoise world, etc., *each of which is composed of Nature's or Kosmic habits tetra-created by the sentient holons at those levels,* as are atomic, molecular, cellular, etc., worlds).

The deep structures of these worlds are the nondual epistemic-ontic Whole occasions, but this doesn't prevent them from being fallible when it comes to humans' attempts at disclosing and discovering and describing the real characteristics of the Whole; i.e., the surface epistemic-ontic approaches are fallible (which is one of the reasons that multiple *methodologies*—epistemologies that co-enact and co-create correlative ontologies, and vice versa—are so important): the more methodologies used, the likelier the deeper Wholeness (the deeper unity of being-consciousness) will be accurately disclosed and enacted in more of its dimensions.

These deep features of the real are—à la Peirce—not eternal pregiven realities of a one world, but Nature's *habits* that have been engraved in the universe through the interaction of semiotic-sentient beings (that go all the way down—including quarks and atoms—which is why there are proto-conscious-feeling-knowing beings present *from the start* to actually create habits—they are living and conscious beings *capable* of forming habits!—instead of prehension-free ontologies that have no living choices, and thus must

blindly obey laws, something both Peirce and I, among others, find unintelligible. Further, according to Peirce, it is the fact that each semiotic being—all the way down—has in its tripartite makeup an *interpretant* that means the holon's being is determined in part by interpretation, all the way down—and this, he says, is "inescapable").

Which brings us to another point. Originally, CR was created as a way to explain and justify the results of scientific experiments (as Karl Popper asked, paraphrasing, "How is it that science actually works? It works because there is a real ontology that can rebuff it"). But it is not clear at all that the types of realities disclosed by science and scientific experiments are the same ones that work with morals, hermeneutics, aesthetics, and introspection, to name a few of the multiple methodologies that exist out there and address different object domains and zones. To claim that only scientific experiments give "real" results is perilously close to scientism, and simply adding other disciplines on top of science is actually to reduce those dimensions to merely scientific methodology itself. Reducing all dimensions to science certainly strikes me as being far from an integral move. I am much more satisfied with the (at least) eight fundamental methodologies that disclose different object domains (and whose injunctions or paradigms enact or bring forth or co-create those various domains, which, again, are not just lying around out there waiting to be stumbled on by a scientific methodology—that belief is what Sellars calls "the myth of the given").

More recently, Bhaskar has introduced spiritual realities and consciousness into his scheme. But dumping consciousness on top of an ontological scheme that was developed without it is, well, cheating. The whole scheme has to be done over, using consciousness as an intrinsic part of the scheme from the very beginning, and not simply importing it after the scheme has been developed without it. The chances that the scheme will have anything real to do with actual consciousness is slim indeed, as consciousness becomes a *deus ex machina* to the main frame.

Finally, I would be remiss if I didn't at least briefly mention the claims made on behalf of quantum mechanics (QM), which has, if nothing else, been taken as the most successfully precise scientific model ever invented (one estimate put it at a million times more precise than Newtonian physics). The central concern of QM centers around what is called the "collapse of the wave packet" (which means, simplistically, this: around 1925, both Heisenberg and Schroedinger came up with a set of mathematical equations describing the existence of a subatomic particle. Heisenberg's was a complicated Smatrix equation, and Schroedinger's a simpler calculus wave. They were quickly shown to be interchangeable in results, and thus Schroedinger's wave equation, being the simpler of the two, soon became the standard form of QM—"the collapse of the wave packet" refers to the collapse of Schroedinger's wave equation version). Max Planck (who had introduced the quantum revolution in 1905 by suggesting that energy does not come in a continuum but rather exists in discrete packets or quanta) noticed that if you take the square of the results of the Schroedinger equation, you would get the probability of the specific location (and/or a set of other characteristics) of the particle in question (but you get only two characteristics at a time—and—the catch—the *more* you find of one, the *less* you *can* find of the other). The results of this inability to determine both variables was able to be put in a precise form as what became famously known as the Heisenberg Uncertainty Principle, which basically brought an end to strict causality in the physical sciences (and presumably removed "causality" from the Realists level of the "real"). But the real kicker came from the fact that, prior to actually measuring the particle to gain some information about it, the particle existed only as a probability—you *literally* couldn't say it existed or it didn't exist. Moreover, the type of measurement that you performed on the particle determined the type of being that you actually evoked—different measuring methods gave you different beings with different qualities. This led John Wheeler to say that we lived in a "participatory-observation" universe. QM has now been found applicable in scales from the very smallest to the very largest, as well as in brain interactions, biology, etc., and remains, for what it does, "the most successful physical theory of all time."

What is remarkable about this theory is how firmly it unites epistemology and ontology—the two, in fact, co-evoke each other. A different epistemology brings forth a different ontology, and a different ontology

will correlate with a specific and different epistemology—each of them, as it were, bringing forth the correlative dimension (or co-creating it).

I don't want to over-emphasize the role of QM in Integral Theory. I do want to point out, however, that—starting with Karl Popper—the role of science in CR has been pervasive, but science has been changing in profound ways that CR seems not to have kept up with. If ever there was a case of "means of knowing" governing in many ways "modes of being," QM is it, undeniably. And given that QM is the most successful physical theory in history, one's "ontology" should probably line up with it.

I might mention that it's not just the existence of the four quadrants that is important—many theorists include the four quadrants—but rather their being four different dimensions of the same occasion, moment to moment, that is distinctive with IT. The four quadrants, further, go all the way down, and this means that consciousness itself goes all the way down, as an intrinsic part of the very fabric of the Kosmos itself. This is what sets Integral Theory apart from so many other theories. Aspects of consciousness—which itself is primarily an opening or clearing in which subjective and objective phenomena can emerge—include:

- creativity (as part of the very opening in which newness and novelty *can* appear, and the means *by which* it can appear)
- an automatic epistemic-prehension of the preceding moment (which co-creates or helps bring forth the being or ontology of the present moment—its being "grasped" is what brings it forth, and its being prehended by an *interpretant*, a la Peirce, is what gives the unavoidable interpretive twist to its being)
- while, at the same time, the "include" part (of "transcend and include") means the previous moment, once subject but now object of the new subject, is included or literally *taken into* the being of the new subject, thus altering the new subject's very being or ontology in the specific act of inclusion—again, epistemology-consciousness and holonic-being are co-creative and co-determining as two aspects of the Whole real occasion. Sucking epistemic-consciousness-feeling out of the holon, leaving only its dead and denuded being or ontology is effectively to kill the being in question, and anthropocentrically to transfer all the epistemic-knowing-feeling-consciousness dimensions to humans alone, who then propose theories about this denuded level of being that they call "the real." This is tragic.

  Further, while the "transcend" part is Eros, or Spirit-in-action (or Spirit-in-self-organization), and is injecting Spiritual creativity into every moment (thus making evolution "self-organization through self-transcendence," as Erich Jantsch put it)—while that is happening, the include part is taking care of those aspects generally known as "causality" and induction. If the degree of creativity or novelty in a holon-being is extremely small (as with, say, a quark), then the previous moment's including component will be by far the strongest determinant of the new subject, and the new subject will seem completely deterministic (having little creativity to counter the causality). But Whitehead points out that no being's creativity is absolutely zero, only vanishingly small, and thus strict determinism or strict causality doesn't exist (the same as maintained by QM). Moreover, the higher on the Great Nest that a holon appears, the more novelty and creativity it possesses—so a physicist can predict where Uranus will be, more or less, a 1,000 years from now, but no biologist can tell you where my dog will be 1 minute from now. But for those holon-beings with little creativity, the "transcend and include" mechanics accounts for an answer to Hume's critique of both causality and induction (i.e., accounts for their existence, even as both become less and less the higher the degree of development and evolution).

I do want to repeat that there is much in CR that I appreciate. I particularly appreciate having an ally against the relativism of extreme postmodernism (even if, alas, I still find problems in how CR goes about doing this, by ripping consciousness out of the Kosmos and leaving "the real" to be merely a denuded "ontology"). But its heart is in the right place, one might say, and Roy Bhaskar himself is a truly extraordinary human being, and everything a philosopher should be, in my humble opinion (it reminds me, somewhat grandiosely, I guess, of what Habermas said about Foucault after their famous meeting—"He's a real philosopher"—praise indeed from Habermas). The funny thing is, several theorists have pointed out how CR and IT can be brought into general (and even quite close) agreement, with a few fundamental changes: IT, accept ontology as "the real"; and CR, accepting epistemic-ontic as correlative dimensions of the same actual Wholeness of sentient holons going all the way down. As I read CR, I keep seeing it subtly—very subtly—reducing everything to ultimate anchorage in the essentially prehension-free Right-Hand quadrants (and I'm sure CR sees IT as subtly reducing everything to the Left-Hand quadrants). But my position is, and remains, that all four quadrants are equally real, equally present, tetra-enacting, and tetra-evolving, and anything less than that (along with levels, lines, states, and types, fulcrums and switch-points, Integral Methodological Pluralism, and Integral Post-Metaphysics) can scarcely be called "integral."

Panpsychism

When we say that, for example, atoms do not "ex-ist" for magic individuals, we mean, as noted, that there is nothing in the consciousness (or records) of the magic individual that indicates any knowledge of atoms at all. Still, we in the modern and postmodern world—say, turquoise—assume that something like "atoms" nonetheless were real and existed in some sense during the magic epoch—and that sense we call "subsistence." Atoms did not ex-ist, but they did subsist.

But two important points about that. One, Integral Theory is a version of *panpsychism* (a term I'm uncomfortable with, preferring "pan-interiorist," meaning all holons have both exteriors and interiors, all the way up, all the way down. The interiors are the "prehensions" of Whitehead, which, as we've pointed out, we stretch to "tetra-prehensions"). And this means, before human beings even emerged—before, in fact, molecules even emerged—all four quadrants of atoms were involved in co-creating each other. The agency of each atom contributed to the opening or clearing in which other atoms could appear to each other—in short, the proto-consciousness or prehension of each atom contributed to the being or ontology of each atom. This wasn't just a level of ontology completely divorced from epistemology, but an occasion where knowing and being, consciousness and form, were two complementary aspects of the same happening, and could not be separated or torn asunder without grave violence to the reality of the atomic beings. So in this fundamental sense, epistemology and ontology cannot be separated (or more specifically, Who x How x What, epistemology x methodology x ontology, are so many dimensions of each actual occasion [see below]).

Nor can they be separated when it comes to the human being. It is common for schools of realism and positivism to maintain that "atoms" exist without being known by humans (and did exist when humans weren't even yet evolved)—whereas, in actually, atoms *subsist* (not ex-ist) without being known by humans. But atoms are known by each other—and their mutual knowing contributes to their mutual being—their epistemology and ontology are inseparably linked *for each other* (humans not required, but four quadrants are). Neither being nor consciousness can be separated from the other, at any level, without grave violence. The four quadrants go all the way up, all the way down.

Further, when it comes to saying exactly what it is that subsists at the atomic level, human consciousness, knowing, and interpretation are inevitably brought into the picture. The fundamental fact realism and positivism keep overlooking is that different levels of being-consciousness (and different methodologies) bring forth different worlds. It is not—as the "myth of given" maintains—that there is one, single, pregiven world that is interpreted differently by different worldviews (although that of course can happen), but rather

that these different levels of being-consciousness bring forth *different worlds* themselves—there is a red world, an amber world, an orange world, a green world, a teal world, a turquoise world, and so on, and each of them has different phenomena with different ontologies. Atoms—which have *subsisted* since shortly after the Big Bang—don't *ex-ist* until orange, where they are pictured as a little planetary system with sunnucleus and planetaryelectrons. At green, the atomic world now appears to be composed not only of electrons, protons, and neutrons, but mesons, bosons, leptons, and other sub-subatomic particles. At teal, these numerous particles are brought together in a unified synthesis known as the "8-fold way"—with the discovery of the Higgs boson particle giving added credibility to that paradigm. But at turquoise, an entirely new paradigm of super-high-energy colliders has suggested theories known variously as "string theory," "M theory," "superstring theory," and "a theory of everything"—where the universe is seen as composed of 11 dimensions, which gives rise to "multiple universes" or "multiverses." String theory is the only theory that promises to be a "theory of everything," pulling together items that previous physical theories were unable to do—but it is so complicated and so abstract, it is generally agreed that no empirical experiment will ever be able to be devised that could prove or disprove the theory. Physics, now far removed from the "empirical queen of the sciences," has become the "abstract theory of the sciences" par excellence, with a deeply Pythagorean worldview.

The point is that these different theories—and different epistemologies and different ontologies—came into being with increasingly unfolding levels of being-consciousness, and points once again to the fact that both what "ex-ists" and what "subsists" depend on the level of epistemology (and various methodologies) co-creating a particular level of ontology. Again, these two—epistemology and ontology, knowing and being—are not two entirely separate events but two complementary aspects of the same occasion, an occasion tetra-enacted by all four quadrants simultaneously (which means, more fully, a Who x How x What, or a subject/epistemology x a zone methodology x zone/object, at a minimum for Kosmic address [see below]).

Integral Pluralism

Many of these important distinctions are well exemplified by Sean Esbjörn-Hargens (2010) in his article, "An Ontology of Climate Change: Integral Pluralism and the Enactment of Multiple Objects." He starts with a well-accepted tenet of Integral Theory that an object or phenomenon is not merely something that is lying around out there waiting to be stumbled on, but is enacted, where "enacted" consists of at least a Who (epistemology) x How (methodology) x What (ontology). He points out that, in his view, where Integral Theory well emphasizes pluralistic Who's and pluralistic How's, it often assumes a single object (while this is often true, I think it perhaps overlooks my insistence that different epistemologies/methodologies enact different worldspaces—i.e., different objects or ontologies, which I emphasize often and seriously, and even more so in recent writings). But overlooking that generalized inaccuracy (and Sean admits it's a matter of emphasis, and that theoretically Integral Theory is fully aware of this point and insists on it), his discussion of pluralistic ontologies is illustrative.

He begins by pointing out that indeed Integral Theory maintains that single objects are only one interpretation of ontology, and that much more useful (and more accurate in a certain sense) is that each object is actually a multiply different object—an empty soda bottle, for example, can be used for a variety of purposes (a musical instrument, a flower vase, or an opportunity for a deposit refund). "In each case," he says, "the ontological status of the bottle is enacted in part by the method of interacting with it….. In other words, the ontological status of an object is not entirely independent of the actor or action involved." It's important to note that this is a real difference in ontology—in the actual "thing," which literally changes with different uses—and not merely a difference in description or classification (in my opinion, this is an important difference Sean tends to overlook, which leads to an overestimation of Critical Realism, as we will see). But for the moment, let us call a real change in the actual nature or real ontology of an object by the term "real ontological change" (or "real ontological object") and a change that is due merely to different definitions,

classifications, or views, by the term "descriptive ontology" (or a "descriptive ontological object").

Sean wishes to view climate change (CC) as a real ontological multiple object, and not merely a descriptive ontological object or a single object, a view I fully share (we both realize it can be viewed as a single object, but not effectively). "Ontological pluralism is enacted through an increase along three axes: *epistemological distance*, *methodological variety*, and *ontological complexity*"—which he simplifies as Who x How x What and I have previously simplified as quadrant x quadrivia x domain (although I'm very fond of Who x How x What). Sean acknowledges that Integral Theory at least recognizes this triple pluralism (including ontological: "Methodological practices bring phenomena into being"). I would say, "partially" bring them into being, but the point is clear enough. I also differ slightly, I believe, in that I maintain that (at least) all three of these co-exist, and you can't have one without the others. I will often just say "epistemology and ontology are two complementary aspects of the same occasion," or at other times, "The structure of the subject co-creates the nature of the phenomena perceived"—but as I make clear, I think all three processes (Who x How x What, along with a few others) are an inseparable part of Integral Methodological Pluralism (in theory and *in reality*). All three of these are often different—often quite different—but all three of them are always already present in any occasion (including pre-human holons, which prehend each other through various methods coproducing various domains). And this means, without doubt, that changing the Who or changing the How will change the What—hence, integral ontological pluralism. Moreover, while we can say that the What subsists (it possesses what Wilfrid Sellars, pioneer critic of "the myth of the given," calls "intrinsic features"), we can't say what those actually are (or what those intrinsic features are) without specifying the Who and the How (explicitly or implicitly).

Now, Sean says that in his How, he is including, among other items, Integral Theory, Critical Realism, Actor-Network Theory, Science and Technology Studies, and Ontological Politics. I simply want to point out that the How will change depending on *exactly* what the combination of those methods are. We can't simply say they are all important (in many ways, they are indeed all important, as are dozens, perhaps hundreds, of other methodologies). I know Sean realizes this; I just want to make crystal clear how sensitive that formula (Who x How x What) is to every change made in each of its variables (and I would add, to be included in that list, names such as Jürgen Habermas, Michel Foucault, Martin Heidegger…. to Plotinus, Padmasambhava, Shankara, Eckhart…. Well, you get the Integral picture. The fact that Integral Theory doesn't name every single theorist that went into it doesn't mean they weren't taken seriously. In *Integral Psychology*, I give over 100 developmental theories, all of which have been taken into account in creating the "altitude" component of the Integral framework, even if only a few are usually mentioned explicitly when explaining that dimension, but any or all of which can be called on, as necessary, to flesh out the framework, which was created precisely to be able to include other theories as needed.)

But that doesn't mean that we can simply include a long list of names and claim they are part of a new and expanded Integral Theory, especially if some of those names rather dramatically differ with the core tenets of Integral Theory or Integral Enactment Theory itself. We must be careful, for example, with Critical Realism's treatment of "ontology," which it tends to privilege. In too many cases, what Critical Realism calls "ontology" is not "real ontology" but "descriptive ontology"—it simply does not grasp the depths of what enactment is actually doing (even when it uses that term). As Sean approvingly summarizes Mol's argument, "Thus, practices or methods used to understand CC do not just describe it, instead, they actually help to produce or enact it." And John Law, "The argument is no longer that methods discover and depict realities. Instead, it is that they participate in the enactment of those realities." To which Sean concludes, "When we allow for the enactive or performative nature of methods, we begin to understand how the use of multiple methods to understand an alleged single phenomenon like CC results in multiple—but networked—objects." And that means not just descriptive objects but real objects.

Yet in every example that Sean produces of Critical Realism, claiming it supports his Integral Pluralism, the author argues for multiple descriptive objects, not multiple real objects. Tim Forsyth's "typology of

environmental problems," for example, divides those problems into four major overlapping categories—local and global realities seen as "brute facts" or "institutional facts." The brute facts are just straightforward empirical "facts." What are examples of "institutional facts"? He lists "shifting cultivation, environmental vulnerability, global deforestation, anthropogenic climate change." Forsyth states that "environmental 'brute facts' (or biophysical properties) are divided locally or globally [i.e., their differences are matters of location, not ontological reality]. The 'institutional facts' (or definitions of degradation) are controlled by discursive practices [i.e., as he says, 'definitions']." Different discursive practices give rise to different topics and definitions of discussion, not to the deep realities of those topics themselves. His major complaint about how CC is treated is that these four cells get confused—and not that there aren't enough real methodologies or a wide enough pluralism of epistemologies to produce and enact a wider understanding of the *real* multiple object known as CC. In other words, his argument is loaded with shifting descriptive ontologies, but no real ontologies (which he tends to equate with real biophysical ontologies, period). I don't disagree with his points; I disagree that they support Integral Pluralism in any real sense at all (not in the fundamental sense that, as Sean says, "Ontological status is enacted in part by the means of interacting with it"—where "enacted" means "co-created").

And I constantly find that with Critical Realism in general—the pluralities it acknowledges that are enacted (or whose ontologies actually depend in part on their epistemologies) tend to be largely descriptive ontologies, not real ontologies (which tend to be defined by science and science alone, going all the way back to Karl Popper). Nor does Critical Realism believably integrate the various knowledge domains it acknowledges. Sean at least acknowledges Integral Theory does a better job of this: "One of the things that sets Integral Theory—and the Integral Pluralism I present in this article—apart is that of a meta-framework that helps coordinate epistemological, methodological, and ontological variables and their complex interactionships. Even Critical Realism does not offer, in my mind, as powerful and as accessible a framework for doing this" (p. 167).

Sean also quotes Carolan, who in his examples of multiple objects says, "In other words, the object changes through translation, but the (sub)structure does not." Sean points out that Carolan arrives at this conclusion by analyzing two axes (x = complexity and y = epistemological distance). Sean agrees with Carolan's conclusions, then says, "I have added a third [axis] that represents methodological variety" (p. 162). If Carolan had done the same, he might realize that some forms of translation actually change the (sub)structure of the object as well—and *that* is a *real* change and a *real* multiple object, "produced and enacted" (as Sean puts it) by the How, and not merely a descriptively different object. Carolan, in other words, is not supporting a genuine Integral Pluralism (but rather a descriptive pluralism). Orange structures look at atomic realities in incredibly different ways than turquoise structures look at them—not just different descriptive ontologies, which Carolan gives, but different (sub)structures as well—real ontologies. Again, I don't disagree with everything that Carolan is saying; I am pointing out it does not support a truly Integral Pluralism and real enactment.

Sean brings up a point raised by Brian Eddy, namely, that in addition to Who x How x What we can add "Where" and "When," and this is especially important in contextualizing the knowledge. I fully agree, but would like to point out that in Integral Theory, it goes without saying that the subject (the Who) that is doing the (multiple) methodology on the (multiple) object is always already fully contextualized vis-à-vis the Lower-Left quadrant (which implicitly or explicitly includes a "Where" and a "When"). But it is certainly okay to make that explicit by adding it to the Kosmic address.

Finally, Sean quotes a personal communication from Mark Edwards, whose work I admire, stating that Integral Theory needs to spend more time stating how it arrived at its own Kosmic address, but Edwards knows Integral Theory can't do it. "No one system is up to this task. Hence the ultimately inadequate nature of all mailing systems." But Integral Theory has already stated this as the "IOU tenet"—"every system is either incomplete or uncertain," and that definitely includes Integral Theory. But Integral Theory further

claims that "Emptiness redeems all IOUs." That is, the relative world is forever incomplete or uncertain; only ultimate knowledge—given by prajna or nondual awareness, and not vijnana or dualistic awareness—can disclose ultimate reality (Spirit or Emptiness). That reality is real; it is ultimate; it is unqualifiable (including that claim); but it can be "known" in a certain sense via Enlightenment or Awakening (i.e., satori, sahaja, metanoia, gnosis, wu, moksha), which Integral Theory puts at the center of its framework. The only value of a statement such as Edwards'—if it's not to be merely a one-upmanship move—is to remind us to state as fully as possible all of the pluralities that go into any system or decision that we make (knowing it will be ultimately inadequate, but will make it more whole than the options)—and that is the one founding and most fundamental tenet of Integral Theory.

Postscript

On balance, I want to congratulate Sean Esbjörn-Hargens on a truly fine article. My only major complaint is that, if anything, he doesn't take his own arguments strongly enough. That we have *real* multiple objects (think about what that really means!) must mean we have some powerfully co-creative enactments being engaged—that epistemology, methodology, and ontology are inextricably intertwined, and changing any one of them changes the others. Even in Sean's intentionally simplistic opening example—of a bottle being used in several different ways, each time producing a genuinely different article or object—these are genuinely and truly different objects, not just different descriptions. This shows the real power of enactment, using Sean's words, to be genuinely "performative" and "productive." But he tends to shy away from this strong assertion, in part, perhaps, due to his recent infatuation with Critical Realism, and in part, perhaps, due to the collapse of extreme postmodernism, which has resulted in an atmosphere that has gone to the extreme opposite of the Kantian view, and instead of claiming (too strongly) that all knowledge is a social production, anytime epistemic or methodological actions are brought in as part of the co-creation or enactment of an object, theorists cry "epistemic fallacy"—and thus ontology alone is taken to be constituitive of the being of an object (instead of a finely interwoven Who x How x What x When x Where—the "What" alone is said to exist, all on its own, without any enactment or co-creation at all). This is a postmodern reaction in the extreme, and throws the baby out with the bathwater (or as Ronald Reagan would say, throws the baby out with the dishes). "The myth of the given" is still a myth and is still operative, and is directly contradicted by the existence of multiple objects, among many other criticisms. The fact that there are at least eight primordial perspectives, each involved in the co-creation and enactment of eight ontological zones, is another argument against "the myth of the given." Add to those eight zones (or four quadrants) anywhere from five to twelve levels of being-consciousness—each of which brings forth and supports an ontologically different world—and you have even further evidence (this is what Sean does with his eight levels of ecological worldview and ecological selves—those are real and genuinely different worlds, not merely different descriptions of one unchanging world). "Multiple objects" brought forth by performative, productive, enacting, co-creating Who's and How's is, in many ways, exactly what Critical Realism is fighting, because it has not yet found a workable synthesis between idealism and realism, which, I believe, is what both Integral Theory and Integral Pluralism have succeeded in doing.

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THE BIRTH OF INTEGRAL SPORTS
Insight into Coaching Parents in Sports

Nuno F. Matos, John Thompson, and Sean Wilkinson

ABSTRACT This article provides an introduction to Integral Sports. We begin by outlining a key element of our work, integral coaching with parents of athletes, and then explain how Integral Theory can help support the aims of coaching in this context. To broaden the scope of the article we discuss how sports science research is tackling the issue of parents in sports and argue that much of this work has led to limitations in understanding and inertia in the field. The use of the methodology of Integral Coaching Canada is outlined with a case study of a parental participant in our project, followed by a discussion and reports of some of the characteristics found in other tennis parents. Finally, we present our future plans and the wider potential for Integral Sports both in research and practice.

KEY WORDS athletics; sports; academia; coaching; parenting

Sport dramatizes ancient myths and makes them real. In the heat of battle, the mind and body can be forced into new frontiers. With its way of enticing all one can give, sports have a way of revealing a person's true character, leaving athletes emotionally naked with nowhere to hide. This can be an incredible environment for learning about the mind-body relationship, different states of consciousness, and interpersonal relationships—all parts of the self that are difficult to face and a vehicle to spiritual growth (McNamara, 2012).

Greater levels of passion and excitement are generated through sports than perhaps any other social phenomenon. Part of the pull toward sports involves patriotic sensibilities, but sports also challenge societies of all sizes to endeavor to higher standards of individual attainment and the systems that support their development. In addition, sports also make visible the darker side of humanity with issues of overtraining and dropout, injury, performance-enhancing drugs, fan violence, unfulfilled talent, and poor sportsmanship. Thus, sport can be seen as a social phenomenon that faces the challenges of its time.

Historically, evolving values have been promoted through the power of sport. Sport has changed tremendously from ancient gladiatorial games in Rome, where man fought to the death as a way of entertaining and controlling society, to traditional values demanding young boys be trained for becoming disciplined soldiers, to the advent of structured sports in the 20th century. In modern times, sport has been transformed by science and global political structures into a worldcentric forum that includes athletes from all ages, ethnic backgrounds, and genders (Coakley & Pike, 2009). Given the microcosmic reality of sport in a time of intensifying demand to understand and deal with global complexity, we see a great calling for Integral Sports.

In this article, sport is examined with an Integral lens in order to promote deeper and more inclusive values. We see sport as changing from a practice largely defined by exterior excellence to the outside world to a profound practice of self-development and social evolution. In our approach, psychological development practices and spiritual insights are utilized to not only aid the development of the performer, but all those who

Correspondence: Nuno F. Matos, Rua da Guiné, 40, 4º esquerdo, 3030-054 Coimbra, Portugal. *E-mail*: nuno@performanceintegralcoach.com.

support and spectate. Overall, this article aims to be part of the first steps toward the birth of Integral Sports.

Parents in Sports and Bringing Parents Into Coaching

We have run a major Integral Sports project over the past five years centered around a successful tennis academy in the United Kingdom, named Integral Tennis. This project aims to show how an integrally informed way of dealing with sport can help achieve both greater excellence and well-being within the academy, with an academic project running as a complement. A key element within the project is our work with the parents of athletes. Under the guidance of coaches, Integral Tennis parents are inspired to connect deeply with their child's development as an athlete.

Our approach enables parents to gain a wider perspective and, therefore, empathy for what their children are experiencing when they engage in sport. More significantly, the program initiates a discussion of how parental behavior and communication can have a major impact on how children perceive and grow through sport. The accountability and "nowhere-to-hide" aspect of sport makes this all the more possible. What we have found is that sport provides a setting in which parents are open to accepting expertise and support for their child. Being with the parents while a child is competing, and showing empathy and an interest in the parents' often highly uncomfortable state, has helped us to build a strong rapport with our participants. It is important to acknowledge Integral Coaching Canada (ICC) in providing a rigorous and integrally informed training that supported us in working with the level of depth and grounding in adult development that we were looking for. ICC also provided professional credentials that legitimatized our work for many of Integral Tennis parents.

To further support parents and to potentially recruit them for coaching, we run workshops to help illuminate how important parents are in helping their children to have a healthy experience and to reach their potential in sport. What excites us about this project is the fact that very few parents have heard about and/or have any initial desire to receive coaching. Coaching creates an intention and professionally guided process where we can support parents to embody invaluable changes in their relationship with their children and therefore influence the well-being and success of their child. Such coaching is conducted with no mention of Integral Theory, which can be too complex and abstract for people to relate to their own lives. In our project, however, the Integral model has played a significant role.

Literature Review

Integral Theory in Sports

Integral Theory (Wilber, 1999) has been a guiding principle throughout the development of our work. It has been especially important in helping us to carefully integrate the different schools of thought within academic sports science research. The four quadrants are aspects of and perspectives on reality that yield four interrelated yet irreducible perspectives; these will be described using the notion of zones, or different perspectives of consciousness (Combs, 2009), as applied to sport (Fig. 1).

The Upper-Left (UL) quadrant includes the subjective, phenomenal dimension of individual consciousness and is described using the pronoun "I." Applied to sport, the UL represents an athlete's subjective flow of experience (zone 1), like emotional states, feelings, fears, thoughts, and sensations possible during a race or the meaning they attribute to participation in their sport, and it can also describe a detached (objective) view from the previous experience (zone 2) and therefore describe the state of consciousness the athlete is in during the race.

The Lower-Left (LL) quadrant includes the intersubjective dimension of the collective—culture in the broadest sense—approached as a first-person plural perspective. From zone 3, sports science can look at the shared experience and understanding between a coach and athlete during a competition—both may share the

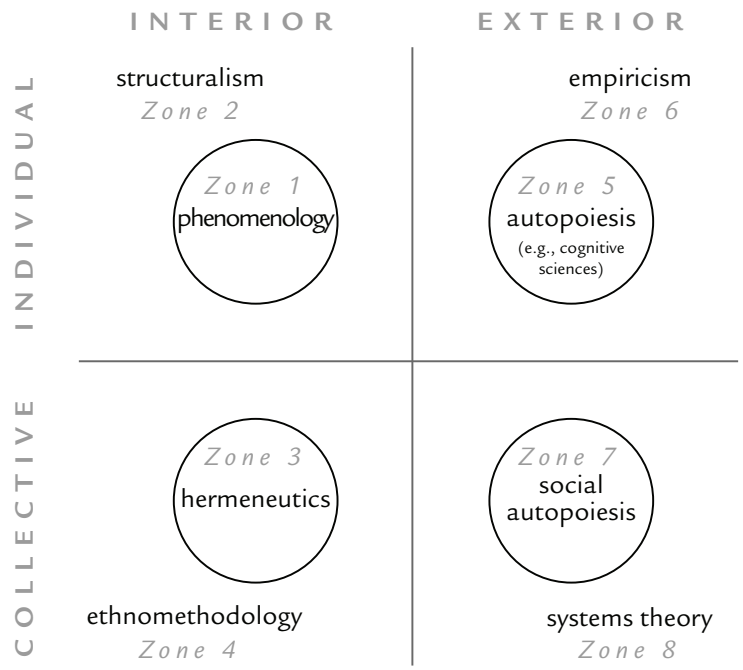

Figure 1. The four quadrants and their corresponding methodologies.

joy of winning or, on the contrary, the pain and sadness arising from a loss. An objective view of this quadrant (zone 4) would then interpret the communication between coach and child and look at statements that the coach uses to support or pressure the child. Sociologists and some sport psychologists through qualitative inquiry have researched zone 3 and more attentively zone 4 with great interest.

The Upper-Right (UR) quadrant includes the study of individual structures, behaviors, events, and processes that can be described in "it" language. This quadrant can yield a zone-5 perspective, drawing on cognitive science to address how an athlete interfaces with the athletic environment such as a court or field. Or it can include Tanner stages of physical growth (from infancy, to puberty, to adulthood), body morphotypes like the ones observed in different sports (e.g., wrestler vs. distance runner), or biomechanical analysis of movement, all of which comprise a zone-6 perspective.

The Lower-Right (LR) quadrant includes the interobjective perspective of systems, addressing aspects of systems and society, which applied to sport can yield two final perspectives: zones 7 and 8. A zone-7 approach would include the examination of internal communication dynamics within an athletic system (e.g., how scores and statistics are kept; how statistics translate into athletes' salaries). Zone 8 studies the external appearance and dynamics of a group or system, which can include sports policies, financial resources to fund teams or athletes, access to medical and physiotherapy support, and so on. Mackenzie and Cushion (in press) have studied football team tactics (i.e., how many passes have been made, how much have they run on average) and Gray and Jenkins (2010) have focused on physiological recovery systems (i.e., how body organs work together to influence recovery from training).

Each quadrant provides a different but valid view for any given phenomenon. A quick example may help illustrate simply and practically what this means with an elite athlete before entering a competition: the athlete is anxious and worried with how he will perform. This athlete's experience of anxiety is inextricably linked to UL factors, including likely feelings of anger, frustration, and potentially feelings of depression and overtraining/burnout occurrence; to UR factors such as his behavior around a competitive environment, elevated heart rate, high blood pressure, adrenaline production, and other hormonal parameters; to LL factors

such as how competitors perceive and respond when he becomes upset due to a loss, his relationship with the coach, parents and more; and to LR factors such as lack of available referees, traveling time to the venues sport-related expenses, and much more (Kentta et al., 2001; Richardson et al., 2008).

The Academic Perspective on Parents in Sport

An integral perspective is essential to understanding the scientific approach to parents in sport and its inherent limitations in tackling the problem. As a discipline, sports science has for the past 20 years dedicated much time to the study of how parents influence developing child athletes (DeFrancesco & Johnson, 1997; Gould et al., 2008; Harwood et al., 2010; Smoll et al., 2006; Smoll et al., 2011). From this research, scientists have reported the crucial role parents have in supporting their child's growth in sport (Power & Woolger, 1994). Researchers have also found that parents can act as highly negative influences, creating many problems for the child, including provoking/stimulating unnecessary pressures, high states of anxiety, unreal expectations, overemphasis on winning, acting as sideline coaches, destructive criticism, emotional and physical abuse, and more (DeFrancesco & Johnson, 1997; Gould et al., 2006; Smoll et al., 2006; Smoll et al., 2011).

DeFrancesco and Johnson (1997) surveyed 45 "tennis parents." In their report, it was shown that 33% of parents reported winning as very important, and 20% admitted to have engaged in inappropriate behavior while watching tennis matches. In the same study, 29% of youth tennis players (N = 101) reported they felt embarrassed by their parents during matches. Such parental practices included walking away from the court (61%), yelling or screaming (30%), and even physically hitting their child after the match (13%). A more recent survey by Gould and colleagues (2006) sampled junior tennis coaches who stated that 36% of parents were having a negative impact on their child's development. An even more recent study (Harwood et al., 2010) looked at parental stressors in a professional football youth academy and found that a considerable number of parents were led by an ego-oriented approach highlighted by a "winning is all that matters" mentality; these results corroborated some of the negative parenting practices observed in sport in general (DeFrancesco & Johnson, 1997; Gould et al., 2006; Smoll et al., 2006; Smoll et al., 2011). On a different continuum, it has also been observed that the stress that parents place on a child may act as one of the many contributing factors for the development of overtraining and burnout (Gould et al., 1997; Matos & Winsley, 2007; Matos et al., 2011; Winsley et al., 2011).

In 2004, Fredericks and Eccles created a model of parental influences on children's motivation and achievement and concluded that parents tend to fulfill three main roles for their child's experiences: that of a provider, that of an interpreter, and that of a role model. For example, parents provide financial support and transport, they "give the example" and therefore help their children interpret their sporting experience when they show a positive or negative reaction to a lost match, and they model critical behaviors such as work ethics and morals (Gould et al., 2008).

Research Practice and Limitations in the Sports Science Community

Research supports that parents strongly influence how children behave and grow through sport, how they make decisions, and that they can be catalyzers for the development of overtraining and burnout. As such, parents should be seen as important sources for optimizing training. Here, *training* is meant from a LL quadrant perspective rather than a biomechanical and/or physiological one (i.e., an UR perspective). In other words, we believe that sports science should recognize that intervening to support healthy parenting, together with the healthy psychological and emotional growth of a child athlete, is another means to optimize training. To the best of our knowledge, this is not yet the case. Although recent suggestions have emerged in the sports science community to educate parents in sport (Gould et al., 2008; Harwood et al., 2010; Smoll et al., 2006; Smoll et al., 2011), at this date no studies have attempted to address the specific challenges that parents have

and that for several years have been known to strongly influence a child's development. When looking closer at how the issues of parenting in sport are currently being studied, it becomes more apparent what is preventing grounded interventions from taking place.

The issues that parents cope with can be psychologically complex, but there is also the vulnerable nature of the relationship dynamic with the child (Davis & Jowett, 2010; Gould et al., 2008). Essentially, what researchers have done is to provide guidelines and direct parents on what their responsibilities in sport are, normally through the creation of workshops or documents directed to sports governing bodies (Harwood et al., 2010; Smoll et al., 2006; 2011). Sports science has taken a crucial step in raising awareness on the issue of parents, but it is difficult to foresee useful interventions emerging from sports science's current way of addressing and seeing the problem. This stems from the fact that research is still guided by a strong positivistic view of reality which dictates what gets and what does not get published in the core sports science journals (Martens, 1987). To get sport psychologists engaged in this research would require them to not solely rely on methodological zones 5 and 6, but to progressively integrate consciousness zones 1, 2, 3, and 4.

This would be a radical shift in an environment that has excelled largely through empirical observation to understand processes and predict outcomes of individuals from an exterior perspective (Martens, 1987). Adult development challenges this premise because UL and LL processes require personal experience and training on how to deal with interior perspectives. However, development of interiors normally involves engaging in practices (e.g., meditation, psychotherapy, journaling) that are very likely to be met with strong resistance, suspicion, or indifference by a majority of people. Since interior development is not regarded (or even known) as important within sports science, little attention is devoted to stages of consciousness (Combs, 2009) (i.e., how humans develop their understanding of the world). By not studying stages of consciousness, researchers are limited in the understanding they can get from parents since they will be understood essentially from a perspective that does not recognize differences in development or ways of expressing worldviews.

Incorporating zones 1 to 4 in sports science would also involve establishing dialogue and understanding between the different schools of thought and epistemological stances (i.e., positivism vs. phenomenology) to address the broader developmental needs of adults (Marquis, 2007). For the latter, researchers would potentially have to face great uncertainty and be open to areas where they are not experts. Accordingly, researchers would need to improve their communication through growth in competence in the LL quadrant. Ultimately, these developments would ask researchers to acknowledge the relevance of different fields and the viability of generating research through different means of producing knowledge. In summary, although sports science is highlighting the problems for parents as they manifest in the field, researchers have not developed a way of understanding UL and LL development needs sufficiently to make a meaningful intervention. Below we outline our project as a potential way to address this issue.

Methods

Case Study Overview

This article uses a case study approach to examine how the ICC methodology may help parents in sport. Although several parents had already been coached in our academy, we purposefully sampled one mother from this tennis club in England due to the richness of her data. This type of sampling has been used extensively in qualitative methods as it allows the capture and study of specific phenomena that otherwise would not be available or easily accessible (Yin, 2003). In applied sports psychology, the importance of adopting such approaches for assessment of intervention work has been highlighted elsewhere (Anderson et al., 2002; Strean, 1998). The ability to create thick descriptions that offer an insight into what it is like to experience a given setting, from the viewpoint of the individuals immersed in that same setting, is considered a key component of a case study method (Yin, 2003). Thus, case studies have been used as a way to provide rich information

about the effectiveness of applied interventions within the real world environment (Strean, 1998).

The aims of the study were explained to the parent in an information letter and informed consent was obtained. The participant was made aware that her involvement was voluntary and confidentiality would be assured. Anna (pseudonym) had been a tennis parent for approximately three years, and was in her 40s. Her son Richard (pseudonym) was seven during the time the intervention took place; Richard did not take part in the study. Our study used a combination of three different sources of data: written reports from the integral coach, journals from Anna, and interview extracts from a post coaching interview with Anna (Yin, 2003).[1]

ICC Methodology

Integral Coaching Canada attempts to view where the client is with their topic in all four quadrants (Hunt, 2009).[2] Coaches are trained to "look at" and "look as" the client (Divine, 2009) in order to determine an "AQAL constellation" or pattern that gives rise to someone's structural lens, which is the foundation for the client's current way of being. The coach needs to ask what must it be like to be this person right now? This process enables the creation of metaphors for the client's current way and new way of being. The Apprenticeship ICC methodology also uses lines of intelligence (e.g., cognitive, moral, interpersonal, somatic, spiritual) as a means to determine a client's capacity to develop and to evolve through stages of consciousness. In adapting work from other theorists, Wilber has described and mapped more than a dozen different lines of development that each proceed sequentially yet quasi-independently (albeit at different rates) through the basic structures of consciousness. The idea behind lines of development is that each human being is more developed in some areas than others (Wilber, 1999).

Data Analysis

The transcript from Anna's interview was analyzed using content analysis through inductive means (Elo & Kyngas, 2008). The interview was individually analyzed by the first author (N.F. Matos); after having read through the transcripts three times to become familiar with the data, the emergent data themes were discussed with the second author (J. Thompson). Both authors then met and discussed the analysis until consensus was reached, with only minor differences pertaining to how the analysts' interpreted important events. Next, both authors looked for connections and similarities between the data themes, which were later organized into categories and subcategories; this part of the analysis was mainly conducted by the first author with support from the second author. Anna's case profile was then discussed in the research group until consensus was reached and a case study was written. Anna was permitted to read the case study to check for accuracy (Lincoln & Guba, 1985; Yin, 2003), with subsequent personal discussion of the themes as part of the member-checking procedure (Lincoln & Guba, 1985), before the final case study was developed.

Results

Anna's topic was entitled, "How to Better Support Richard in Tennis." Anna had been targeted by the tennis coach as one of the parents that could take on coaching because he felt her way of engaging in tennis was influencing Richard's behavior on court and affecting his training considerably. She had been acting as a *pushy* parent (i.e., exhibiting high degrees of stress such as not eating at tournaments or feeling sick with the stress of competition) and showing a lack of understanding of what was happening with her son on court—Anna would often get angry with Richard and comment on his mistakes which, in the coach's view, were perfectly acceptable. Seeing that Anna was really trying her best to support her child and appeared unaware of the best ways to do this, the coach suggested integral coaching to her. Figure 2 illustrates the main theme and corresponding higher-order themes and sub-themes that emerged from the content analysis.

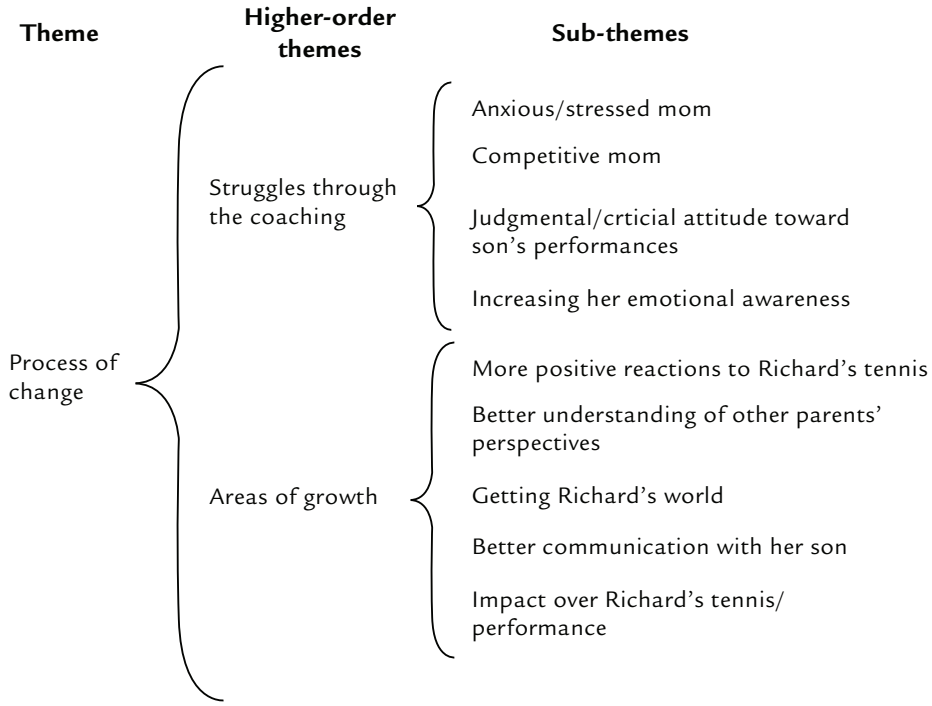

Figure 2. Hierarchical structure of the themes that emerged from Anna's interviews.

Session One: Intake Conversation

The ability to act in a particular way or stay calm when emotionally charged was difficult for Anna. Her competitive drive had the capacity to undermine the possibility of improving interpersonal skills with her children and other parents. This issue was apparent in Anna's first reflective journal entry that detailed her desire for her son to become a national-level player:

> [Referring to a tournament where he played very well] One of my proud moments though—everything going smoothly, well ahead every game—a reminder of how far he's come. Today I believe he can make the nationals!

Anna later questioned her ambitions after seeing her son not perform well at training:

> [Referring to Richard's squad where he didn't do well] I'm not sure I'm seeing this and the doubts set in again. Warning bells? Don't get carried away—this may be going nowhere!

The coach felt he needed to help Anna improve some of her relationships, better understand her son and other parents, and help her reflect on the core purposes of being involved in tennis. The latter goal was important to help her deal with her high levels of anxiety: "I still avoid watching competition because I don't find it easy. I find it really… I am really nervous when he's playing." Looking across the lenses, the coach felt Anna was worried about her level of commitment and involvement in tennis, her family, outcomes not reaching expectations, and what was being sacrificed for her child to play so much tennis. Another example of how Anna struggled with stress and anxiety:

> I need these [benchmarks] to justify all the time and energy spent every week; [Referring to a competition her son had unfairly lost] Again, I came away (after the initial disappointment) thinking he was amongst the best. I am definitely matching results with expectation, which ignites my excitement/disappointment.

Further, Anna knew how she would get very stressed when Richard played and that this often would boil over onto him with a judgmental attitude for his performance. She was, however, not aware of how this could hinder his development and add pressure:

> So frustrating to watch because he's making mistakes due to slow feet. Volleying at net a lot—excuse for lazy feet? Does he know which ball to come in on? We talked about his "bread and butter" shots. His reply: "I don't like butter on my bread!"

The latter statement gives evidence of the difficulty in understanding her son's tennis due to her high stress levels and a lack of emotional awareness, which would consequently lead to poor communication and more pressure on Richard. This was key to Anna's journey (i.e., the high levels of stress she felt whenever Richard played let to unrealistic expectations of how he should perform).

Session Two: Responses to the Coaching

Anna's "current way of being" metaphor (*The way of the Relentless Marathon Runner*) attempted to describe how Anna was continuously anxious around others, especially Richard, and how her lifestyle allowed little chance for reflection. A second metaphor was also created, which would serve as inspiration and support for Anna's development of a "new way of being" (*The Way of the Inspiring Counselor*) in her topic. The new way attempted to inspire Anna to become more understanding about Richard's reality, enabling her to nurture him more instead of pressuring him continuously.

Session Three: Cycle of Development 1

As the session progressed, the coach realized the effort that had gone into Anna's practice and felt happy she was starting to engage more fully with the coaching methodology. The coach kept probing Anna's awareness through questioning, which seemed to work well; she showed early signs of becoming more aware of the nuances within her current way of being:

> Most of my daily comments relate to stress levels as a result of watching Richard play. My stress increases if/when he comes off court and I ask him how he thinks he played and he offers me nothing constructive. It is definitely linked to whether it looks like he's trying hard or not (effort!)

After having gone through the client's journal, issues to do with Anna's high levels of anxiety in competition emerged:

> [Referring to a competitive match] I watched Richard. I was feeling very nervous. He couldn't get a proper warm-up at all, therefore I was fearing the worst.

Or her emotional struggle with her son's performances around other parents:

> [Referring to a tournament] Poor performance; really disappointed. Woke up a bit in the quarterfinals against Ryan losing 8 to 10, but still really poor overall. I tried talking to him about his performance—he just said he felt tired. I was embarrassed. It is always worse on home territory! I was ready to give up watching by the end!

Good progress had been made as Anna was starting to become more aware of her current way of being and how that also involved her being excessively critical of her son without taking more time to reflect by herself; this is clearly expressed in the interview when she refers to her previous way of addressing Richard's performances:

> I think before I would have probably reacted to it [speaking to her son after competition] quite quickly and said something. Now, I tend to reflect a little bit before I say something, because I think I recognize I can do more damage sometimes if I jump on him with both feet.

Session Four: Cycle of Development 2

The coach linked Anna's new way of being with her goals. She started becoming more interested in knowing what it was like for her son to play tennis, giving the first signs of evidence on her effort to understand his: "I'm trying to understand how he's feeling on court." In the interview, Anna also gave a reflection of her highly reactive emotional style and refers to how that changed through the coaching. She was starting to see how her way of communicating was quite strict: "I would probably have said: 'Why are you playing that for? You know you're never going to win if you go in and play those volleys!,'" and how she would could give him more space with his tennis: "Now we allow him to do that." As she understood her son better, it made sense that Richard began to feel less pressured:

> He probably feels less pressure from me than he did before because I would have been very clear about what was coming up from what he had to do, and then more focused (…) I don't keep harping about these sort of things anymore.

Session Five: Cycle of Development 3

Anna was making clear progress. She was starting to show more vulnerability: "I don't talk about feelings and things like that very often. Find it really hard… not used to it, but… it's important." Despite her personal growth, her arm would shake at times when speaking about more sensitive topics.

Anna felt she had a breakthrough after a tournament in which she realized that she was putting pressure on Richard by how nervous she was acting. She also really felt for the first time what it must be like for him in a competition. She also began to realize how the Inspiring Counsellor was emerging and how she felt drawn to support him rather than criticize him. She kept developing her awareness around her emotions:

> I've noticed I'm too emotional day by day. I'm almost too involved. If I could review Richard's progress over a longer time period, this would probably help me to see his progress more and stop stressing about every up and down.

Anna spoke to her husband about her expectations of Richard, and realized that if she would only expect Richard to do his best and enjoy tennis more, she could understand him better: "Sometimes, genuinely, there are reasons to why he plays like that." She was better able to introspect and be more open with Richard: "It

just makes me stop and think. That's the biggest thing that I've learned." She started changing her perspective to a less egocentric view: "I think to remember to ask, to put his feelings first before my own," allowing her son to express his desires and beliefs: "Usually that involves me asking him how he feels or whatever, without imposing my feelings on him." It was from this time onward that the coach started to notice a considerable difference with Richard's practice on court. Instead of coming to training feeling moody, he started showing up smiling more and clearly being less worried about training. This continued to improve and by the end the coach felt like he was able to get twice as much out of Richard in a session than before the coaching:

> I can look back and see how he is so much more ready to train now than he was before. He used to have frequent tantrums, lose his focus, etc., and that would stop him training. Now it's like… it's so much better, really, from night to day!

Session Six: Cycle of Development 4

Anna was starting to talk with other parents, which brought her new insights as well as some relief: "It's good to know others [parents] are going through the same thought processes!" This was also important to help Anna feel less anxious. More importantly, there was clearly a greater and deeper understanding of her son. Anna realized better what it was like for Richard to be on court, the pressures he was under, and that he was just trying his best. She realized it was not his fault when he made most of the mistakes that she was used to pointing out:

> Sometimes what he says actually makes me stop and think I was wrong to think that. Sometimes he would say to me things like: 'I was really intimidated out there. I couldn't play because he was really aggressive.' (…) But then, sometimes, genuinely, there are reasons why he plays like that. So yeah, it just makes me stop and think.

Anna was realizing more and more how she could support her son better by working on improving communication (i.e., being more positive and asking questions if she did not understand something), rather than telling him off. This aspect of her awareness was expressed in her journal, together with Richard's positive response:

> At breakfast we talked about how to deal with situations he's not happy with: talk to partners nicely and in an encouraging manner, talking to the coach quietly about the situation, so trying to solve the problem before his head drops. We also talked about his ambitions for his tennis. Encouraging signs with regards our earlier conversations. I haven't seen his head drop since.

Anna was starting to make clear progress in better sensing the challenges of competitive tennis, especially for a seven-year-old, which then led her to also act more as an emotional support. With these changes, Anna started feeling better about herself and her family's investment of time and money in her child's tennis. She became clearer on what her goals in tennis were, and consequently started seeing the benefits of Richard's involvement in the sport:

> It did help by the end of it [coaching program] because it did make me reflect a bit more for the long term, which I didn't really do before. I used to respond day by day, to how he plays... it was exhausting at times.

Session Seven: Completion Conversation

Anna was, by now, clearly relating to both Richard and her new way of being. This was observable by Richard's improvements in training quality. By the end of the coaching Anna could see how much she had progressed and how her understanding of her son's perspective had been important for her to give him more space and to make Richard feel less pressured overall: "At the end of the day, he's the one who's got to work it all out. He's got to work out what tactics to use. He's got to change the way he's playing in order to beat the opponent. And we're not down there on court. So he has to develop his own thoughts, really".

Anna now had a much clearer sense of purpose behind her and her family's involvement in tennis. Summing up, Anna was now able to better understand the purpose behind her actions and the things she would like to achieve in the long term; better able to act appropriately and calm herself when feeling stressed; to have a deeper understanding and respect of other people's perspectives; and to communicate better with her child.

Discussion

Applying the ICC methodology to work with parents in sport has given positive and promising results. As demonstrated in this case study, there was an increase in self-awareness and an improvement in new interior "muscles" that helped the parent in her relationship with the child. This consequently led to positive changes both in the parent and the child's well-being. This development in the parent then had a direct impact on the child in terms of how he behaved and performed both in training and competition. In sport such a powerful shift is rare to witness, as often coaches work with tiny margins of improvement with an athlete. It can also often be seen that difficulties in the relationship between the parent and child can undermine the positive effects of a good sports coaching program. This points to the huge role of parents in their child's development and the necessity of parental support for high-quality athlete development.

Our work provides the first evidence that an Integral approach to coaching parents is the most comprehensive and practical way of dealing with the adult-development issues that parenting entails. In sports science, despite some studies suggesting the application of holistic sport psychology interventions (Anderson et al., 2001), at this date no studies with a solid holistic framework have been carried out. Published studies normally neglect collective interiors and exteriors and focus more on cognitive-based strategies, visualization, and goal setting (Orlick, 2000). Still, it needs to be stated that sports psychology has indeed produced numerous interventions both with athletes and coaches, but they have essentially focused either on improving performance or the motivational climate. Despite a few studies that suggest that parents need to be educated (DeFrancesco & Johnson, 1997; Gould et al., 2008; Harwood et al., 2010; Smoll et al., 2006; Smoll et al., 2011), it seems that work with parents has been minimal and not yet managed to make a clear difference to them and their child.

The case of Anna illustrates the reality of being a tennis mother. We believe that at some level this story describes the situation a great number of parents find themselves when supporting their children in sport. This situation sees them acting as "pushy" and not knowing they can negatively impact the growth of the child inside and outside sport. In other words, Anna's case exposes several issues common to parents in sport (i.e., pressuring a child to do well in sport, a lack of understanding the child's perspective, an inability to stay calm during tournaments, a strong drive to competitiveness, personal ambition, unrealistic expectations, and strong feelings of pressure in front of friends and family). These data corroborate earlier investigations (Gould et al., 2006; Harwood et al., 2010) into parents in sport. They also cast light on the highly demanding task of being a parent in sport and therefore on the potential significance of coaching parents in sport.

It is typical in the sports arena for parents to be seen as "villains" or at least a "handful" that cause more harm than good and get in the way of coaches producing great athletes (Smoll et al., 2006; Smoll et al., 2011).

We want to emphasize the crucial role that parents play in sport through supporting their children and believe that an effort to understand the roots of their behavior is required. It was clear that Anna was trying her best to support her child, but her manner of doing so was affecting her son in negative ways, and all she needed was some guidance and awareness-raising in order to transcend her current way of being. Parents normally try their best and hold the best intentions when it comes to supporting their children in sport (Gould et al., 2008; Matos & Winsley, 2007; Matos et al., 2011). The problem is that while "supporting" their kids they do not realize the damage being caused to the child since it remains unconscious (or at least subconscious) to them. This is an example of how a focus on interior development could really further sports science.

Integral Coaching Canada uses metaphors (i.e., current and new way metaphors) to support a client's growth (Hunt, 2009). By gaining awareness of her current way of being, Anna was able to make her actions the object in her awareness (Kegan, 1994), which consequently led her to see how she was impacting Richard. What was made object in Anna's awareness was that she finally saw how her attitudes and behavior around Richard were making it difficult for Richard to remain focused through the training sessions.

This case shows how a mother has the potential to influence the growth and perception of experiences of her child in sport, corroborating other studies in sports science literature (Harwood et al., 2010; Power & Woolger, 1994). As Anna was better able to see things from her son's point of view, it became a significant relief to Richard, who clearly became more relaxed, enabling him to train and compete much better. Richard has had his fitness scores and attitude levels objectively measured by the Lawn Tennis Association (LTA). His scores show significant improvement since before the coaching intervention: Richard is now one of the top players nationally for his age. These data need to be interpreted with care, however, as it is hard to determine a direct, empirical relationship between coaching and the improvements described above without further research.[3]

Characteristics of Other Cases with Tennis Parents

We have now coached over 20 parents in the tennis academy and the results have been highly successful, with all parents reporting a positive impact and some reporting the program to be life-changing. Parents' problems have tended to fall under a series of themes. These themes include *underinvolvement*, which includes parents who provide little support or who struggle to set healthy boundaries and discipline their children. The reasons behind this issue vary from things like being too stressed with other facets of life, lacking confidence, not wanting to see a child's shortcomings, or not wanting to do anything that might make them seem like an overzealous parent. The common impacts on children from these types of parents include poor behavior and discipline, difficulty in taking responsibility, and deficits in confidence and motivation. The individually specific reasons behind these parenting issues make integral coaching a powerful tool as an intervention, as it can scratch below the surface and address the deeper causes behind these issues, leading to long-term, sustained change.

We have observed various ripple effects with the majority of the parents who have gone through the coaching program. These effects include improvements in family life in general, improvements in communication, effectiveness, and relationships at work, and also having a greater sense of general well-being. We aim to investigate how coaching parents in different sports can impact athletes' performances and how this approach can be used as another means to optimize training. Further, we are also interested in investigating the impact that parenting can have on the manifestation of overtraining and burnout.

Future Plans

We have recently launched a website, Parents in Sports (www.parentsinsports.com), that offers coaching to parents involved in sport to a worldwide audience, across all sports. We feel there is a huge potential market

for this sort of coaching and, if successful, the organization would employ integral coaches to work with parents across the globe. We intend to work closely with sports clubs, academies, schools, and governing bodies to provide this service for parents. We also plan to work with sports coaches directly to help them provide better support for parents.

Peripheral goals of Parents in Sports include bringing more awareness of integral ideas to the sports science community so that research can become more inclusive, less fragmented, and consequently more applicable. Parents in Sports is also a model for how sport can be a vehicle for the healthy development of individuals, families, and communities aside from excellence. Given the project's integral foundations, we are excited at the prospect of people in sport (especially those in postmodern/pluralistic phases) being introduced to Integral Theory since we believe it will benefit not only their sporting activities but also their lives in general.

Beyond our work with parents we are developing the website Integralsport.org, which shows the wider potential of Integral Sport. The site will introduce the model of an Integral Sports Academy, our academic research and work with parents, and describe the potential of integral coaching with athletes and its implications for child development.

Conclusion

This article gives insight into the potential of the Integral framework as applied to sports. To support the argument for an integrally informed approach to coaching athletes and their family members, we have 1) described the foundations of our Parents in Sports project; 2) given insight into what sports science literature has claimed so far and the way researchers approach the issue of parents and children in sports; 3) described how the Integral framework would deal with the phenomenon; 4) reported a parental case study; 5) briefly reported the common themes and characteristics found within the group of parents that have been coached by our team; and 6) presented our future plan for the growth of the project and Integral Sports more widely. We believe that more academic research is needed to help expand the project beyond its homebase in the United Kingdom, thus it is our goal to continue to publish our findings in sports science journals. In addition, we plan to present a follow-up article that describes in detail the roots of the Parents in Sports project, our life skills work with athletes, and the creation of a healthy culture and community within the Integral Tennis academy.

NOTES

[1] The tennis coach (J. Thompson, second author) held the ICC apprenticeship qualification at the time the mother was coached and therefore it was the actual tennis coach intervening with the mother.

[2] For a comprehensive overview of ICC's methodology, consult Volume 4, Number 1, of the *Journal of Integral Theory and Practice*.

[3] Potential bias stems from the fact that the second author (J. Thompson) served as the Integral coach for this intervention and one must also take into account Richard's maturational factors (both emotional and biological).

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NUNO MATOS, M.Sc., Ph.D., is an Apprentice Integral Coach who holds degrees in Sport and Health Sciences from Exeter University, U.K. His doctoral dissertation focused on overtraining and burnout in young athletes, using Integral Theory to support the integration of physiology, psychology, and qualitative inquiry. Nuno is a former Portuguese national swimming champion, and now holds a purple belt in Brazilian jiu-jitsu.

JOHN THOMPSON, M.Sc., M.A., is the Director of Integral Tennis, Ltd., and is the Managing Director of parentsinsports.com. John has coached tennis at the highest level and now uses sport as a vehicle for applying Integral Theory to facilitate human development. He has a B.Sc. in Sports Science, an M.Sc. in Management, and an M.A. in Critical Global studies. He is a certified Integral Coach®. His research interests include applying Integral Theory to sport, specifically how integral coaching with parents can benefit the performance of athletes and how sports coaching can lead to the development of multiple intelligences in children. John also leads workshops in the practice of Circling.

SEAN WILKINSON, M.A., is an elite tennis coach, with a B.Sc. in Sports Science, an M.A. in philosophy and psychology, and a postgraduate diploma in counseling and psychotherapy. He is also a practicing Foundational Integral Coach. Currently, he is working for Integral Tennis developing an integral sports club, coaching in an innovative parent program, and training as a psychotherapist. With the success of Integral Tennis in coaching parents, he is now developing a company, Parents In Sports, to bring integral ideas and practice to a wider audience. Sean is also the U.K. chair for the World Spirituality Centre for Europe and is developing and teaching the practice of Relational Meditation.

WALT WHITMAN'S VISION FOR A NEW PERSON AND A NEW DEMOCRACY

Neil Richardson

ABSTRACT This article examines how Walt Whitman's poetry and prose presents a path forward in understanding democracy's complexities at its fundamental core, the creation of a citizen who participates in pubic life. From an integral perspective, Whitman's ideas are a precursor to contemporary theory emphasizing democracy's tension between the public and private and the internal and external evolution of an evolved democratic system. This article contextualizes Whitman's practice as a precursor to the AQAL model. Whitman advocated for a strong self and a nation of individuals that would predicate a transformed culture that included politics, religion, sociology, manners, and art. I argue that Whitman appears to have arrived at many of his conclusions by practicing meditation and it is from this visionary state he accessed his poetic voice and integral self. It is known that Whitman was familiar with Hindu literature and the philosophical concept of Brahman or universal soul. This article proposes that Whitman stimulated his self-development by practicing a meditation, advocating for a set of communal values, engaging in a verbal expression of ideas, and innovating a style of poetry to better express complex truths.

KEY WORDS AQAL model; contemplation; democracy; meditation; poetry; Walt Whitman

> I believe in you my soul, the other I am must not abase itself to you,
> And you must not be abased to the other.
> I am the poet of the Body and I am the poet of the Soul…
> – "Song of Myself"
>
> Produce great Persons, the rest follows.
> – "By Blue Ontario's Shore"

Walt Whitman was the personification of his country, and his poetry inspired both a new type of person and a new type of community. Whitman thought about democracy on a variety of levels, from the role it played for individuals to how it related to a nation and culture and its global meaning. In Whitman's metaphysics, all of the aspects of a single entity are like a holon, existing as both a whole and a part.[1] In his poetry and prose he articulated a democracy that manifested itself internally and externally, and in each of these realms he left a methodology for creating unity between our private and public personas, spawning a new type of person embracing both the interior and exterior realms of the Kosmos. Ultimately and significantly, Whitman stressed the value of the human soul as the basis for affirming democratic equality and the divine worth of each and every person.

This article begins with background on Whitman's historical context, at the cusp of an expansiveness of thought and new social movements in the United States. It then delves into his view of a "new person."

Correspondence: Neil Richardson, 1873 Ingleside Terrace NW, Washington, DC 20010. *E-mail*: neilrichardsondc@gmail.com.

This view incorporates aspects of freedom, or defining your own path; the use of meditation, which is "lighting the very light"; a new spirituality and metaphysics, discussed through his poem "Chanting the Square Deific"; and his use of vocalism, which he considered "the divine power to speak words." While the elements in the new-person discussion also relate to Whitman's view of democracy and community, the latter aspects are more directly addressed in the final sections on free verse and camaraderie in action. The article closes by placing Whitman's perspectives in the context of Integral Theory.

Historical Context

From its inception, the United States was a nation of innovation. Early settlers escaping from the dogma and ancient traditions of Europe had a clean slate to create a new history and a new world.[2] Carving out cities, towns, and farms from a wilderness and experiencing greater human diversity provided both an environment and a need for a different kind of political order. For 2,000 years, democracy as an idea and practice in the Old World had remained largely dormant and forgotten outside of history books. The generation of Americans who fought for independence from England struggled with the tension between a strong state and an autonomous citizen and were forced to come up with a system of checks and balances that protected both. More complicated was agreeing on who was a citizen. It took over 150 years before there was full enfranchisement of all adults, with a civil war, women's suffrage movement, and civil rights movement in between. This tension between the individual and the state continues to this day.

Walt Whitman (1819–1892) was born when the Revolutionary War generation was dying out and the country was in transition from the fervor of birth to an era of geographical, economic, and even spiritual expansion. The next decades gave rise to the free love movement, women's rights, abolitionism, the transcendentalists, and many other movements. With the westward expansion that resulted from the Louisiana Purchase and European migration, pluralism became a necessity as diverse people mixed and needed to forge communities for security and well-being. From creating local militias to community harvesting to home-raising, Americans often depended on neighbors who looked, thought, spoke, and acted differently. America began to diversify quickly, creating a tension between who and what constituted an American and what values were to be held sacred.

Within this historical melting pot Whitman began to champion an integral age, including a nondual religious perspective that exulted in the body, the earth, and the spirit. Whitman sought to create a new treatise for democracy that celebrated a way for individual achievement and a democratic selfhood that bridged our differences and forged a common identity. Few thinkers have understood the complexities and the evolving possibilities of democracy to the extent that Whitman did. His poetry and prose provide a language to understand and transcend our integral potentials as persons, citizens, and a community. Implicit in Whitman's instincts toward an integral and democratic potential is the underlying demand that we self-liberate and in so doing realize our divine connection to each other in a realization of what he described as "Merge," or put other ways One Taste, I-I, or Emptiness.

The New Person: "From this Hour, Freedom"

Likely the most important tenet toward becoming the new person is to define your own path and determine how, in the deepest sense, to incorporate the most perspectives. Fundamentally, Integral Theory provides people with the tools and an approach to discover deeper and more expansive truths. Whitman's ideas, perhaps even more than those of other writers and poets, were meant to be both interpretive and subjective. Certainly, there can be erroneous conclusions, but with Whitman one can collaborate with his ideas more than with other thinkers, and this was intentional. Whitman was clear that he sought to erase boundaries between himself and his readers—born or yet to be born—and declared that "Camerado! This is no book; who touches

this, touches a man; (is it night? Are we alone?) It is I you hold, and who holds you; I spring from the pages into your arms" ("So Long"). He was clear that we are to do our own work in discovering enlightenment, yet he was explicit about his own process:

> From this hour, freedom!
> From this hour I ordain myself loosed of all limits and imaginary lines,
> Going where I list, my own master, total and absolute,
> Listening to others, and considering well what they say,
> Pausing, searching, receiving, contemplating,
> Gently, but with undeniable will, divesting myself of the holds that would hold me.
> – "Poem of the Road" (Stanza 13, *Leaves of Grass*, 1860)

Whitman was plain in his meaning: we must go beyond any proscription or boundary and come to our vision after careful consideration and thought. This is not a call for rebellion for rebellion's sake; it is a siren for the soul to awaken. To the core, and from his earliest enlightened state that brought forth *Leaves of Grass* in 1855, Whitman understood that we are matter and mind, body and soul in part and in whole simultaneously:

> You have been told that mind is greater than matter. I cannot understand the mystery, but I am always conscious of myself as two—as my soul and I. (as cited in Matheissen, 1941, p. 525)[3]

Whitman was just as direct in his belief that we discover for ourselves eternal truths, and he was clear that we are unified in mind, body, and spirit. Even so, he implicitly laid out throughout his work a practice that brought him truth and could help others realize their own truth.

The Practice: "Lighting the Very Light"

As documented in my research (www.waltwhitmanmeditation.com), Whitman practiced meditation beginning in the mid to late 1850s and considered lecturing on the subject. Whitman's approach involved a dedicated practice where he would imagine the four corners of the earth and the universe and in which he would spend some minutes in this exercise that he described as *self-teaching*. I have described this as a "centering" practice, as Whitman emphasizes *the point you stand, that is now to you the center of all*. In the 16 decades since *Leaves of Grass* was first published, there has been debate regarding how Whitman suddenly transformed himself from a mostly conventional prose writer, newspaper reporter, and editor to the "Good Gray Poet" or "Minor Prophet" attracting devotees and followers perhaps even more than fans. It is clear that while writing he existed in a deep ecstatic state that either elevated or sustained his depth and height of consciousness. He was writing neither from metaphor and supposition nor from a psychotic or autistic state; he was creating from an attained state resembling always-already awareness. According to Evelyn Underhill (1955), "Whitman possessed in a supreme degree the permanent sense of this glory, the light rare, untellable, lighting the very light" (p. 192).

Meditation is a spiritual practice that has been embraced by religions, faith groups, and atheists from all corners of the world; even the United States military now employs meditation. At its best and most complete, meditation is an exercise that leads people to develop both inside and outside the personal soul—in other words, realizing the spirit of the person and the people, or in Buddhist terminology the Buddha (self) and the Sangha (community). Whitman may have represented the people and the community as "patriotism," which is love of community and nation. I have long made the point that academia has downplayed Whitman's

spiritual impulses to make him "safe" for university studies, and in so doing we have lost his most important context and the one that links his ideas coherently together. Even so, there has been a small cadre of insightful scholars and critics such as Malcolm Cowley, Roger Asselineau, and Sri Aurobindo who have made strong cases, even if unsuccessfully, for Whitman's mystic spiritual insight. My research has sought to confirm Whitman's actual method and the substance of his practice. According to Whitman's notes, he considered lecturing on his meditation practice:

> [Outset of lecture] I imagine myself from that condition mentioned. You must do the work, you must think. To you, first of all, prepare for study by the following self-teaching exercise. (Grier, 1984, pp. 2049-2050)

Spirituality and Metaphysical Synthesis: "Chanting the Square Deific"

Throughout Whitman's work, he lifted the supreme self to its ascendant state and downplayed specific gods of religion. It is as if the gods of various religions were a collection of devout and divine ingredients from which one could pick and choose. Whitman was not indicating that you could make a cocktail with any type of ingredients, though; throughout his work, he referred to the core truth inherent in the mythos of the Greeks, Romans, Christians, Buddhists, Hindus, and varieties of prophets and poets. Aldous Huxley elucidated the same idea with his perennial philosophy, which essentially advocates that there is a core cognitive system that includes the common and shared insights embraced by all the world's religious traditions.[4]

In the poem "Chanting the Square Deific," Whitman provides clues to his own understanding. In the first stanza, he creates the system, which he shapes as a square, announcing, "Out of the old and new, out of the square entirely divine…." All parts of the square are as necessary as the other. His God is not one—it is *all*. Thus, he is the ascendant reaching toward a heaven of unimaginable perfection and the descendent that exalts and meshes with everything of the earth, including humanity's ability and instincts for the diabolical. Whitman's God is both saint and sinner—and necessarily so. The God of this stanza is also a judgmental one and being firmly connected to time, the seasons, gravitation, and all other distinctions of the fragmented world. This God will show no mercy.

In Stanza 2, God emerges as a great healer or "consolator" who believes the experience of rejection, pain, and suffering provides the balm for enlightenment and eventually contentment. In this stanza, he is the light of the world and represents the ascendant. He projects and details the power each of us has in bequeathing empathy and kindness. We can heal and imagine goodness that has "no death."

In Stanza 3, in recognition of the descendent (or darkness) contained in all of us, Whitman projects the challenge we have in reconciling our ascendant and descendent spheres. He says, "Aloof, dissatisfied, plotting revolt,/ Comrade of criminals, brother of slaves,/ crafty, despised, a drudge, ignorant." This stanza recognizes the complexity of human nature and the eternal conflict between selfish and selfless actions. He uses the sympathetic Satan of Milton, who is less an eternal torturer pouring scalding water and jabbing us with a pitchfork and more of a rebellious, antagonistic, and warlike curmudgeon. This concept of Satan is critical because he is the energy of revolt and revolution that acts in concert with the consolator of Stanza 1. One might imagine the necessity of yin and yang; we could not be without the other.

And finally, in Stanza 4, Whitman provides the all-encompassing Santa Spirita and injects the spirit with the power of breath and the energy of light:

> Santa Spirita, breather, life,
> Beyond the light, lighter than light,
> Beyond the flames of hell, joyous, leaping easily above hell,
> Beyond Paradise, perfumed solely with mine own perfume,

Including all life on earth, touching, including God,
Including Savior and Satan,
Ethereal, pervading all, (for without me what were all? What were God?)
Essence of forms, life of the real identities, permanent,
Positive, (namely the unseen,)
Life of the great round world, the sun and stars, and of man,
I, the general soul,
Here the square finishing, the solid I the most solid,
Breathe my breath also through these songs.
– "Chanting the Square Deific" (p. 329, *Leaves of Grass*, 1892)

The last and unifying fourth stanza, which is often misunderstood, provides a masterful synthesis of the two forces manifest throughout each of us and within every particle of the universe. Beyond the "light, lighter than light" and "beyond the flames of hell, joyous, leaping easily above hell" we have *Santa Spirita* and most importantly *breath*. It is *breath* that is the most important and unifying element of all earthly life and this poem. In the deep inhalation we literally connect with the depths of our body and soul; with the exhalation, we reach for and comingle our individual soul with the "ethereal, pervading all" of spirit encompassing "life of the great round world, the sun and stars, and of man, I, the general soul," breathing our realization of all that there is.

In summary, Whitman provides a system for understanding his own methodology of metaphysical synthesis. There are four realms: the first is based in reality and natural law, the second in empathy and service, the third infused with the invigorating energy of evil and revolt, and the last with the encircling of the light of the Savior with the flames of hell and Satan, bridging the ascendant and descendent with the truth that can best be found with our breath through meditation or a contemplative practice. Whitman began this poem in the 1850s, around the same time he was contemplating lecturing about his meditation practice. He did not publish it until 1866. In trying to explain the poem in 1888, he said:

> It would be hard to give the idea mathematical expression: the idea of spiritual equity—of spiritual substance: the four-square entity—the north, south, east, west of the constituted universe (even the soul of the universe)—the four sides as sustaining the universe (the supernatural something): this is not the poem but the idea back of the poem or below it the poem. I am lame enough trying to explain it in other words—the idea seems to fit its own words better than mine. You see, at the time the poem wrote itself: now I am trying to write it. (WWC, 1:156)

Vocalism: "The Divine Power to Speak Words"

My voice goes after what my eyes cannot reach
With the twirl of my tongue I encompass worlds and volumes of worlds
Speech is the twin of my vision.
– "Song of Myself" (Stanza 25, *Leaves of Grass*, 1892)

Throughout Whitman's work, he references the power of vocalizing, from his practice of singing on the beach by himself to his appreciation of opera and his intent for us to read his poetry aloud and outdoors. The spoken word mattered to Whitman a great deal, but there seemed to be something else at work, particularly as it pertained to his practices to ascertain truth. He articulated the importance of vocalism in the poem of the same name.

Vocalism, measure, concentration, determination,
And the divine power to speak words;
Are you full-lung'd and limber-lipp'd from long trial?
From vigorous practice? from physique?
Do you move in the broad lands as broad as they?
Come duly to the divine power to speak words?
– "Vocalism" (p. 287, *Leaves of Grass*, 1892)

Vocalism is a new path of research and insight that Steven Herrmann (2010) began to explore in his book, *Walt Whitman: Shamanism, Spiritual Democracy and the World Soul.* Herrmann was the first Whitman scholar and spiritual practitioner to recognize the value and importance of both the poem and technique of vocalism.

In Whitman's most famous poem, "Song of Myself," he describes the significance of spoken sound, not even an articulated word in this instance:

Loafe with me on the grass, loose the stop from your throat,
Not words, not music or rhyme I want, not custom or lecture, not even
the best
Only the lull I like, the hum of your valved voice.

A valve is a device, whether organic or mechanical, that allows for air or substance to flow at an interval one way at a time. In this case, the valve represents the sound of God—not the word of God but the mantric or "Om" of a meditation in which people emit a sound or hum as they meditate. This vocalization is an exercise that leads to and can exist in a meditative state.

In Stanza 5 of "Song of Myself," Whitman, in a full state of ecstasy, describes his vision that "the hand of God is the promise of my own/ And . . . the spirit of God is the brother of my own." This sense of connection between self and all the dimensions and manifestations of God is common for people experiencing an advanced (deep) spiritual state (Underhill, 1955).[5] The key is to be able to access this dimension at will through a dedicated practice and not wait for an epiphany or a state brought on by psychotropic drugs or other temporary techniques. Whitman had a practice, and the result was his sustained ability to describe his unique communion with spirit and the world around him.

Just as inhalation and exhalation represent two parts of the same movement, Whitman appears to have engaged in an introverted method of practice with meditation and an extroverted method with vocalism. As a result of this practice, Whitman had an ability to write in "the gush, the throb, the flood of the moment—to put things down without deliberation" (Kaplan, 1980, p. 210). This relates to a variety of psychological exercises articulated by Sigmund Freud and Carl Jung's work and "talk therapy," as well as journaling and automatic writing and other practices to grasp unfiltered ideas and perhaps personal truth. The point is to be able to articulate your ideas and feelings and to flush out inconsistencies while engaging in internal disputes for clarity. Vocalizing or writing in this way offers a method of conversing with the self (even if aloud) in the meditative silence of one's own thoughts, speaking with the "real me" and what I refer to as *active visioning*. By articulating his deepest thoughts, Whitman was able to provide expression to complex ideas that might seed not only his own transformation but perhaps that of others on a similar journey.

Whitman was particularly enraptured by Italian opera, and he once said that "But for opera I could never have written *Leaves of Grass*" (as cited in Trowbridge, 1902, p. 163). The poems in *Leaves of Grass* have a music and rhythm to them, and even the word *chants* show up again and again—including in the poem examined above, "Chanting the Square Deific." More often than not, Whitman described his poems as *songs*.

Whitman's poetry contains numerous references to the voice, singing, hymns, choruses, chanting, and

chant and includes a mantric repetitiveness common to the lyrical structure of opera. Two of Whitman's finest poems, "Out of the Cradle Endlessly Rocking," which features a mockingbird singing its aria of loss, and "When Lilacs Last in the Dooryard Bloom'd," in which a hermit thrush sings its carol of death, have explicit rhythm and reference to opera. According to Donald Barlow Stauffer (1988), Whitman viewed the *bel canto* style of opera as the highest form of art and described *bel canto* as "consisting of long passages of simple melody alternating with outbursts of elaborate vocal scrollwork, which turns the voice into a complex wind instrument. The desired effect was to heighten the dramatic meaning and significance of the words through attention to pitch, dynamics, melody and rhythm" (as cited in LeMaster & Kummings, 1998).

Whitman demonstrated his appreciation of the capacity of the human voice in opera and seemed to have tried to mimic some of its beauty and rhythm in his poetry.[6]

> O what is it in me that makes me tremble so at voices?
> Surely whoever speaks to me in the right voice, him or her I shall
> Follow,
> As the water follows the moon, silently, with fluid steps,
> anywhere around the globe.
>
> All waits for the right voices;
> Where is the practis'd and perfect organ? Where is the develop'd soul?
> For I see every word utter'd thence has deeper, sweeter, new sounds,
> Impossible on less terms.
> – "Vocalism" (p. 287, *Leaves of Grass*, 1892)

Whitman appears to have been in a state of deep transcendence when he wrote "Vocalism," and in this condition the usual boundaries ceased to exist. In this state of consciousness he was boundless, eternal, and infinite. He did not judge or condemn; instead, he accepted, and it is this state of acceptance that substantiated his vision. In this sense, Whitman is expressing his wonder, perhaps, in the fact that our souls can speak, sing, and express.

Free Verse: Where Politics and Democracy Meet

Free verse does not follow the form and structure of traditional poetry based on meter and rhyme. Nevertheless, structure is present. Whitman used a variety of techniques, including commas, repeating words, dashes, and other grammatical tools and punctuation to prevent total anarchy, formlessness, and incoherence. And, as in the best of poetry, there is music, melody, or rhythm, whether like opera or like the ebb and flow of waves at the seashore.

While there are a few examples of poetry written before Whitman that used free verse, he was the first major poet to have employed this technique and appeared to have come across this style on his own. Verse libre was used by at least two French poets, Gustave Kahn and Jules Laforguee, who were contemporaries of Whitman and likely unknown to each other. Perhaps the *King James Bible* was Whitman's greatest influence, and in his prose work *November Boughs* he included an essay titled "The Bible as Poetry." Whitman may not have been a Christian, but he considered the Bible and its stories an important inspiration and appeared to have used the book as a model for *Leaves of Grass*.

Without the use of free verse, *Leaves of Grass* could not have retained its transformative intention and meaning. I contend that free verse is a democratic literary construct that allows for more expression, unhindered by the artifice of stanzas coerced into rhyme. A free verse approach is apropos for a country that deeply believed it was founded on a unique set of ideas and was destined to change the world. In addition, while

technical form is critiqued, commented upon, and in a sense controlled by the academic or learned elite, free verse was a way for Whitman to communicate his spiritual democratic ideas directly to citizens, the community, and the nation. Whitman's mystical vision for democracy was predicated on a vision in which citizens are engaged in a common enterprise of sustaining democracy and pursuing a path of individual liberty. *Leaves of Grass* and his essay "Democratic Vistas" in particular represent Whitman's attempt to add a kind of muscle and life-blood to the sturdy skeleton of the U.S. Constitution and rule of law (Folsom, 2010). So, Whitman's work using free verse was in itself a *political* exercise that created new ways and rules for people to express themselves.

Two examples highlight the contrast. Here Whitman practices free verse in the poem "I Hear America Singing":

> I hear America singing, the varied carols I hear,
> Those of mechanics—each one singing his, as it should be, blithe and strong,
> The carpenter singing his, as he measures his plank or beam,
> The mason singing his, as he makes ready for work, or leaves off work,
> The boatman singing what belongs to him in his boat, the deckhand singing on the steamboat deck,
> The shoemaker singing as he sits on his bench, the hatter singing as he stands;
> The wood-cutter's song, the ploughboy's, on his way in the morning, or at the noon intermission, or at sundown;
> The delicious singing of the mother—or of the young wife at work—or of the girl sewing or washing, each singing what belongs to her, and to none else;
> The day that belongs to the day—at night, the party of young fellows, robust, friendly,
> Singing, with open mouths, their strong melodious songs.

In the above poem, as in nearly all of Whitman's work, there is indeed music and rhythm. What we can see is that Whitman used commas where a reader might take a breath, and his empathy and connection to his reader is consummate. When he wrote that whoever holds this book is holding a man, Whitman directly related his connection to his reader.

In contrast, here Lord Byron uses traditional form in one of the most famous poems in the English language, "She Walks in Beauty":

> She walks in beauty, like the night
> Of cloudless climes and starry skies;
> And all that's best of dark and bright
> Meet in her aspect and her eyes:
> Thus mellowed to that tender light
> Which heaven to gaudy day denies.
>
> One shade the more, one ray the less,
> Had half impaired the nameless grace
> Which waves in every raven tress,
> Or softly lightens o'er her face;
> Where thoughts serenely sweet express
> How pure, how dear their dwelling place.

And on that cheek, and o'er that brow,
So soft, so calm, yet eloquent,
The smiles that win, the tints that glow,
But tell of days in goodness spent,
A mind at peace with all below,
A heart whose love is innocent!

There is no denying the sentiment and beauty inherent in this type of poem and the many score of great English and European poems. Yet for Whitman, it was completely necessary to break with European poetic tradition and achieve what Emerson called for in his essay "The Poet": a new literature for a new nation.

Free verse allowed Whitman to engage the ordinary reader on terms that were direct and less rigid. Whitman's style more closely resembled the structure and flow of the *King James Bible* than what his contemporaries like Hawthorne, Longfellow, and Dickinson were using. To Whitman's great surprise and disappointment, *Leaves of Grass* did not enjoy the large following and mass popularity he had anticipated. Nevertheless, he did not abandon free verse, regardless of the disappointing sales of his books, yet when he did, most notably with "O Captain! My Captain!", he was a master at creating conventional poetry. This poem was Whitman's most successful attempt at reaching a national audience. Despite his ability to reach technical (i.e., conventional) excellence and mass popularity in poetic form, he continued to write in free verse. Free verse in regard to Whitman sometimes follows the rhythm of natural elements like the rolling ocean waves and at others the cadence of speech, and perhaps most importantly the very flow of our thoughts. Ultimately, in Whitman's own lifetime his ideas regarding free verse did not resonate with the common reader he most wanted as an audience. Yet today, part of his undeniable appeal lies squarely in the fact that for many free verse *is* the best way to express the nearly inexpressible.

Democracy and the New Person: Camaraderie in Action

States! Were you looking to be held together by the lawyers?
By an agreement on a paper? Or by arms?

Affection will solve every one of the problems of freedom,
Those who love each other shall be invincible…

The most dauntless and rude shall touch face to face lightly,
The dependence of Liberty shall be lovers,
The continuance of Equality shall be comrades.
– "Calumus" (Section 5, *Leaves of Grass*, 1860)

It is important to understand what Whitman intended by his style of comradeship if we are to grasp his intention for a new democracy and new person. This exercise can only be confirmed by Whitman's audience, and more specifically, each individual reader. It has been said that we do not see things as they are but as we are. Whitman intentionally wrote a Kosmic book, and the power of *Leaves of Grass* derives from its ability to resonate with so many distinct people. Nevertheless, it is essential that as we explore Whitman's intentions we emphasize what *he said* and what *he wrote,* as those are his means of communicating with his audience.

Among the controversies surrounding Whitman after his death was the false impression that he may have been homosexual. In the 19th century, prior to the formal categorization of sexual preference, same-sex affection was more outwardly acceptable among some people, and it was not uncommon for men to walk hand in hand or kiss and closely embrace. Common custom proscribed that men and women operate in differ-

ent social spheres, and interaction between the sexes was limited except among the married. In his own day, Whitman's controversies were largely focused in the "Children of Adam" (*Enfans d' Adam*) cluster because of their direct heterosexual topics and in the last century because of a major misreading of Whitman's notion of comradeship, especially articulated in the "Calamus" cluster of poems.

Whitman is among the most controversial poets for his refusal to adhere to a conventional literary practice and for writing about sex and spirituality in ways that were as innovative as they were repellent to contemporary mores in the 19th century. In his role as a democratic mystic rebel or antagonist, he was unafraid to express himself in direct ways or censor his belief that the body was sacred. Thus, when John Addington Symonds corresponded with Whitman over a period of 20 years trying to ascertain Whitman's sexuality, Whitman was quite clear in his response: He was not homosexual and whoever interpreted his poetry with that meaning was missing the point of it.[7] After one written exchange, Horace Traubel (1914), who spent most of the last 10 years of Whitman's life writing down every single thing he said and did (and who did not believe that Whitman was homosexual), recorded Whitman saying, "The world is so topsy-turvey, so afraid to love, so afraid to demonstrate…that when it sees two or more people who really, greatly, wholly care for each other…they wonder and are incredulous or suspicious or defamatory" (Traubel, 1914, p. 386).

That being said, evidence of camaraderie in action is found in Whitman's life. Whitman followed a distinct practice that led him through several corresponding personas throughout his lifetime:

- Teacher
- Carpenter/entrepreneur
- Newspaper editor/journalist
- Poet (sustaining throughout the rest of his life)
- Nurse/government servant (Civil War years)
- Sage (probably beginning in 1855, but not publicly recognized until *Good Grey Poet* was published by Burroughs and ending at his death in 1892)

In the last half of his life a sense of purpose never left him. In spite of popular rejection of his poetry, the horrors of nursing in the Civil War hospitals, ill health, and an unpredictable income, he remained committed to creating *Leaves of Grass* and his vision of creating a new bible for democracy. It is in his role as poet, nurse, and sage that he publicly practiced the important art of civic participation and engagement by offering himself for service to democracy and the nation.

From the inception of *Leaves of Grass,* it was clear that Whitman was creating it to be a book and a perspective that had the power to transform its readers, embracing both the democratic ideals of the founders and a vision for what might yet be. The style of writing was different, the subject matter and themes were innovative, and the vision was distinct from anything yet created. By stepping out publicly as a poet, Whitman was doing what the Trappist Monk Thomas Merton would describe a century later as stepping out of the contagion of our own obsessions to engage in public life.

Likewise, Whitman's volunteer service to thousands of wounded and dying soldiers in the fetid Washington, DC, hospitals during the Civil War brought great relief to the suffering in premodern medical conditions. This act of service diminished his once-robust health but affirmed his belief in the democratic experiment. Offering himself in support of the nation in its most dire crisis is an example of his efforts to directly affect the union, even if he admitted later in life that he did not frequently vote.

Integral Instincts

Integral practices, whether those espoused by Ken Wilber or as articulated by Sri Aurobindo, emphasize the necessity of engaging our different and varied selves in context to culture, community, and self. Whitman

appears to have used a combination of practices that effectively transformed him and offered a pathway for others to blossom from conventional to postconventional perspectives. As shown in Figure 1, Whitman's practices fit within an integrative framework, although further analysis is needed to identify the components of Integral Theory most relevant to Whitman's work.

The implication is that Whitman, through luck, experience, and sensitive aptitudes, appears to have stumbled upon what appears to be an early and instinctual Integral Operating System that allowed him to develop into a well-rounded human being that I identify as a "new person." Meditation allowed Whitman access to the causal body, which gave him insight on the formless state, or in his vocabulary "lighting the very light"; his subtle body embraced a guiding vision of an interconnected nation and world where camaraderie and communal feeling could provide the ties that bind us together as a species and citizens; and lastly, few thinkers have articulated so well the beauty of the gross body in all its forms with his practice of vocalism and use of free verse. Combined, these instincts toward wholeness put him on an intense evolutionary path.

Whitman, true to his sense of self and vision, used his skills as a poet to create a language with which to describe both the immanent and ascendant aspects of spirit and how it infuses all things in the divine Ground of Being. In *Leaves of Grass* and in his prose work, Whitman was clear that each person must tramp out into the open air and find their own unique truth. Whitman was famous for writing: "Do I contradict myself, very well then, I am large, I contain multitudes," yet there is sometimes a distinct difference between the Whitman of flesh and blood with his prejudices and the poet who embraced all things and creatures. More research will need to be done to accurately gauge where he would fit on an Integral Psychograph.

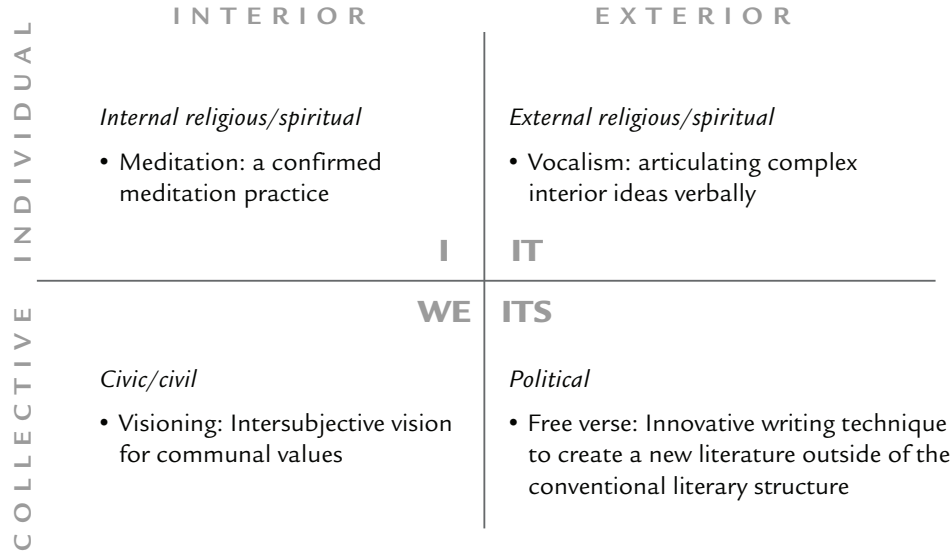

Figure 1. Whitman's insight and transformative practice as related to Integral Theory's four-quadrant model.

Conclusion

The new person is defined by what he or she practices publicly. How do we participate in our community life and what depth of connection and affection do we hold for our neighbors and institutions? Democracy is an often rowdy and messy process, as we are witnessing in the Middle East or with the Occupy Wall Street movement that began in the United States. At its core, democracy is about public action, and the energy to sustain action is an affection, passion, or devotion toward something beyond ourselves. Public participation in whatever form requires a community of people to make it happen. For democracy to thrive, it needs to be supported by citizens willing to sacrifice for the greater good, as Whitman did.

Even now, the United States, both gifted and burdened by its history and achievement as the world's oldest democracy, has few historical, cultural, or literary icons that fully embrace the wholeness and diversity of America. Currently, the United States is in the throes of a "great recession," and new international competitors like China, India, Russia, and even large multinational corporations are jousting for position as leaders in a newly forming elite. A new world order is on the horizon, and in Whitman's ideas we may be able to create a new person who better acts out of self-interest in context to the common good incorporating the most depth and span. If the Integral vision is a map that uses quadrants, levels, lines, states, and types to ensure that we are including all perspectives, perhaps Whitman and his work represent a magnifying glass so that we might be able to see more clearly.

NOTES

[1] A philosophical concept developed by Arthur Koestler to describe how all things in the universe are simultaneously both a part and whole. For example, in the current sentence, the *universe* is a complete word with its own definition but is part of a larger sentence. In the same way, our planet is part of a galaxy that is part of the universe.

[2] The history of the conquest of America, with the brutal subjugation of Native Americans and the eventual formalized introduction of slavery, lingers today as a wound that is not yet healed.

[3] This is an unpublished note quoted by F.O. Matheissen (1941) in *American Renaissance: Art and Expression in the Age of Emerson and Whitman*.

[4] This tradition includes seven main truths: 1) there is spirit; 2) spirit is within; 3) men and women live in a fallen or illusory state of ignorance/suffering; 4) there is a path out toward liberation; 5) we can be reborn in the experience of spirit; 6) there is an end of suffering; and 7) there is a call of compassion to all sentient beings (as cited in Wilber, 1991).

[5] Underhill's excellent study of the characteristics of mystics throughout the ages and incorporating many diverse religions and cultures writes that "with Transcendental Reality, a mystic's union with God, has now been finally established: that is his self, thought intact, is whole penetrated-as a sponge in the sea-by the Ocean of Life and Love to which he has attained. In the realization our union or connection with God…we see that God is in everything and everyone."

[6] It should be noted that while visits to the opera may have delivered Whitman to a state of ecstasy, this state would be temporary unless he followed a sustaining practice of meditation or chanting. For an experience to be deeply transcendent, the practitioner needs to be intentional about the exercise. This is one of the differences between a "stage" and a "state"; the former implies a permanent transformation. People can have a momentary Kosmic awareness, but the experience usually wears off and becomes a pleasant memory (i.e., a peak experience). Peak experiences can add to the luster and catalyze an existing stage and perhaps be used as a quick jolt to stimulate the transcendent state.

[7] In response to Symonds and perhaps in exasperation, Whitman stated that he had fathered six children in Louisiana. There has been no research authenticating this claim.

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NEIL RICHARDSON, M.A., is Director of Continuing Education at the University of the District of Columbia Community College in Washington, DC. He has served in Ghana developing election systems, worked across the United States creating greater transparency in public institutions, and has served the past three mayors in the District as strategic planner, deputy chief of staff, and policy director. Neil has been researching the poetry and ideas of Walt Whitman for over 20 years and is continuing research on integral governance systems and better engaged citizens. Neil has practiced self-awareness meditation resembling early vipassana practices that have been espoused by J. Krishnamurthi.

FRAMING INTEGRAL LEADERSHIP IN THE MEDICAL CANNABIS COMMUNITY

Regina Nelson

ABSTRACT In a world of increasing complexity where existing models of leadership are becoming obsolete, an ongoing and current healthcare controversy provides us with a rich vein of study for integral models of leadership. This article draws on research from and about the medical cannabis community, revealing human universals of leadership, with pressing practical implications for community building, research methodology, medical interventions, and public policy. Specifically, this article examines the suitability of the AQAL model as a frame for constructing healthcare organizations promoting, centered on, and with leadership shared by patients themselves. Critical elements include support for the individual and the collective, as well as an avenue for knowledge exchange. Additionally, such organizations and groups have the potential to develop a sense of community, increase diversity maturity, and offer leadership opportunities.

KEY WORDS Integral Theory; leadership; medicine; stigmatization; medical marijuana

There is an increasing recognition for the need to develop integrative approaches to understanding and explaining organizational sustainability or change. Few have considered, however, the need to use an integral approach when developing community-based organizations, such as patient groups and non-profit service organizations like cannabis collectives, dispensaries, or other healthcare centers serving cannabis patients.[1] My research interests concentrate on leadership within the medical marijuana (MMJ) community, and as I interact with patients, I have recognized that the capacity for leadership in this community is abundant. Overcoming stigmatization, however, is critical to patient emancipation. At this time, cannabis use falls into what anthropologist Victor Turner (1987) describes as a "liminal" phase. Patients find themselves "between and betwixt" living an experience in which they do not belong to the society they were previously a part of (i.e., one that stereotypes marijuana users as out-of-control, unable to focus, speak rationally, or any number of other pejorative conjectures) and one in which cannabis use has been accepted and normalized. Thinking of one's self as normal means "incorporating standards from wider society and meeting others' expectations about what we ought to be. The concept of stigma is therein a device that ensures the reliability of the interaction order by punishing people who do not conform to moral standards" (Hathaway et al., 2011, p. 455). Some cannabis patients note a considerable cultural shift in opinion toward cannabis users, and polls suggest a growing majority of Americans support the medicalization of cannabis. In contrast, other patients fear being exposed as cannabis patients with internalized and institutionalized stigmatization notably affecting their quality of life. This article examines current attitudes regarding cannabis use, which appear to be related to the extent of one's understanding or ignorance of the evidence rather than the virtue of one's convictions about cannabis use. However, lingering stigmatization, dismissive of cannabis users, continues to affect cannabis patients, as well as leadership within this critical social movement.

Correspondence: Regina Nelson, 6525 Gunpark Dr., Ste. #370-266, Boulder, CO 80301. *E-mail*: rknelson63@gmail.com.

Cannabis remains a Schedule I Controlled Substance under the American Controlled Substances Act (CSA), which classifies it as having no recognizable medicinal value and as a highly addictive substance. Both of these descriptions are false. Research supports the notion that cannabis helps to regulate immunity, inflammation, analgesia, neurotoxicity, appetite, blood pressure, bone formation, body temperature, gastrointestinal functioning, and physical and psychological responses to stress and trauma, among other potential affects (Baker et al., 2003; Courtney, 2012; Grinspoon & Bakalar, 1997; Holland, 2010). Additionally, social scientist Amanda Reiman (2009) promotes the notion of cannabis as an *exit drug* that helps patients with alcohol or prescription drug dependencies find relief from addiction; observation in the MMJ community supports the reduction of pharmaceutical treatments as a primary benefit for cannabis patients. In short, the evidence supports cannabis as being less addictive and relatively side-effect free in comparison to most prescription drugs (Grinspoon & Bakalar, 1997; Holland, 2010). These findings prompt us to reconsider cannabis and its potential medical benefits.

The reasons for research into the medicinal efficacy of cannabis are numerous, but include advances in understanding of the endocannabinoid system on which cannabis acts. In short, our neurological, immune, circulatory, digestive, endocrine, and musculoskeletal systems all contain endocannabinoid receptors and their ligands are cannabinoids (Holland, 2010). The Schedule 1 classification has discouraged cannabis research in the United States, much as international drug policies have repressed researchers worldwide. Despite these obstacles, scientists have identified five cannabinoids that the human body produces, and cannabis plants produces perhaps a 100, although we only have an elementary understanding of a few, like THC (delta-9-tetrahydrocannabinol) and CBD (cannabidiol). Recent research points to cannabis as an effective treatment for cancer due to "the cumulative effective of CBD and THC in blocking proliferation of brain-cancer cells… [and] breast-cancer metastasis" (Project CBD), suggesting that cannabis research is of utmost importance and serves the common good. If humans all have an endocannabinoid system, then collectively there is a stake in learning more about cannabinoids, the endocannabinoid system, and cannabis.

Numerous factors, including the medicalization of cannabis through medical marijuana or "compassionate care" policies in 18 states and the District of Columbia, indicate that there is a cultural readiness for an integral embrace of the MMJ movement and cannabis patients in general. However, as Ken Wilber (2004) elucidates, "No matter how high-minded, idealistic, or altruistic a cause might appear—from ecology to cultural diversity to world peace—the simple mouthing of intense support for that cause is not enough to determine why, in fact, that cause is being embraced" (p. 24). The cannabis movement is an ideal example of this fact. It is a movement driven by activists, most of whom are patients and experienced with the use and symptom relief of cannabis, but the majority consensus among medical practitioners is that advocacy is a poor substitute for the dispassionate analysis of evidence-based medicine (EBM), and the media tends to portray marijuana users as those who "just want to get high." Cannabis patients have yet to be recognized as knowledge bearers and leaders, who have much to contribute to this debate. Hathaway and colleagues (2011) comment on the social status of cannabis users:

> [Cannabis] users might alternatively be viewed on a normative continuum that has shown signs of shifting in the theorized direction of greater sociocultural acceptance (or indifference) of the practice, while retaining vestiges of social disapproval that contribute to maintaining a "culture of control," as espoused by Goffman. (p. 453)

Certainly, stigmatization requires more scholarly attention.

The AQAL Model

Leadership scholars like Mark Edwards (2005), Wendelin Kupers, and Jürgen Weibler (2008) have demon-

strated the suitability of the Integral framework in the study of organizations, particularly regarding organizational sustainability or change. As noted above, few scholars discuss the use of this framework in developing an organizational model focused on cultivating leadership potential from within a marginalized membership and for the organization to be centered on the needs of the collective membership using an Integral approach. With this type structure as a goal, I was compelled to explore the Integral approach as an interdisciplinary model with practical application. Throughout his vast work on Integral Theory, Wilber (2000) describes his efforts as an endeavor to "honor and embrace every legitimate aspect of human consciousness" (p. 2). The AQAL model, the foundational structure of the Integral approach, has two axes: the horizontal axis denotes a continuum between interior and exterior realities; the vertical axis signifies a continuum between individual and collective realities. Together, the four quadrants are the fundamental domains in which change and development occur in individuals and collective groups.

By definition, the AQAL model effectively supports an integral approach, as the interaction of its dimensions produce the fundamental domains through which all developmental change occurs. Further, the Integral approach maintains that understanding any social phenomenon requires that at least two fundamental dimensions of existence be considered. This section analyzes this frame from the perspective of MMJ leadership and observable issues that require our attention.

Starting in the Upper-Left (UL) quadrant, the AQAL model references the interior reality lived by a person. In relation to leadership, Torbert and associates (2004) find that efforts to transform an organization are dependent upon the level of consciousness of leadership. However, leadership development and practice are most effective when the individual interior dimensions are linked and supported by external action and tangibles (Kupers & Weibler, 2008, p. 449). In other words, when leadership development and practice are linked across dimensions, leadership is best positioned to take action based on shared values. When this type of integral frame is applied we begin to conceive of leadership not as a science or an art, but as a state of consciousness, much as leadership scholar Jonathan Reams posits. From this standpoint, we can "begin to grasp the phenomenon of leadership as the field of awareness rather than a personality trait or personal attribute" (Reams, 2005, p. 6). Integral leadership considers the needs of others, knowing that knowledge and change are co-created in learning situations. The MMJ community has no shortage of learning situations that stand in need of integral approaches and integral leadership.

The Upper-Right (UR) quadrant refers to reality as it is perceived externally. In particular, development in this quadrant concentrates on behavior, but as a bodily experience physical health is also located here. Stigmatization affects individuals with a variety of medical conditions (HIV/AIDS, hepatitis, post-traumatic stress disorder [PTSD], chronic pain conditions, cancer, among others); cannabis patients with these conditions are dually stigmatized as marijuana users. Stigma is internalized in the UL quadrant, but enacted through individual behaviors, like those associated with either concealment or revelation in this quadrant. Encouraging marginalized citizens who habitually live their life in concealment to share their private voice publicly and engage in community is laudable, but integral leadership that approaches patient support with a patient-as-leadership philosophy and an AQAL frame offers patients the opportunity for *whole* wellness. In an organization, training and development opportunities as well as "coaching, planning, decision making and any skill that develops individual effective acting and practice in the environment of an organization" (Kupers & Weibler, 2008, p. 449) are included in this domain. Traditional medicine, as practiced in the United States, occupies this quadrant and arguably has a singular quadrant focus on "the physical organism using physical interventions: surgery, drugs, medication, and behavior modification" as it relates to individual and collective health concerns (Wilber, 2007, p. 92). For this reason, any organization that supports patient development and growth, especially among a marginalized and physically weak population, should consider the individual and collective patient needs from an integral perspective. Conducting integral research in this domain will also allow us to resolve the fragmentation of knowledge we have regarding the United States' rapidly growing

population of cannabis patients.

The Lower-Right (LR) quadrant refers to the tangible or physical world, which is measurable and quantifiable and can be comprehended from outside. Kupers and Weibler (2008) elucidate:

> [L]eadership here is more likely to be associated with a transforming system. As such irreversible, progressive contexts and not repetitive ones within an emerging order characterize it; this implies that chaos and complexity are not problems to be solved, but the triggers of evolution, adaptation, and renewal. (p. 451)

Many national organizations that advocate on behalf of cannabis patients, including the National Organization for the Reform of Marijuana Laws (NORML) and Marijuana Policy Project (MPP), are situated directly in this quadrant as they concentrate on issues of law and public policy related to patient access to medication, and ending criminal penalties related to cannabis use. Although they may well be aware of patient needs related to other dimensions, their approach has a nearly singular focus that exponentially limits their ability to address the whole patient through public policy initiatives. The argument can be made that it is as vital for organizations concentrating on public policy (vs. those directly involved in healthcare) to develop integral approaches. Integral public policy would better serve citizens and improve legislative outcomes. The case of AIDS patient Ryan White, which educated citizens and required medical practitioners receive education about HIV and AIDS, as well as the funding for research and community support structures for HIV patients, provides an example of our failure to learn from and hence repeat our past. There are certainly parallels between the stories of Ryan White and Cash Hyde, a young cannabis patient whose brave battle with brain cancer recently ended amid much political turmoil in his home state of Montana regarding MMJ policy (Cash Hyde Foundation). Chemotherapy, initiated at the age of one, made Hyde blind and too sick to eat. Yet only weeks after his father began administering cannabis oil to his son, Hyde was able to eat again and even regained his sight. Although Hyde did not survive his battle with brain cancer, he experienced two full remissions and lived years longer than medical professionals anticipated; moreover, his quality of life was exceptional given that he was indeed a cancer patient. At the age of four, he passed peacefully in the arms of his parents (Cash Hyde Foundation). Cases like Hyde's illustrate that it is time for scholars and policymakers to consider alternatives to the status quo; the Integral framework offers the possibility of broader, more comprehensive policies that provide support to patients.

Finally, the Lower-Left quadrant (LL) contains the subjective as expressed through the collective: groups, organizations, society, and our global community, as well as collectively expressed levels of consciousness. Paulson (as quoted in Kupers & Weibler, 2008) provides a solid description of this quadrant as a space of mutual recognition, as well as delineating the internal collective aspects of leadership conveyed in this dimension:

> The intersubjective world of shared history, myths, stories, values, norms are all part of this quadrant, so it encompasses cultural dimensions such as deal with group identity and meaning-making issues. Correspondingly, it is also the domain of unwritten beliefs, shared meanings, and worldviews. As such it includes taboos and informal norms that can be discerned from how people justify and explain what they think and do together in terms of leading and following. This area of culture calls for a focus on the deeper significance of collective aspirations, valuing and meaning making for example in rituals, ceremonies and symbols, socio-cultural purposes and visions. Approaching this realm allows us to not only tap into what is held by individuals, but also to access and create a composite of what is held collectively. (p. 449)

Although little attention has been paid by scholars to the cannabis community, perhaps only a bit more has been paid to the significance of leadership as it relates to this quadrant. Integral organizations understand that leadership "cannot manipulate this sphere directly, because to a great extent it is determined and controlled by members of the organization" simply because it includes "corresponding levels of consciousness expressed on the collective cultural level" (Kupers & Weibler, 2008, p. 450). However, for these reasons, shared or distributed leadership is developed from this quadrant and of concern for any organization whose purpose is to empower members.

The "all-quadrants" aspect of the AQAL model refers to "the I, We, and It dimensions (or self, culture, and nature; art, morals, and science; first-person, second-person, and third-person)" (Wilber, 2000, p. 138). Thus, an integral understanding of cannabis patients might include, for instance, a phenomenological analysis on the subjective meaning to individual patients (UL); observations of individual behaviors (UR); promoting tools and processes to be used at the collective level (LR); and the uncovering of the social and cultural characteristics that affect patients (LL). Using the AQAL model and interdisciplinary methodologies, one can study the perspective of each quadrant from a series of complex, interconnected relationships. The perspectives gained when we focus on the cannabis community demonstrate a clear need for further research in this subject field.

Public Policy and the Need for Integral Leadership

Based on the cross-stigmatization associated with marijuana as an illegal drug, a "recreational" substance, and an alternative healthcare option, cannabis patients are often marginalized by their own physicians for considering cannabis as a treatment option. As a patient, I find it perplexing and unsettling that I frequently have a better understanding of the endocannabinoid system than the physicians managing my healthcare. If human beings have an endocannabinoid system, an important physiological system critical to homeostasis, known to react favorably to cannabinoids, *all* medical practitioners should be required to be aware of this system and have a comprehensive understanding of it. It is quite surprising that this particular argument is not central in the medical cannabis movement. Its absence indicates attitudes regarding cannabis use may be related to the extent of one's understanding or ignorance of the evidence rather than exclusively to one's moral beliefs. Research exploring stigma from an Integral frame will add value to the processes undergirding patient marginalization and stigmatization.

Conventional medicine predominantly employs an UR, hierarchal approach that seldom focuses on the needs of patients outside traditional practices. Cannabis use falls outside of this firmly established model for many reasons beyond its lawlessness. In comparison, a holonic model "claims that every physical event (UR) has at least four dimensions (the quadrants) and thus even physical illness must be looked at from all four quadrants (not to mention levels)" (Wilber 2000a, 91). Integrative medicine asserts a person's interior states (i.e., emotions, psychological state, imagery, and intentions) play a crucial role in both the *cause* and the *care* of physical illness, as well as the *cure* (Wilber, 2000a, p. 91; 2007, p. 92). Alternative health practitioner Dr. Andrew Weil is one, among many, who espouses the belief that mind, spirit, and *community*, as well as body are important factors that influence health, wellness, and disease; a fact conventional medical providers fail to recognize as they ignore an "entire panoply of effective treatments across all quadrants and dimensions of human health and illness" (Wilber, 2007, p. 92). Wo/men's Alliance for Medical Marijuana (WAMM) and Harborside Health Center (Harborside or HHC) are ostensibly integral organizations and model cannabis programs. Both are founded on a belief similar to Wilber's (2003) notion of Integral Medicine that calls on medical practitioners "to utilize as complete and as comprehensive an approach as possible in treating any illness," believing it necessary for healthcare organizations to follow the same premise, thus treating the whole patient. Both organizations offer services that span the Integral framework, concentrating on safe patient access, education, and support issues (in contrast to many cannabis and traditional healthcare organizations).

Future research may find that the ability to span the full spectrum of the Integral model is at least partially responsible for patients stepping into leadership roles, sharing their personal stories publicly, as well as supporting Harborside's struggle with federal authorities that seek to close a well-respected healthcare provider (David, 2012; DeAngelo, 2012).

As important as both the UR and UL quadrants are for seriously ill patients, "individual consciousness does not exist in a vacuum; [it exists] inextricably embedded in shared cultural values, beliefs, and worldviews" (Wilber, 2000, p. 91). Wilber points out, "How a culture (LL) views a particular illness—with care and compassion or derision and scorn—can have a profound impact on how an individual copes (UL) with that illness, which can directly affect the course of the physical illness itself (UR)" (p. 91). Arguably, cannabis patients are marginalized not just by how society views (LL) their illness (chronic pain, PTSD, AIDS, among others), but also by how society views the use of an illegal drug as treatment. Compassionate care policies require patients demonstrate that conventional treatments have failed to provide relief before one can apply for consideration as a potential cannabis patient; patients must also obtain a physician's recommendation. The decision to become a cannabis patient is not about "getting high" or intoxication, as the media and dominant narrative would have us believe; instead, for most patients, like me, it is about the chance of living a better quality of life and seeking wellness. Regardless, experiencing, witnessing, or fearing potential stigmatization causes numerous patients to conceal their use of cannabis; many are unable or unwilling to defend their choice or themselves when confronted by others armed with a narrative that cannabis patients just want to "smoke pot" or that "all illicit drugs are bad." It is an act of leadership to stand against social conventions challenging healthcare providers with one's own embodied experience—an experience often sought in desperation when conventional methods fail to provide relief. As a cannabis patient, I frequently face these charges from the uninformed, including my own physicians establishing that there is still much work to be done to remedy issues like this.

Encounters like those above cause fear, stigmatization, and feelings of oppression, and they will remain a dominant part U.S. culture until as a society there is a better understanding of cannabis patients and marijuana use. For, as culturally acceptable as it has become over the past two decades for cancer patients to use cannabis to relieve symptoms brought about by chemotherapy treatments, very few patients fall into this category. The chronically ill, who from quick observation may appear physically healthy, have been the target of MMJ detractors and are the most affected. Skeptics, politicians, and medical professionals frequently stand on the premise that the Schedule 1 classification of marijuana "affirms" there is no medical benefit provided by its use, mimicking the dominant narrative that "all illegal drugs are bad" and labeling those who use cannabis as misguided souls or addicts. This type of stigmatization, compounded by a lack of support, causes patient stories to remain concealed and the knowledge they might share silenced. In contrast, the Integral framework provides a space for the marginalized to share their stories, first with each other and then with others who may benefit from their knowledge.

An informal survey of several MMJ specialty physicians revealed that more than 95% of cannabis patients were "self-medicating" prior to the receipt of their recommendation, leading Mikuriya and associates (2007) to conclude that physicians were really "approving" the medical use of marijuana as opposed to "recommending" it. This statement is important because it illustrates a situation cannabis patients recurrently face: a lack of knowledge and understanding by their primary care or specialty physicians compounded by a shift in role redefining an experienced cannabis user as knowledge agent (in contrast to the culturally acceptable passive patient who relies on the clinical expertise of the medical provider). Passive cannabis patients are those who have little or no experience with cannabis but who may benefit from its use. These same patients find little assistance and a general lack of ability to answer medically relevant questions regarding cannabis use from traditional medical providers. As a new cannabis patient it is often more productive to access other patients or cannabis providers (dispensary personnel) than to seek advice from one's primary care physician

or even a specialist (oncologist, endocrinologist, etc.) because knowledge is often not exchanged between those who know (cannabis patients and providers) and those who need to know (conventional medical practitioners). Integral organizations offer patients and physicians a variety of opportunities to bridge this communication gap. Time and observation will help us assess their success, but certainly several integral MMJ organizations are making strides in changing public perception. Leadership scholar Boas Shamir and colleagues (2005) contend, "Telling the biography is an important leadership behavior." Sharing one's personal story, as a cannabis patient, is then an act of leadership within itself. Contrary to popular belief, medical cannabis users seldom medicate or use cannabis with other patients (Hathaway, 2004); therefore, patients need to understand the experience of others in order that they may evaluate and validate their own relationship with cannabis (Becker, 1997). It is also necessary for others to understand why MMJ patients choose cannabis as medication and how they perform the act of medicating with cannabis, so that they can evaluate their views about this controversial medication.

A rare few MMJ organizations have embraced an integral approach that encourages patients to share information and thus personal narratives in this manner. As mentioned, Harborside Health Center proffers a model that concentrates on safe patient access, education, and support issues that fit the AQAL model. I visited Haborside while in the San Francisco Bay Area, and for the first time since I became a patient, I walked into a dispensary that not only offered cannabis medications in forms I prefer and typically cannot find (salves, tinctures, and oils); but also allowed me to engage with perhaps the most knowledgeable MMJ staff I have encountered in three years of cannabis research. In addition to increasing my knowledge, I was encouraged to accept literature for myself *and* my physician that would facilitate a discussion about my cannabis use, medical condition, and care. Harborside and other integral MMJ organizations recognize this type of empowerment is critical to the average cannabis patient knowing that patients are placed in the uncommon position of being the bearer of medical knowledge (instead of the receiver in their physician-patient relationships). Given this unique position, it is critical to have structures that support and empower patients to share their stories, first with each other and their own physician, and eventually more publicly, perhaps sharing their story with non-cannabis using family or community members.

In Integral Medicine, the importance of the LL quadrant lies within the "intersubjective factors" that are "crucial in any human interaction—such as the shared communication between doctor and patient; the attitudes of family and friends and how they are conveyed to the patient; the cultural acceptance (or derogation) or the particular illness (e.g., AIDS); and the very values of the culture that the illness itself threatens" (Wilber, 2000, p. 91). All of these factors are to some degree causative in any physical illness and cure (simply because *every* holon has four quadrants) (Wilber, 2000, p. 92). When taking a holonic approach to the needs of cannabis patients, one can see that they are affected by physical health condition as well as economic, insurance, and social delivery systems (with social delivery systems currently being the greatest area of focus in this movement); public policy; environmental issues and toxins that affect the quality of medication; and the expectations of traditional medicine. Physician, family, and community attitudes and perceptions are important factors in the acceptance or degradation of a patient. Terminal and chronic health conditions have causes, treatments, and cures that include emotional, mental, and spiritual waves, and as Wilber demonstrates, when "adding these levels to the quadrants, a much more comprehensive—and effective—medical model begins to emerge" (Wilber, 2000, p. 93). When considering cannabis patients in relation to an Integral model, we begin to understand that our nation's cannabis patients suffer incredible injustice and marginalization because their whole- person status is not considered in public policy, conventional medicine, or even a majority of the very organizations that advocate or provide services for MMJ patients.

Public policies supporting medicalized *access* to cannabis arguably fail to consider the needs of patients—individually or collectively—across quadrants. In New Mexico, the state in which I first became recognized as a licensed medical cannabis patient (MCP), this singular approach is inadequate. The MCP

program is weak because it neglects to consider the needs of the whole patient, preventing it from meeting the needs of the population it is implicitly designed to serve. Five years after its inception, for example, state-licensed producers are unable to meet even the basic access demands of the 7,000+ enrolled patients; given that many patients, like me, are driven to an illegal market due to medication shortages illustrates a need for integral responses to tackle complex problems. Integral models empower patients to take action, sharing their voice and making their individual and collective needs known so that policies are developed in relationship with those they are designed to serve.

In just a few short months, my own personal experience as a cannabis patient has resulted in a number of transformational learning experiences. In large part, these experiences are attributable to interactions with other cannabis patients, not "experts" as physicians are regarded in our society, but *experts* nonetheless. For the past three years, I have been researching the medical cannabis movement from a wide variety of perspectives that span the AQAL model, and while I still have much to learn, I consider myself a knowledgeable person within this domain. Yet the personal perspectives and knowledge other patients have shared with me through their stories have been the most instrumental factors in my success as a patient and scholar. Each patient I encounter has greatly broadened my understanding of this complex movement, the medication itself, and the people who individually and collectively are recognized as cannabis patients.

Because I am concentrating my research on topics within this community, I seek out patients to speak with and place myself in situations in which I am able to interact with cannabis patients. For instance, I visit locations where state-licensed MCP patients purchase cannabis medications from state-licensed producers; I hesitate to call these providers "dispensaries," although this is the commonly used term. In New Mexico these healthcare sites are not permitted to perform as "storefront" healthcare centers, but only as "limited hour pick-up locations" or delivery services. In this patient's opinion, these organizations are *cannabis healthcare centers* and should be both operated and considered as such; delivery options may be convenient, but they are inadequate as a sole option for patients buying whole plant cannabis remedies. As legitimate, state-sanctioned businesses offering a critical service to marginalized citizens—sick and dying members of our society—these organizations should not be forced to conceal themselves forcing cannabis and cannabis users to remain hidden from others and forcing patients to make complex medical decisions over the phone or online. Reinforced stigmatization of this type denounces cannabis patients by supporting the dominant narrative that silences their voices, so their true needs remain unknown, and therefore cannot be addressed. It also silences conversations critical to cannabis patients like the need for whole-plant treatment centers, such as Harborside and WAMM, as well as the necessity of research focused on cannabinoid medications with conventional applications like cancer treatment. Integral approaches, on the other hand, legitimize cannabis patients' needs, as well as the knowledge they embody.

Existing policies also continue to hide cannabis and cannabis use from the mass population, exacerbating the stigmatization of patients. What few outside the MMJ community understand, including the medical providers who often support these patients' healthcare in traditional ways, are the various forms cannabis can take as medication beyond simply "smoking marijuana"—a major detractor of medical professionals and citizens in relation to cannabis use. Many, many times over the past three years I have heard a health professional say, "The FDA will never approve a drug that patients must smoke." Although many patients continue to smoke cannabis, and do so with what studies consider minimal health risk (Pletcher et al., 2012), the majority of patients use cannabis in other forms (capsules, tinctures, oils, waxes, and other whole-plant formularies) that do not require smoking. Further, oncologist Dr. Don Abrams finds smoked cannabis as a preferred option to pharmaceutically derived and dosed cannabis, as included in the legal and FDA-approved cannabinoid drug, Marinol (Abrams et al., 2007). This is only one example of the knowledge disconnect between practitioners and cannabis patients that the Integral approach could contribute to resolving.

In contrast, when operated transparently using integral approaches, organizations like WAMM and

Harborside are becoming deeply immersed in cannabis research, as one would expect from a pharmaceutical company like cannabinoid leaders GW Pharmaceuticals (which markets Sativex, a cannabis-based throat spray available by prescription in Europe, New Zealand, and Canada). In understanding patients' needs, because nearly every person involved is a cannabis patient or hands-on caregiver, an organization like Harborside is able to research and offer improved whole-plant cannabis options for patients as young as five years old ("Jayden David's Story," 2012). Jayden David has a rare form of epilepsy called Dravet's syndrome, which once inflicted persistent daily seizures that left him unable to eat solid food, walk, play, or even hug his parents. However, a year after his father, Jason David, approached Harborside leadership seeking a treatment for his son without the psychoactive effects cannabis is known for, Jayden is now eating, running, and attending school seizure-free. After exhausting conventional medical routines, parents have much to lend this discussion regarding the alternative treatment cannabis provides for their children.

This case also highlights the importance of reclassification and the expanse of beliefs versus knowledge that Integral Research must address. For instance, arguably cannabis is improperly classified in the Schedule I category; in contrast, cannabis patients and healthcare providers stand on the conviction that cannabis may in fact be closer in relation to herbal therapies such as St. John's Wort. St. John's Wort is not regulated by the Controlled Substances Act; instead it is an over-the-counter (OTC) medication with labeling that attests it is only a *dietary supplement* and has no *confirmed* medicinal value. Perhaps the removal of cannabis from the Controlled Substances Act in totality is an unachievable rescheduling goal for advocates at this time, as it runs counter to dominant notions that demonized this plant-based medication; however, whole-plant remedies like "Rick Simpson Oil" are being used widely and successfully in the United States for a wide variety of treatments, suggesting not only that a Schedule 1 classification is unwarranted, but also that FDA approval is unnecessary for cannabis in whole-plant forms. That said, pharmaceuticals like Marinol or Sativex represent only the beginning of what should become a burgeoning field of cannabinoid medicine, offering measured, precise treatments for chronic and terminal healthcare conditions in addition to the alternative therapies patients now rely on. Further exploration in medicine, public policy, and leadership related to this population will only improve our understanding of cannabis and cannabis patients.

I have only recently begun sharing my story with others, an action I feared, but which I now find empowering. For as much as cannabis patients have united online through social media like Facebook, few have a sense of community with other patients that they can interact with face-to-face. For this reason, developing a patient-centered support group seems like a good starting point in any MMJ community. However, after discussing this idea with a number of patients and considering their responses regarding individual and collective needs, I have come to realize that unless an organization is structured using AQAL concepts, its chances of resolving issues that patients experience is slim. Community development scholars John McKnight and Peter Block (2010) postulate, "The idea of co-creation…becomes possible when we join our neighbors to live and create a community that nurtures our family and makes us useful citizens." The process of co-creating can only take place when the collective knowledge and wisdom of the community are engaged. Figure 1 lists a number of patient needs uncovered since I have entered the MMJ community. Unquestionably, this chart does not represent a complete accounting of cannabis patient needs or desires, but it highlights the value and necessity of the Integral approach in attempting to meet these needs.

Starting in the UL quadrant, this realm is where patients determine whether they are willing to share their private voices publicly or accept a leadership opportunity. Fear of being labeled and stigmatized, fear of federal prosecution, or any other number of concerns may prevent a patient from participating collectively as a cannabis patient while concealing their individual needs and concerns. Integral concepts expand the leadership potential within an organization; therefore, a primary objective is for patients to learn to recognize leadership opportunities across the four quadrants. Further, they must be empowered to act upon these leadership opportunities from within their community.

Figure 1. A preliminary list of medical cannabis patient needs.

Development in the UR quadrant focuses on behavior, and as mentioned physical health is located in this quadrant. Individually and collectively, patients have the opportunity to influence conventional medicine by engaging in this quadrant. Currently, a majority of patients who seek to use cannabis find themselves in the peculiar position of educating their personal physicians about the medical efficacy of cannabis. At the Seventh National Patients Out of Time (POT) conference, Abrams (2012) explained most physicians graduating from medical school before 2007 have not been formally educated about the endocannabinoid system. This lack of knowledge deepens the stigmatization potential that current cannabis patients experience as it relates to their ability to interact with their primary or specialty medical providers. The physician's lack of knowledge combined with a marginalized patient's fear squelches meaningful conversation about cannabis use. As a pa-

tient, physicians have dismissed me more often than questioned me in further detail about my experience as a cannabis patient. Some medical professionals express a fear of committing "career suicide" by engaging with medical cannabis and MMJ patients or becoming known as a "pot doctor," but these beliefs seem to be based on fear of stigmatization and not knowledge of the endocannabinoid system, cannabis, or cannabis patients. Issues of institutionalized stigma, like these, demonstrate a need to focus on issues within this quadrant. There is value and empowerment in supporting patient development and growth, especially among a marginalized and physically weak population; the key is to consider patient needs from an integral perspective.

Public policies that support or prevent patients from using cannabis as medication fall squarely within the LR quadrant and have been a primary focus of advocacy groups related to patient *access* to "safe, legal" medication. Policymakers seem to pay little attention to cannabis patient needs outside of this realm and notably fail to consider cannabis in forms beyond smokeable products, which drastically limits cannabis patients' choices once the policy has been implemented. Yet, humans want and need shared and deliberative decision-making in healthcare, public policy, and other aspects of their lives. Leadership in the medical cannabis movement has a great deal of knowledge to share that could offer improvements across dimensions, not just in social delivery systems. The AQAL model supports growth and development in all quadrants and advances the notion that in looking at issues from a single quadrant perspective, advocates and policymakers are missing the bigger picture and failing to develop the structure required to support patient initiatives and organizations.

Finally, common language, signs, and symbols that are understood and shared with others characterize the LL quadrant. If we are to successfully rescript cultural beliefs about what it means to be a cannabis user in U.S. society, this realm requires reflection. Until the taboos, rituals, and shared meanings about cannabis use are demystified, leadership within the MMJ movement will continue to be dismissed by the dominant cultural script and media as radical messengers. The ability to shift social perspectives in this way is a daunting task and one that can only be achieved if MMJ patients are willing to share their private voices, in the medical cannabis community, with medical and other service providers, and with others outside the community. Research concentrating on stigmatization of cannabis patients would increase our understanding of this marginalized population from an integral perspective that considers the internalized experience of patients (UL), as enacted through their individual behaviors (UR), while taking into account the cultural phenomenon cannabis patients experience at this time, as well as how stigma has been institutionalized through (LR) structures such as organizational policies (pre-employment drug testing), public policy (compassionate care policies), and laws (the conflict between state and federal laws), for example. Integral organizations encourage growth and development that benefits the individual as well as the collective across these dimensions, facilitating societal shifts in thinking that will in turn help cannabis patients overcome current societal stereotypes.

Integral Diversity Maturity: Its AQAL Benefits

I have discussed the ways leadership opportunities may present themselves in each of the quadrants and across dimensions; however, I have yet to discuss the importance of Integral Diversity Maturity (IDM). Scholars Toni Gregory and Michael Raffanti (2009b) posit diversity maturity as "a developmental process… achieved through transformative learning" (p. 43). These two scholars build upon the work of Roosevelt Thomas who also justifies the need and the importance of analyzing diversity dynamics from multiple perspectives. Thomas (as cited in Gregory and Raffanti, 2009b) elucidates:

> Diversity maturity signifies a deep clarity about the fundamental concepts of diversity…We can acquire the conceptual clarity and learn the diversity principles through education (formal and informal) and personal reflection. Maturity comes through putting these principles into action on a daily basis. (p. 43)

Gregory and Raffanti (2009a) demonstrate the effectiveness of IDM in their article, "Climbing a Great Hill," which is framed by an AQAL approach. In the article, the authors demonstrate how an "individual's level of development and openness to transformative learning determine not only how an individual will respond to diversity tension, but also the number of options available for responding" (Gregory & Raffanti, 2009a, p. 44). Both Malcolm X and Nelson Mandela provide illustrations of "the transformative learning that occurs as individuals reconceptualize diversity beyond traditional categories and dualities to recognize diversity as unlimited creative possibility" (p. 30). Although the authors discuss their theory in relation to prominent leaders, they also demonstrate how "extraordinary situations" can become "fertile ground" for the development of "transformative and integral learning experiences and opportunities to lead" for anyone (p. 30). Cannabis patients are currently experiencing "extraordinary situations" by choosing to medicate with cannabis in spite of federal (and often state) laws that deny them that ability. In many ways, this makes them a prime population of potential leaders and research participants (co-researchers), and there is also an opportunity to use IDM as an impetus for leadership development efforts within the MMJ community.

The IDM model avoids "quadrant absolutism" and "recognizes that diversity dynamics…are generated as a result of the complex process of integration and differentiation in which similarities, in addition to differences, play a key role" (Gregory & Raffanti, 2009b, p. 45). Within IDM, "the four quadrants represent a co-enacted field of probability waves and potentiality/creativity out of which multiple, complex events emerge in each quadrant and interact with each other within and between quadrants" (p. 45). The authors move diversity "beyond race and gender" and "beyond winning and losing," which increases the understanding that "diversity is everywhere and in every context, and that its dimensions of expression are unlimited and have unlimited combinations" (p. 46).

Largely, adversity could be lessened in the MMJ community if the use of cannabis as a drug became normalized in our society, and although the paradigm is shifting, much work remains to be done. Susanne Cook-Greuter (1999) explains, "Much suffering is alleviated when the automatic habits of mind and heart are unlearned and uncoupled from memory (what was) and desires (what ought to be) and replaced by mindful, non-evaluative attention to what is—now" (p. 35). Gregory and Raffanti (2009b) provide readers with multiple examples of diversity maturity in action (case examples of a service manager, salon owner, etc.), each performing leadership "now" based on the context of the circumstances and time they were experiencing, much the way cannabis leadership is acting "now." By structuring a patient-centered organization using an Integral frame, not only will the diversity maturity within the MMJ movement exponentially increase, but that change will also have an effect outside the community, helping us redefine what it means to be a MMJ patient in American society. As patients share their stories with others, they engage in experiences that force the type of self-reflection and analysis Nelson Mandela and Malcolm X presented in Gregory and Raffanti's findings. Patient empowerment, diversity maturity, and leadership across the AQAL spectrum are each primary benefits of this type of leadership frame. There is a significant opportunity to learn more about IDM in relation to leadership development by engaging in research with this population.

Conclusion

As a researcher concentrating my studies in the medical cannabis movement, I have a much clearer understanding of the needs of patients because I have now walked a mile in their shoes. My fear in being labeled a "stoner" because I am a cannabis patient has receded as I find personal relief from suffering, acceptance among other patients, and empowerment from sharing my story with others. Given the right context and circumstances, I believe other patients can have similar experiences. Filling this need within my own community motivates me to consider patient needs with a broad interdisciplinary lens that encompasses the whole patient—an Integral perspective. Based on my observations, organizations founded on the Integral model best serve patients as whole persons and their communities. Using the Integral model to develop a patient-

centered organization supports (individually and collectively) an avenue for knowledge exchange, the potential to develop a sense of community, increases diversity maturity, and offers leadership opportunities. As patients become empowered and develop post-conventional emotions, there becomes a tremendous capacity to reach beyond the MMJ community with a message of care and compassion that is worldcentric. For this reason and many others, I posit that integral models are critical in our society; it is time we reconsider Western medical traditions in patient care and explore how integral approaches can assist in reframing what it means to be a patient in our society.

While it may not seem like embracing the Integral approach will change the world, it just might. If we consider leadership as an architecture that facilitates the collective genius of people, instead of a singular hero, we can learn much from the leadership patterns that integral organizations encourage. If we consider the patient as a whole and very important part of the physician-patient relationship, instead of a checklist of symptoms to be diagnosed and treated by protocol, we can also make great strides in healthcare. If we challenge evidence-based medicine with an Integral Research approach, perhaps even greater strides can be made as it relates to cannabis and its purported medical efficacy. This notion could allow us to consider the embodied knowledge of a large population while we wait for the U.S. government to reschedule cannabis, releasing restrictions on cannabis research. The Integral model as described and used as a frame for a research program goes beyond the limitations of current leadership, medical, or research inquiries and persuades us to consider the knowledge cannabis patients hold in each of these subjects. Furthermore, it highlights how little we have inquired about cannabis, cannabis patients, or the organizations and systems designed to serve their needs. A model based on an Integral frame can help us understand more about other marginalized populations and may well have global healthcare and public policy implications.

NOTES

[1] The terms *marijuana*, *medical marijuana* (MMJ), *medical cannabis*, and *cannabis* will be used interchangeably. While *cannabis* refers to the plant and whole plant medicines, and is the preferred term among patients and MMJ organizations, the terms *marijuana* and *medical marijuana* are directly associated with public policies.

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REGINA NELSON, Ph.D.(c), is a student at Union Institute & University concentrating on leadership studies and interdisciplinary research within the medical cannabis movement. Her educational background consists of undergraduate and graduate level interdisciplinary degrees: a B.A. in Cultural Anthropology from Vermont College (1998) and an M.L.S. in Leadership from the University of Oklahoma (2002). Regina's dissertation involves challenging the structure of evidenced-based medicine, while her life's work centers around community development projects. Additionally, Regina is involved with the Cannabis Patient Network and presents on a range of topics, including leadership, public policy, and medical cannabis, at academic conferences and community organizations nationwide.

CRAFTING A CULTURAL LATTICEWORK

Weaving Triadic Micro-Communities for Nurturing Tomorrow's Leaders

Mikyö Clark

ABSTRACT This article explores the future of leadership through a developmental framework, focusing on the design and implementation of a specific networked leadership platform designed to support the quickening of transformational processes, competency building, and the establishment of healthy mentor and mentee relationships. It outlines a specific social technology that aims to support rapid leader development, emphasizing the importance of this and similar tools for the cultivation of members of the millennial generation who are facing unprecedented global challenges. Through an examination of the relationship between artifacts and the intersubjective and techno-economic systems in which they arise, the author points to the role of artifacts as developmental pathways for the creation of new social systems. Finally, through an examination of the author's own developmental and typological orientation, the article further investigates the role of psychological and spiritual development in the cultivation of highly complex forms of leadership that are needed today.

KEY WORDS business; leadership; social systems; action inquiry; youth

> We do know from systems theory that when a system hits a bifurcation point, very small differences can determine the future pathway of the system. If our current era is marking such a threshold point for the global system, how many committed people acting from the heart would it take to co-inspire a profound global shift one way or the other? The Renaissance, it is often said, was created by a core group of approximately two hundred people...we don't know how many people it will take at the beginning of this century to co-inspire another profound global shift. But it probably wouldn't take more than fifty or a hundred people if these people were really committed and supported by the right kind of infrastructures.
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> – *C. Otto Scharmer* (2009, p. 445)[1]

> Leaders who ask themselves, "What can I do to make my setting the most fertile ground in the world for the growth of talent?" put themselves in the best position to succeed. These leaders understand that for each of us to deliver on our biggest aspirations—to take advantage of new opportunities or meet new challenges—we must grow into our future possibilities. These leaders know what makes that more possible—and what prevents it.
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> – *Robert Kegan and Lisa Lahey* (2009, p. 11)[2]

What are the essential qualities of tomorrow's emerging leadership? Ours is a time on planet Earth in which the many systems that humankind has built over the course of its history are being rendered obsolete by the sheer size and complexity of the problems that we face. In both our public and private institutions, the growth of a globalized informational marketplace has rendered the rules of traditional economics and 20th-century

Correspondence: Mikyö Clark, 2721 Shattuck #207, Berkeley, CA 94705. *E-mail*: mikyo@fer.tl.

business practices extinct. We have seen countless firms closing their doors, and even more new ones springing up in their wake. As I write this, protestors from around the world have been occupying public spaces from Wall Street to Bangladesh continuously for more than six months in opposition to the injustices being incurred through a massive and ongoing financial crisis. The multifaceted and interwoven human systems that have carried us into the new millennium are today collapsing under a tremendous weight.

The roots of these dysfunctional systems live within the hearts and minds of societies both past and present. It is the purpose of today's leadership to transform these structures into newer, more complex, and more adequate forms that are suited for the world that we are leaving to the generations of the future. Successful leadership today requires more than rote learning of new technologies and the incorporation of an expanded framework for action. To affect transformation, to be resilient and regenerative in our leadership today, requires modes of continual epistemological overhaul in the face of ever-changing circumstantial and environmental factors.[3] Building such capacities is perhaps the single greatest challenge that millennials face as a generation; not only professionally, but personally as well, in our roles as children and parents, husbands and wives, friends and mentors. Such growth requires layered networks of deep support and challenge, which can help to incubate and structure experiences of the higher capacities we are being called to explore, and eventually master.

Today's leadership has the task of designing just these types of networks, and weaving complex relationships between the disparate parts of the many systems that we live within. As leaders, we must tend not only to the exteriors of these systems, to their aesthetic, form, structure, and scaffolding, but also to the interiors of these complex systems, their cultures and subcultures, families and tribes, in order to insure their sense of safety, mutual reinforcement, healthy competition, and commitment to specific values or value systems. We must to begin to architect not only the size and shape of our teams and committees, but the interior cultures and interpersonal dynamics in which they function. The micro-communities in which we live must reflect our own complexity and internal capacity for change. This shifting of our interpersonal engagement reforms the riverbanks of our social world by changing the exterior structures of our relationships and the way that values and other interior phenomena can move through our organizations and communities.[4]

Integral, Action Inquiry, Tribal, and Developmental

There are a number of leading-edge leadership paradigms that address both the interiors and exteriors of culture within a larger meta-systemic framework, namely Integral Leadership (Ken Wilber, Sean Esbjörn-Hargens, Barrett Brown), Tribal Leadership (David Logan), and Developmental Action-Inquiry (William Torbert and colleagues). Each is based in an ontogenetic understanding of the individual human life-cycle, which points to different potential stages of cognitive (oneself-world), interpersonal (oneself-other), and intrapersonal (oneself-oneself) modes of identification and maturation. In each of the models, alongside individual growth, two differing modes of collective development are also acknowledged. The first is as a "deep time" evolutionary process—the (phylogenetic) unfolding of human potentials throughout the course of history into more and more complex civilizations and forms of social interaction.[5] This same arc of cultural evolution can be seen in smaller (ontogenetic) micro-movements, which happen throughout the course of a lifetime as an individual transitions between a previously held set of values and an emergent set of values tied to new sets of communities with different social practices.

The developmental component of these models serves as their ontological and epistemological backbone by emphasizing the increasing complexity of structures of human consciousness as they connect with the world to make meaning. This developmental lens is an indispensable cornerstone of emerging forms of leadership for two reasons. First, within leadership communities that are immeasurably diverse, it allows us to map and place individuals along a recognizable spectrum and thus better support them in taking their next steps into the elaborate terrains of human life and work. Second, when we realize that "no problem can be

solved from the same level of consciousness that created it," a quote attributed to Einstein more than 50 years ago, then the moral imperative for leaders becomes to continue the evolution of consciousness to match and overcome the many complex problems that the world faces.

The process of maturation and healing never happens in isolation—it is only with the support of a strong community that we can step more fully into deeper capacities for love, vision, and action. It is the weaving of these kinds of communities, committed both to undying support and fierce challenge, that has become the focus of my work, and has led to the development of a social technology called Cultural Evolutionary Ecosystem Design (CEED). I feel that CEED's potential as a transformative tool for the development of tomorrow's leaders is worth considering for a number of reasons: 1) it runs on the Integral Operating System (Wilber, 2003a), a post-metaphysical framework that allows for a) the coordinates of its ontological and epistemological zones of enactment to be specified,[6] and b) its methodological injunctions to be determined in relationship to the realities they are designed to reveal,[7] all of which helps to frame the enactive nature of the technology's various functions; 2) it employs Torbert's (2000, 2004) triple-loop feedback system for highlighting the relationship between actions, strategies, and awareness, allowing us to incorporate more moment-to-moment feedback and perspectives on the current decisions we face and identities we hold; and 3) it draws on David Logan's (2009) concept of Tribal Leadership, first and foremost operationalizing the triadic structure that he presents as the basic unit or "building block" of CEED communities. The integration of insight and praxis from these emergent leadership paradigms is the basis for CEED's developmental approach to ecosystem creation and cultural design. It is with these tools in hand that I offer the beta version of this leadership technology in the hope that it can be revised and incubated in its own network of theoretical and practical application.

Pilot Research on CEED Applications

Given the need for robust developmental ecosystems in the context of leadership training and capacity building, it is clear that CEED technology's time has come. What remains unclear is to what extent the more theoretical aspects of this form of praxis can begin to come online in real-world situations as embodied functional capacities of a diverse group of leaders. In attempting to drill down to the source code of CEED's platform, I conducted formal research and beta testing on this technology over six months, in the context of a course on Integral Research held at John F. Kennedy University. In a more comprehensive version of this article available online, I outline a pilot research project that utilizes the platform of Integral Research (Esbjörn-Hargens, 2008) to explore a number of the core components of CEED's design through a self-reflexive mixed-methods research design aimed at analyzing my own experience of the platform.[8] For the purposes of brevity, I have chosen the most relevant insights and consolidated them in the section titled "Thematic Perspectives on the Nature of Social Systems," found below. My current inquiry into the application of CEED is meant as a generative preview of an ongoing revision and restructuring processes that is giving way to newer versions of this technology as it matures from a more theoretically aligned set of practices into a project-based multiyear youth leader development program.

Before moving forward, I would like to make visible a few of the assumptions that I hold about this topic, and about the art of leadership as a whole: 1) The limitations of my own awareness and development (my Kosmic Address) will dictate my direct experience of the terrains that I enact (i.e., my data sets & perspectives).[9] This includes the first-person research that I have conducted on myself—which constitutes a picture of myself that only I could have taken. 2) My own interest in, and involvement with, my research topic (i.e., CEED beta as a whole) is based on unseen and unnamable forms of identification, desire, and repulsion ("karmas") which play into my every interaction with my topic and the world.[10] 3) The support and challenge that I have received from my own leadership-ecosystem which I have been engaged with throughout my research process prevents me from wholly objectifying CEED, as its core components are constitutive of my

present sense of self as a researcher. These are important for me to name up front in the knowledge-building process, as they have formed the bedrock of my entire inquiry process.

Growing CEED: The Basics

At this point I would like to give an overview of the technology itself, and provide some examples of how it can be rolled out. The basic building blocks of CEED technology, as mentioned above, are triads. Essentially, the technology provides a framework for the creation of leadership ecosystems that leverage the power of triads to create intimacy and support for leaders to accelerate their growth. By creating dynamic flows of energy across social systems, the technology helps leaders to stretch themselves and fail more quickly and gracefully in the pursuit of greater and greater emancipatory impact.

The starting point of any leadership ecosystem is the single triad. You may select peers whose development in particular domains is more or less on par with your own, or you may select an individual or group of mentors or mentees with obvious developmental differences.[11] Many different combinations are possible, and it is up to you to know what it is that you need most, and where you can best serve and be served. The essence of the selection process is to find the domains of growth that will be emphasized by the group, whether they be personal or professional, esoteric or exoteric, and then hand-pick the individuals from within your network who are presently working in those domains. Oftentimes the first triad a leader builds provides a base, or foundation, for the larger social system to rest upon, so it is important to select other leaders whom you feel a deep alignment and resonance with. The other factors to take into account, aside from domain competency, are the overall developmental centers-of-gravity and stages-of-life of the participants. As a rule, there should be no more than one developmental level of difference between participants' centers-of-gravity; otherwise much of the work may become "lost in translation".[12] Similarly, stage-of-life should be taken into account, as differences in age can be both an asset or a liability depending on the circumstances.

Once the participants have been selected, how does CEED technology function as a social tool? What are the practices, and how are they brought forth within the triad? CEED functions to magnify leaders' highest potentials through the use of transparent communication, pointing-out instructions, critical and self-reflective feedback, as well as non-judgmental and presence-based holding, witnessing practices, and perspectival cross-referencing. The platform, however, is fully customizable based on the needs and competencies of the participants. The root, presence-based witnessing and engagement, is consistent across domains and developmental differences. It is this foundation that allows for participants to feel seen in both their weakness and their strength, and it is this witnessing that allows for growth and transformation.

Participants who engage triads from a more developmentally mature place may wish to engage in self-critical processes in which the roots of dysfunctional and outdated modes of self can be examined by group members, and cross-referenced from a third-person perspective. This more masculine mode of engagement, referred to as *chiseling*, provides a safe space for participants to challenge one another based on their interactions both inside and outside of the triadic container.

Whatever the mode, whether more masculine or more feminine, the triadic practice is designed to fortify the participants leadership voice—to train them to tell their own story and the story of their leadership and their tribe in clearer and more authentic ways. By speaking into the space, offering perspectives, and allowing others to cross-examine and critique their storytelling, leaders begin to access a cultural training ground in which it is safe to take risks and be vulnerable, as well as draw support and affirmation. When triadic practice is engaged in regular intervals, whether weekly, bi-weekly or otherwise, participants can more readily come to know the developmental challenges that they and their group are facing, and they can begin to lay down the patterns and pathways that lead them toward a better future.

Thematic Perspectives on the Nature of Social Systems

The data offered here should be contextualized by offering a brief but poignant look into the cultural ecosystem which gave rise to this research process, as this article is an artifact of that ecosystem and my place within it. I am presently situated in the context of many triads, which I have cultivated as an act of implementing CEED technology in my own life. The triads that I am running as of today are: 1) a horizontal triad of fraternal peers who are well versed in the AQAL model and aspects of the wisdom traditions, whose developmental scope ranges between Cook-Greuter's Individualist stage at the lower end and Autonomous to Construct-Aware stages at the higher end; 2) a vertical triad of Dzogchen-practitioner integral scholars, spanning three generations who are aligned in a common mission, of which I am the youngest; 3) a pyramidal triad of two third-wave integral leaders (myself included), led by a second-wave practitioner, whose primary focus is waking-up to deeper and deeper vantage points on the moment;[13] 4) a second pyramidal triad of cultural creatives with varying levels of familiarity with the Integral model, who together are building a guild structure for cultural stewardship; 5) a vertical shadow triad, whose other two members are my mentees, coming together in a context focused on the healing of "dark" and "bright" disowned aspects of self; and 6) an emerging inverse pyramidal triad, led by two social entrepreneurs, which will be focused on the development of youth leadership ecosystems across institutional boundaries.

These six triads constitute my personal deployment of CEED beta technology, with the specific inverse pyramidal triad being sourced in Dave Logan's work on tribal leadership, and much of the developmental and state-based metrics and language used being sourced in the AQAL model and the larger integral tradition. The live feedback practices occurring in each of these triads can be seen as expressions of Developmental Action-Inquiry, as the organic capacities being lit up in each feed into their own evolution, and the evolution of the larger interwoven system of micro-communities.

In my synthesis of the data sets that emerged from my different modes of inquiry within this social system, I distilled a set of four themes related to leadership and leadership design. These are as follows: 1) leaders produce artifacts that are meaningful to their leadership ecosystems; 2) artifacts represent (i.e., are symbols of) the developmental complexity of the systems that generate them; 3) certain artifacts may be used as leverage points for a system to transition into a higher-order of complexity; 4) each developmental level represents an artifact itself. I will now present an abbreviated description of these themes in order, drawing direct examples from my research to illustrate these higher-order principles. A certain familiarity with the Integral framework is assumed in relationship to different elements of my meta-analysis of these themes.

Data Theme 1

The first theme that emerged has to do with the relationship between individual leaders, and the leadership ecosystems that house them in spheres of concomitant meaning-making and value creation. The intersubjective realm of a leader's life will have a great deal of influence on his or her worldview, this much is clear. But what I explored in this theme had more to do with what leaders produced—the actual artifacts of consciousness, whether songs, soups, or sub-personalities, which were tended to during their creation processes. These artifacts will always exist (i.e., be interpreted) differently for different developmental levels of consciousness, as explained by Sean Esbjörn-Hargen's (2010) notion of Integral Ontological Pluralism. They will always "show up" differently, and be related to differently, by people at different levels of consciousness. What is interesting to explore, then, is what leaders do produce—and what I found in my own case was that I always produced artifacts that were meaningful to those in my larger social system at the time of their creation. I found that I exemplified developmentally distinct performances of higher levels of complexity when I was in communication with a higher-order "audience," or group of leaders.

This theme exposes the relationship between artifacts and the leadership ecosystems that produce them,

with the process of meaning-making being highlighted as the thread connecting the two. If we utilize this insight as a lens for the examination of current leadership systems and the artifacts they produce, we can more readily create relationships between the complexity and meaningfulness of an artifact with the many systems that gave rise to its form. In the context of CEED's implementation as a technology for leadership design, we can operationalize this insight by first assessing the current ecosystems which formulate the back-end support system of any leader's life. We can asses such a system through any number of lenses, looking into deep structural components as well as surface structural (i.e., cultural, temporal, geographic, and other such contextual circumstances), chronological (i.e., how long have the various components of a system been online), linguistic (i.e., how leaders speak about themselves, others and their work), narrative (i.e., how such a support system came into being from the leader's perspective), and others.[14] This sort of investigation can offer a variety of inside-out perspectives on the back-end leadership ecosystem, which gives rise to front-end artifact creation processes in gross, subtle, and/or causal spheres.

An inverse approach would start with the artifacts themselves, and attempt to discern using a variety of the lenses mentioned above, information about the back-end systems which gave rise to them. This is a sort of outside-in approach, which is similar in some ways to psychotherapy and traditional medical sciences, wherein one starts with a symptom (which itself can be viewed as an artifact of a social system) and then works backward to discover the root cause (or set of causes) that gave rise to it.[15] When CEED is operationalized in such a way, it can reveal the genealogies not only of problems and less-than-desirable outcomes, it can also trace successful and brilliant forms of emergence "upstream" to their own root systems in order to reveal some of the causes of both healthy and diseased forms of leadership. This article is an example of this mode of outside-in investigation into an artifact (namely CEED technology), by which research is conducted into the context in which the artifact came into existence.

The capacity to relate the back-end systems with their front-end production capacity is an extraordinarily valuable asset within the context of leadership design, and one which is not yet being taken advantage of by many of today's leadership professionals. CEED's capacity to meaningfully integrate these dimensions within the personal and professional lives of its users exemplifies its breadth and depth of potential application.

Data Theme 2

In each of the previous examples I have noted the generation of particular artifacts. It should be clear by this point that my use of the word *artifact* is in no way limited to concrete objects or material things. I am using the term to point to objects in the most general sense as expressions of a particular consciousness. The second theme has to do with how these "things" are related to the various systems (both intra-, inter-, and extrapersonal) that give rise to their existence.[16] The shape and texture, size and weight of a thing, in fact all of its gross, subtle, and causal attributes, are symbols of the many systems which gave birth to it—they are indicators of the ecosystem in which it participates and thus has meaning.

This theme keys into an artifact's meaning, and the process by which objects interact as symbols within the networks in which they participate. These front-end artifacts have their life cycle as the carriers of those back-end systems that gave rise to them, as posited in theme one. But once birthed into the world, these artifacts become the symbolic carriers of their mother system's generational DNA (or AQAL blueprint). Throughout this process, the artifact's DNA interacts autopoietically with the surrounding system, forming newer and exceedingly more complex forms of communication and interaction within an expanding world. These interactions in turn serve to amplify meaning and help to shape future systems that give rise to more complex artifacts.

As a leadership design platform, CEED's primary function is the continuation of meaning as the blueprint of the Kosmos. Its capacity for understanding the living nature of the participatory systems in which

humans and other life forms generate their realities allows for its functional participation in the lives of its users as a dynamic platform for the regeneration and reconstitution of their own meaning-making. Such regeneration allows for more dynamic and healthy front-end expressions within a user's own professional environments, in addition to back-end stabilization and integration within a user's personal and familial environments.

Data Theme 3

In outlining the symbolic relationship between artifacts and the ecosystems which give rise to them, I hope it has become clear that artifacts themselves have multiple meanings. These differing meanings are based upon the levels of development of the subject in the various lines through which the artifact is apprehended and interfaced with. In other words, artifacts are in continuous dialogue with their environments and members of various cultures who apprehend and engage with them. By entering the cultural conversation, artifacts can dramatically shift the consciousness and developmental trajectory of entire systems.

This theme examines the transactive nature of artifacts as levers for whole-systems to undergo transformation. This relates to the concept of artifacts as keepers of a genetic code, which interact dynamically within the systems in which they are considered meaningful. When an artifact is transacted between two systems, the DNA of that artifact couples with the DNA of the receiving system, and something entirely new is born. When the releasing system opens itself to release or birth the meaningful artifact, its structure inevitably changes, as does the structure of the receiving system, but what is interesting to note is that the artifact itself changes as well, as its meaning shifts simultaneously to stabilize within its new context. The entire interaction is almost sexual in nature, and it is through such intimacy that both systems have the potential for constitutional transition.

CEED exists as a platform for such transactions to take place between systems that could not have otherwise found commonality. Its users will find through its platform the triangulated spaces in which their own personal and professional growth can take place through a demand for increasing quality of deliverables (i.e., more complex front-end artifacts being produced; more challenge), as well as a deep network of professionals who can assist them in legitimating their own failures and regressions, which can open the gateways for the growth of richer support systems both on- and offline (i.e., more complex back-end ecosystems; more support). In this way CEED itself can act as a lever within its user's lives to help them transition their personal and professional life-systems into more satisfying, genuine, and successful forms.

Data Theme 4

As evidenced in the discussion above, artifacts are generated at each level of consciousness in both the gross, subtle, and causal realms of existence.[17] In such a way, each of the levels of consciousness can be seen as an artifact of the ecosystem that produced it—each can be conceptualized as the emergent technology necessary for the leveraging of a system into a higher order of complexity. These artifacts are then transacted with the full AQAL matrix that they inhabit, as the self continues its process of meaning-making from that level of development. When that meaning-making system breaks down, due to newer and more complex challenges, life circumstances, or any other number of unforeseeable causes, then the mode of self-identification, the form of the ego, becomes an artifact to be metabolized by another emergent form of self-identification.

This theme deals with situating each level of human existence, or each chapter of a user's life, as an artifact of its own. This frame allows us to look at the entirety of our front- and back-end systems, at the entirety of an ecosystem (at the entirety of our self) as a living process with its own DNA that will inevitably act as a lever for our own continued evolution deeper into the depths our own potential and manifestation. We can view this transaction as taking place between the entirety of our self-system and the Kosmic or total

AQAL system itself, part of which is unmanifest or latent at the point of such an interaction. This transaction in which the DNA of our present self is released allows for the influx of a structurally novel set of potential horizons for both our front- and back-end systems. We can also conceptualize such a transaction as the overflowing of awareness beyond the boundary of the current system, which results with the satisfactory environmental conditions (i.e., support and challenge) in a metabolization process (the aforementioned transaction) through which the boundaries of the self are redrawn to include larger spheres of being. This is epistemological overhaul in action.

The role of CEED technology in such profound growth rests in its own living, open-source nature. Its users upgrading their own interface will result in CEED's DNA changing along with their own, as the quality and quantity of support and challenge requested from this platform deepen as more and more users begin to engage it.

Discussion

The themes outlined above point to the continued process of the evolution of form, and draw from my own and my community's experiences of evolution and simultaneous production of gross, subtle, and causal artifacts along the way. I have attempted to outline some of the processes by which leadership (or the "leading edge" of either individual or collective evolution) creates the necessary technologies for the purposes of the continuity of the system of which it is a part. Through this process, it seems that the systems themselves have the opportunity to become increasingly self-conscious in their utilization of emergent artifacts as gateways into newer and more complex forms of self-organization. It is my hope that CEED can be such an artifact for its front-end users, albeit scaled accordingly to their own current level of development.

Conclusion

We are seeing, in the examination of these themes, a story emerging that surrounds both the growth of leaders and the growth of CEED technology as an artifact produced by a group of leaders. This story is one of the dynamic potential exemplified by human beings which has been translated into an active platform for the development of future generations of leaders who, because of the enormity of the challenges they face, will undoubtedly require the developmental edge that they can gain through its use. As the millennial generation, empowered with technology and unprecedented connectivity, begins to confront the challenges of a globalized world, CEED may become a truly scalable, open-source technology for social innovation.

The current version of the technology, CEEDbeta, is today being operationalized as a front-end user interface for those desiring to pioneer the future of leadership, and is being rolled-out in the design of a multi-year, multi-institutional leader development program. It is our hope that as the technology finds application across these contexts it can begin to scale into more and more environments, being improved upon and adapted according to conditions on the ground.[18]

Acknowledgments

I would like to thank my two second-wave integral mentors, Dustin DiPerna and Edward West, for showing me what it means to walk the path with ferocity, heart, and genuine deep purpose. You have guided my words, my actions, and my being. I would like to honor my lineage, specifically my Dzogchen teachers, Khyentse Yeshe, Chögyal Namkhai Norbu, and my father, Jey Clark. Without your blessings and infinite compassion I would be lost in the ocean of samsara. Finally, I would like to express my deep gratitude for my loving partner, Day, for her support, innocence, levity, and sense of humor. Without your laughter in my life I would be taking all of this much too seriously.

NOTES

[1] See Scharmer (2009, p. 445). It is my opinion that we are on the verge of another such cultural renaissance, as mentioned by Paul Hawken in his book *Blessed Unrest*. There is a movement happening that has great magnitude and a multiplicity of expressions. It is my sense also that the infrastructure required for this momentous change is emerging just in time with the movements of social media (e.g., www.twitter.com), crowdfunding (e.g., www.kickstarter.com), and co-working (e.g., www.the-hub.net), among countless others.

[2] See Kegan and Lahey (2009, p. 11). This entire article, and much of my exploration of the field of leadership as a whole, relates directly to the notion of mentorship as the foundational ingredient of emerging leadership. The pace and quality with which we can empower tomorrow's leaders with not only technological and economic resources, but also emotional and spiritual competencies, cultural networks, and institutional support will determine the fate of our planet and its people over the coming decades.

[3] See Kegan (1994). This means that ideas of who we are must be updated and reiterated, tested and redeployed as quickly as our ideas about what the world is are. We must engage in deep inquiry and feedback such that we can come face to face with our assumptions and test them against reality in the most sober of ways.

[4] Regarding exterior structures, see Wilber (2002c). Social systems and the techno-economic paradigms through which they operate are perhaps the singular most important driving force in the average level of consciousness cultivated within a particular group. iPhones and social media are current examples of the millennial generation's immersion into a participatory postmodern world, which attempts to deliver (at the culmination of the standard formal educational process) largely worldcentric values. Regarding interior phenomena, see Wilber (2002c). These are the values themselves that flow within the riverbanks—the worldcentric feelings of mutuality that drive us to illegalize racial prejudice and legalize gay marriage. These feelings are mediated through our interface with the riverbanks, which, increasingly, are technological and web-based.

[5] Wilber sometimes uses this language to describe a view of the evolution of consciousness over vast stretches of time. For our purposes, we can think of deep time as the 14-billion-year evolutionary history of what we call the universe. The patterns that have caused matter to evolve into life and into mind are the same patterns that can carry our leadership from its current expression into a wider field of impact, resonance, and emancipatory legacy.

[6] See Wilber (2002a, 2002b, and 2006). This means that we can locate this research in a larger context, and position it according to the deeper patterns of human development in order to synchronize its meaning.

[7] See Wilber (2002a, 2002b, and 2006). This means that we can put limits on what this research can and should tell us about reality, and about our topic of investigation. We do this by locating the methodologies selected within a larger field of meta-inquiry, namely the framework of Integral Methodological Pluralism and Integral Research.

[8] The more comprehensive though rough-around-the-edges version of my research can be found at http://www.mikyo.me/wp-content/uploads/2012/07/CEEDbeta-v.2-Mikyö.pdf.

[9] See Wilber (2006). This means where I see the world from, including the structures of my own awareness explored in the section titled Structural Analysis. It can also include the specifics of my own life, including cultural and geographical as well as economic, racial, gender, and other such variables that inevitably dictate my own experience—though many of these contexts are largely unconscious to most of us for much of our lives.

[10] See Trungpa (1976, 1987) and also Wilber (2002a, 2002b, 2006).

[11] See Stein and Heikkinen (2008) for more on domain-specific development.

[12] See Wilber (2002b, 2002c). This means that much of what we speak and how we enact our leadership is interpreted according to the developmental and cognitive structures of the other subjects within our field. Getting "lost in translation," then, refers to the loss of meaning across developmental differences when participants are developmentally incapable of understanding the meaning of one another's storytelling.

[13] See DiPerna (n.d.). The idea of vantage point has been a key concept in my understanding of what spiritual development is, and I would highly recommend this text as a reference to anyone serious about their own meditative practice.

[14] See Logan, King, and Fischer-Wright (2009, Appendix 1). Logan and colleagues found that the ways in which leaders speak about themselves and reality is a key predictor of how they structure their relationship with that reality.
[15] See Pitchford (2002). TCP and Ayurveda have been instrumental in my understanding of the nature of the Kosmos, and continue to deeply inform my daily life. The dignity of these astonishingly precise and profound methods for healing and transformation is missing in modern allopathic medicine. Far from medieval, these methods represent an unparalleled renaissance in the understanding of the human body-mind and energy system, and its relationship with the larger universe. What is needed for a modern-day synthesis is a jettisoning of some of the metaphysics involved with these systems.
[16] By *extrapersonal* I am referring more to the larger social, cultural, economic, and technological forces that inevitably shape artifacts and consciousness of any kind.
[17] See DiPerna (n.d.). Here I am differentiating between realms of existence and states of consciousness. This distinction is fleshed out in DiPerna's work on the topic, and is not worth going into detail about for the purposes of this discussion.
[18] As we take the next steps to rollout CEEDbeta across a range of projects and initiatives, we would love your feedback. If you are interested in beta testing this technology, please contact us using the information on the title page of this article.

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MIKYÖ CLARK is a social entreprenuer and organizational consultant. Mikyö is the founder and Executive Director of the media production firm Fertl (www.fer.tl) and a producer at The Renaissane Project (www.therenaissanceproject.com). He is currently a student and teaching assitant in Presidio Graduate School's M.B.A. program in Sustainable Management.

REFLECTIONS ON TWO RESEARCH COMMUNITIES

Comparing the "Toward a Science of Consciousness Conference" and "Integral Theory Conference" Research Communities

David M. Zeitler, Amanda L. Haboush, and Timothy R. Cox

ABSTRACT In the mid-1990s two separate research communities emerged, each with the goal of reaching across the philosophical divides that had grown between different fields of study. The *consciousness research community* focused on neuroscience and mysticism, while the *integral community* focused on the emergence of Integral Theory. Two decades later, the consciousness research community seems to be thriving in the academic sphere, while the integral community continues to appeal to mainly the avant-garde (in both popular and academic spheres). A "Beliefs About Consciousness and Reality" scale, as developed and used by Imants Barušs for the consciousness research community, was used to discern that the integral community had greater experience with and belief in a transcendent element to consciousness and reality. It is argued that the generally greater transcendental experiences and beliefs of the integral community is a double-edged sword: on the one hand, it offers members of that community a way of connecting with others who share their language; on the other hand, unlike the consciousness research community, they are not continually challenged to translate their values across language and lexicon barriers. This may contribute to the sometimes-lukewarm reception that Integral Theory receives in traditional, modern, and postmodern venues. It is further hypothesized that the developmental stages of researchers may play a role in the valuation of presented data.

KEY WORDS consciousness; research; Integral Theory; worldview

In 1999, a group of people gathered at Ken Wilber's house on a mountaintop and laid out plans to launch a bona-fide movement. This emerging *integral community* would be based on Wilber's integral vision, while also exploring how such a vision might look as it begins to dovetail with the traditional, modern, and postmodern cultures that collectively use first-world nations as a battleground. Our thinking was this: "If we can translate these ideas well, we should be able to help create a tipping point, and the integral culture can help end or minimize the culture wars." However, a decade later, this has not yet happened. Perhaps the parsimony and simplicity of Integral Theory belies the depth and complexity of consciousness that is required to take the theory and turn it into practice. Perhaps changes on the world stage since 2000 (e.g., global terrorism and global economic depression) have caused a regression to more fundamental needs, rendering significant needs like those seen in integral ideals less important. Or perhaps we did not make a good enough case to take the actions needed to help us grow the movement. There are of course a great many perspectives that we might take on "why"; this article presents preliminary research on one of those perspectives—a comparison with a community that is close to our own but has steadily grown over roughly the same period. This community is the "consciousness research community," and is best represented by the attendees of the biannual Tucson Consciousness Conference held at the University of Arizona.

Correspondence: David M. Zeitler, 1243 South 22nd Street, Philadelphia, PA 19146. *E-mail*: david@mindfulnesscoach.biz.

The aim of this research, then, is a comparison between two cultures. One culture is the integral community that is organized around an "emerging integral worldview." Here, we use the term *integral* in a specific way, referring to Ken Wilber's Integral Theory and the community that has grown around his vision. Readers of this journal are likely to be participants in this worldview, but for those who are not I will briefly define this worldview here: an integral worldview is one where the benefits of traditional-religious, modern-scientific, and postmodern-academic values are not lost and the limitations of those values are no longer a hindrance. They are integrated in a larger view that is able to recognize the relative value of each perspective, which leads to actionable steps defined by specific contexts. The way this happens is by broadening our definition of valid knowledge, for which maps like the four quadrants serve as an excellent starting point.

The rationale for doing this comparison is to see if we can identify the similarities and differences in a way that helps us to hone our message, to polish our presentation—to be clear as to what we are offering and why it is useful. Because both of these communities are niche communities, we furthermore believe it is valuable to bring developmental research to bear on this comparison of two cultures. If it is true that there are developmental differences between these two communities, this would help us understand one possible reason for their popularity differences. It would also offer the emerging integral community a reason to look at how the consciousness research community was able to advocate for themselves in ways that people from many worldviews can understand.

Background

In the past two decades, a social experiment has begun whereby researchers from various philosophical, geographical, and cultural backgrounds get together in order to begin a public discourse on the nature of consciousness. From the beginning, the Toward a Science of Consciousness conference, and the *Journal of Consciousness Studies* that emerged from that seminal gathering, reflected a broad-spectrum, interdisciplinary approach to the study of consciousness. Everyone from contemplative-mystics to materialist-reductionists to systems-ecologists to humanistic-artists were invited to join the fray. In 1994, the first Toward a Science of Consciousness conference took place, attracting almost 1,000 scholars, and is seen as a turning point in the study of consciousness.

The next year Ken Wilber published the foundational text of Integral Theory, *Sex, Ecology, Spirituality*. This approach can be summarized in his answer to the following question: "How can the research approaches that have gathered evidence and created entire fields on the study of consciousness each be true insofar as it goes?" Wilber's playful assertion that no human mind is advanced enough to be 100% wrong is one of the guidelines for Integral Theory, which is a metatheory. Despite the playfulness, Integral Theory is firmly grounded in meta-principles that can be found in the best of philosophies East and West. Additionally, his "scholar-practitioner" approach to action-research has proven attractive enough to begin a verifiable movement. In 2008, the first ever Integral Theory Conference attracted 500 participants from 40 disciplines to hear reports from the field and to get the latest on Integral Theory's take on life, the universe, and everything.

From the beginning there was a clear overlap between these two camps. The Toward a Science of Consciousness Conference (the "consciousness research community") and the Integral Theory Conference (the "emerging integral community") shared much in the way of scholarship and practice. We believe that the key question for both communities is: How "disciplinary" are we? The consciousness research community is decidedly *inter*disciplinary, while the integral community calls itself *trans*disciplinary. This is not merely semantic hair splitting; where interdisciplinary approaches focus on traditional discourse and debate, transdisciplinary approaches focus on epistemology and practice. Our argument herein is that the lack of discourse on epistemology results in more heat than light in the consciousness research community.

The authors of this article have all been educated in interdisciplinary programs (some of us in both graduate and undergraduate programs), and it has been our experience that those approaches tend to focus on

the points of connection between two or more disciplines, *yet the epistemological assumptions of the disciplines tend to remain intact.* When epistemological assumptions are intact and unchecked, turf battles become the norm. Transdisciplinary approaches, on the other hand, tend to focus on the meta-principles of epistemology that cut across all disciplines, creating the "orienting generalizations" that, according to Wilber, allow researchers to compare not only evidence, but the epistemological methods used to obtain that evidence. In other words, interdisciplinary approaches leave discipline-specific research budgets intact, while transdisciplinary approaches rank the importance of those research budgets; perhaps that is why interdisciplinary approaches have been more successful in the academic world.

The overlap between these communities was also reflected in the people who found themselves in both camps. My own interest in this research is because I (D. Zeitler) took an academic trajectory from neuroscience to Eastern contemplation to Western psychotherapy to developmental psychology. Along the way, I met David Chalmers first at the 1996 Toward a Science of Consciousness conference, and reconnected with him at the foundational Integral Institute meetings in 1999. Furthermore, Wilber wrote a popular piece for the *Journal of Consciousness Studies* published in 1997, "An Integral Theory of Consciousness," where he outlined the Integral approach to the study of consciousness.

We believed that these two communities, which have a clear overlap in terms of audience, research, and the inclusion of "qualia" (consciousness research community) or "interiors" (emerging integral community), were likely to differ on the key issue of transcendental experiences. We wanted to take advantage of the first Integral Theory Conference to test our hypotheses regarding these two communities.

Current Study

The current study uses Imants Barušs' "Beliefs about Consciousness and Reality" questionnaire to survey attendees of the 2008 Integral Theory Conference (ITC). We hypothesized that the integral community would differ from the Toward a Science of Consciousness community in three significant ways:

1. The emerging integral community would be more likely to have had what Mario Beauregard calls a "religious, spiritual, or mystical experience" (Beauregard & O'Leary, 2007). The research of Barušs (1998) provides a baseline for testing this hypothesis. As members of the Integral Theory Conference team, we were given a unique opportunity to design an experiment to test that hypothesis.
2. The emerging integral community would not as readily or neatly fall into scales that follow a simple materialism-transcendentalism spectrum, as Barušs' results do. (This type of ordinal scale allows us to capture the relative strength of someone's beliefs along a spectrum of intensity. There are six subscales that compose the overall "transcendentalism" scale. We discuss this more below.)
3. The integral community would be more transcendent as a group, and would thereby show less variation in their beliefs than the consciousness research community.

Methods

Participants

The current study includes individuals who attended the first biennial Integral Theory Conference in August 2008 at John F. Kennedy University in Pleasant Hill, California. A total of 150 attendees (30%) of the Integral Theory Conference completed survey packets.

Procedures

Attendees were recruited for participation through verbal announcements during opening ceremonies and throughout various sessions at the conference. The research team also solicited participation at a table that was located near the area that housed the poster sessions.

Questionnaires were distributed to participants throughout the conference proceedings. Upon receipt of their questionnaire packet, individuals were verbally informed that their participation was voluntary, and that all information was confidential, as contact information was not requested. It was also verbally noted that the study's purpose was to gather general demographic information as well as various information regarding beliefs about consciousness and about Integral Theory in order to compare our study results with those found for the 1996 Tucson II Consciousness Conference population.[1] Lastly, participants were informed that they would receive a free Integral Research Center t-shirt in exchange for returning a completed questionnaire.

Measurements

In order to make comparisons between the ITC sample and the Tucson II sample, the same demographic questions were used with two minor differences: 1) the descriptive categories included in the "Main area of interest at this conference" and "Disciplinary Affiliation" sections were chosen to more accurately correspond to the general interests and affiliations anticipated to be representative of the ITC attendees; and 2) the spectrum of descriptive categories for the "Spiritual/Religious Affiliation" section was significantly expanded from the three options (none, traditional, own beliefs) included in Barušs' version to eight options (agnosticism, atheism, deism, animism, pantheism, panentheism, mysticism, polytheism).[2]

Prior to the ITC, we prepared an amended version of Barušs' (1998) "Consciousness Survey and Beliefs About Consciousness and Reality" questionnaire. The original scale consists of 38 items that comprise six subscales and, when taken together, an overall "materialism/transcendentalism" scale. The six subscales are Antiphysicalism; Religiosity; Meaning; Extraordinary Experiences; Extraordinary Beliefs; and Inner Growth. We made two minor changes to the "beliefs" statements from the original "Beliefs About Conscious and Reality" questionnaire. First, we removed the descriptor of "Eastern" from the statement "Eastern religion has much to offer about our understanding of consciousness…" (#13) because we wanted to expand this statement to include the role of all major religious systems in understanding consciousness rather than limiting it to only Eastern religions. There are two related reasons that we did this.

Unlike the consciousness research community, the integral community is generally well versed in Eastern spiritual practices and religion.[3] We therefore found little value in highlighting Eastern versus Western religions, as we wanted to avoid the introduction of a measurement bias or non-response bias. The integral community is in many ways centered on the notion that religious texts and spiritual practices both East and West share core tenets and practices, and we wanted to ensure that the questions were germane to the culture.

The second modification was made to statement #26 by removing the word "our" from the beginning of the original statement so that it would read: "Culture can be viewed as a basic conspiracy against self-knowledge and awakening in which we collude together to reinforce one another's defenses and insanity…." Again, the reasons for removing "our" have to do with avoiding a measurement bias. The integral community views culture as both intrinsic and extrinsic to research paradigms, as opposed to the dyadic approach that Barušs uses in his original questionnaire. Aside from these two modifications, all other wording and arrangement of statements 1 to 38 were kept identical to the original version used by Barušs.

Results

One hundred and fifty individuals who attended the 2008 ITC completed the survey packet. Table 1 presents

	n	%	Mean	SD
Age	147		46.3	12.38
Gender	146			
Male		54.8		
Female		45.2		
Education	148			
No University Education		2.7		
Some University Education		6.8		
B.A. or Equivalent		18.2		
M.A. or Equivalent		47.3		
Doctorate		25		
Religion	132			
Agnosticism		12.1		
Atheism		3		
Deism		3		
Panentheism		27.3		
Pantheism		4.5		
Mysticism		43.2		
Polytheism		6.8		
Disciplinary Affiliation	138			
Arts & Humanities		18.8		
Business		14.5		
Coaching		3.6		
Health		2.2		
Natural sciences		2.9		
Philosophy		8.7		
Psychotherapy		18.8		
Social Sciences		15.9		
Student		9.4		
Sustainability/ecology		5.1		
Statements	146			
I have not really carefully examined my fundamental beliefs about reality.		3.4		
I am aware of my fundamental beliefs about reality but have not found it necessary to examine them.		6.2		
I feel I have carefully examined my fundamental beliefs about reality.		90.4		

Table 1. Demographic data for the 2008 Integral Theory Conference.

a summary of the demographic data for the current study. In comparison to the sample at the 1996 "Toward a Science of Consciousness Conference" (Tucson II) scientific meeting (Barušs, 1998; Barušs & Moore, 2005), the ITC sample was comparable with regard to age (Tucson II Mean = 50; ITC Mean = 46.3) and had a greater percentage of women present (Tucson II = 29%; ITC = 45.2%); but the majority of ITC participants had an M.A. or equivalent background (47.3%), while the majority of participants at the Tucson II conference held doctoral degrees (56%).

Barušs and Moore (2005) felt that "the most straightforward way to look at these data is to consider the frequencies of responses for individual questionnaire items" (p. 484). Therefore, a comparison of frequen-

cies of responses between the Tucson II and ITC samples is provided in Appendix A. This comparison also allowed us to test our first hypothesis; that the emerging integral community would be more likely to have a religious, spiritual, or mystical experience. Heuristic examination of individual items revealed that compared to approximately 60% of the Tucson II sample, over 90% of ITC respondents reported that spiritual beliefs guide their approach to life; had a transcendent or mystical experience; and felt it was important to spend time in contemplation. In addition, 66% of the ITC sample reported having an out-of-body experience compared to 30% of the Tucson II sample. These comparisons provide strong support for our first hypothesis.

Similar to 60% of the Tucson II sample, approximately 50% of ITC respondents agreed that "human consciousness would not exist without the brain," and 60% agreed that "mental events could in principle be explained in terms of physical processes." Unlike the Tucson II sample, in which Barušs and Moore (2005) believed there to be a tripartite division that was consistent with the categories of "materialist," "conservatively transcendent," and "extraordinarily transcendent," the ITC sample seems to be mostly "extraordinarily transcendent," with a minority group leaning toward conservatively transcendent.

For our second hypothesis, we conjectured that the emerging integral community would not as readily or neatly fall into the subscales that comprise the overall transcendentalism scale seen in Baruss' results. To test this hypothesis, we used standard statistical procedures to determine the reliability and the factor structure of the measure in the ITC sample as compared to the Tucson II sample.[4] These procedures included calculating internal consistency reliability, a correlation matrix of the subscales and overall scale in the current sample, and an exploratory factor analysis.

The way we arrived at these results can be framed up best by looking at the scales and subscales of the measure. When we use the word *scale* herein, we are in the main discussing the results from the overall or global scores across all six subscales. To obtain more in-depth information about a group, it is often the examination of the subscale in conjunction with the overall scale that can provide the most interesting information and determine whether or not participants in our study were consistent with their responses. This would be like comparing the internal molecular capacity of one of the six areas of the body to the overall internal molecular capacity of the entire athletic body.

Analyzing the agreements *between* the six subscales allows us to see if there is consistency in the belief that consciousness is more "transcendental" or "material" within the emerging integral community (or, if we agree on "transcendentalism" but disagree on how our beliefs actually reflect this). Analyzing the agreements of specific responses to items *within* a subscale allows us to see if there is consistency within the emerging integral community on the six subscales as defining a category (Antiphysicalism, etc.). Internal consistency is

	ITC		Tucson II	
	n	alpha	n	alpha
Antiphysicalism	141	0.51	212	0.80
Religiosity	141	0.43	212	0.81
Meaning	138	0.44	212	0.77
Extraordinary Experiences	141	0.74	212	0.89
Extraordinary Beliefs	138	0.67	212	0.89
Inner Growth	138	0.47	212	0.86
Global Scale	129	0.80	212	0.95

Table 2. Reliability comparisons of the beliefs about consciousness measure. *Note:* The values for the Tucson II sample have been taken from Barušs & Moore (2005).

	REL	MEA	EXE	EXB	ING	TOT
Antiphysicalism	.405*	.345*	.349*	.361*	.224*	.580*
Religiosity	–	.644*	.471*	.606*	.438*	.753*
Meaning	–	–	.421*	.535*	.498*	.741*
Extraordinary Experiences	–	–	–	.571*	.565*	.783*
Extraordinary Beliefs	–	–	–	–	.649*	.843*
Inner Growth	–	–	–	–	-	.709*

Table 3. Correlation matrix of the beliefs about consciousness scale in the ITC sample. EXB–Extraordinary Beliefs; EXE–Extraordinary Experiences; ING–Inner Growth; MEA–Meaning; REL–Religiosity; TOT–Global Scale. *Indicates correlation is significant at the 0.01 level (two-tailed).

the extent to which all of the items of a scale or subscale measure the same concept. The goal in designing a reliable scale or subscale is for responses on similar items to be related, but also for each item to individually contribute unique information (Gregory, 2000). In other words, the parts and the whole *should* show that they consistently work together.

Internal consistency for our study was measured with Cronbach's alpha, a statistic calculated from the pairwise correlations between items. Internal consistency scores range between 0 to 1; scores above 0.7 are considered to be acceptable (Kline, 1999). Compared to the Tucson II sample (Barušs & Moore, 2005), internal consistency reliability was significantly lower ($P < 0.05$) for the ITC sample for all subscales and the overall scale (Table 2). With the exception of the Extraordinary Experiences subscale and the overall scale, the other five subscales' coefficient alphas were below acceptable. However, upon reviewing the means and standard deviations for the ITC sample, low internal consistency reliability for those five subscales could be attributed to the lack of variability in the data. Subscale scores and the total score had considerably lower standard deviations compared to the Tucson II sample, indicating less variability, which would reduce internal consistency rates. Although caution should be used when making statements regarding subscales in groups outside of the consciousness field, the overall measure of *materialism–transcendentalism* appears to be a reliable measure of beliefs along a material–transcendent dimension in both of the populations in question.

In response to the lower reliability scores obtained in the ITC sample, a Pearson correlation coefficient was calculated to determine the relationships of the scales in the current sample, and an exploratory factor analysis was conducted to determine if the same factors emerged from the ITC data. The correlation matrix indicates that all scales have a significant, positive relationship (Table 3). However, the strongest set of positive relationships exists between each of the subscales and the total score. The implications of this are explored below, and likely have something to do with the nature of thinking in transdisciplinary terms. If "interdisciplinary" means that researchers are exploring the connections between two or more approaches to the study of consciousness, "transdisciplinary" means that researchers are exploring the larger container from which each approach to the study of consciousness draws their particular form of data gathering and falsifiability/acceptance. We explore such epistemological considerations below; for now, we think it means that *thinking* transcendentally about integral perspectives *engenders* transcendent beliefs about consciousness and reality (or rather, the two arise together).

A factor analysis is used to uncover the underlying structure of a large measure which can validate the existence of subscales within a measure (Pett et al., 2003). To explore the factor structure of this measure in the current sample, an exploratory factor analysis was done using a variety of methods, including the examination of Eigenvalue values, a scree test, and a six-factor varimax rotation based on the previous six factor findings by Barušs (1992). There is no single solution to determining the number of factors, therefore

two standard methods were selected for verification: examining the Eigenvalues and Cattell's scree test. Eigenvalues measure the amount of variation in the total sample accounted for by each factor. One method to determine the number of factors is to determine the number of Eigenvalues that are greater than 1.00. Another method is known as the scree test (Pett et al., 2003). The scree test plots the factors against their corresponding Eigenvalues. As one moves to the right of the graph toward later factors, the Eigenvalues drop. Cattell (1966) has suggested that major breaks in the slope, in which Eigenvalues tend to level, indicates the point at which no further factors should be used. Both the Eigenvalue values and the scree test determined that 13 factors were present in the measure.

The most common rotation option, a varimax solution, produces results that make it easy to identify to which factor an item belongs. The factor loadings determine the highest correlation or relationship between the item and the factors (subscales). This process determines which items belong in the same subscale (Pett et al., 2003). Since Barušs previously determined that there were only six factors within his 38-item measure, we set the rotation to extract only six factors to determine if the items would load in a similar pattern. Upon extracting the six factors using the varimax rotation, the item loadings were not consistent with the current subscales (Appendix B). However, our findings indicate that the subscales for the consciousness sample were not consistent in the ITC sample and should be used with caution with other samples until the measure can be validated in other groups.

For our third hypothesis, we conjectured that the integral community would be more transcendent as a group. Barušs (1998) indicates that "scale scores are most useful for making comparisons between different groups or subgroups within the same sample" (p. 489). A simple test of differences was performed comparing mean scores on the subscales and the overall score between the two samples (Table 4). The ITC sample had significantly higher mean scores on all subscales and on the overall score compared to the Tucson II sample, which supports our hypothesis. Within the ITC sample, an additional analysis of variance was conducted to determine if gender differences exist as they did in the Tucson II sample. For the ITC sample, there were no significant differences on any subscale or the total scales with regard to gender. However, the subscale Meaning did approach significance ($F(1,44) = 0.844$, $P = 0.051$).

	ITC			Tucson II			
	n	Mean	SD	n	Mean	SD	t
Antiphysicalism	141	2.9	5.4	212	-3.1	8.5	7.4*
Religiosity	141	7.4	4.8	212	1.6	8.8	7.1*
Meaning	138	12.2	4.8	212	5.4	9.1	8.1*
Extraordinary Experiences	150	22.5	8.6	212	9.6	16	8.9*
Extraordinary Beliefs	150	14.4	8.0	212	5.5	14.9	6.7*
Inner Growth	150	19.9	5.0	212	12.2	11.4	7.7*
Global Scale	150	50.5	18.9	212	18.3	40.7	9.0*

Table 4. Comparison of scale scores with standardization sample. *Note*: The values for the Tucson II sample have been taken from Barušs & Moore (2005). *$P < 0.01$.

Discussion

Our survey of the integral community yielded several unique pieces of information, both in comparison with the Tucson Consciousness Conference community and with regards to an "integral worldview," of which the population of this research is at the very least suggestive. In this section, we will mainly explore the com-

parison with the consciousness research community, and in the conclusion section below, we will revisit the issue of worldview and levels of development. However, before moving on, we would like to discuss some of the limitations of our research.

Limitations

As with any social-science study that is based on survey data, there are limitations with how we can safely draw conclusions. For example, we are assuming that attendees of both conferences are representative of the academics from specific subcultures. Furthermore, no question or set of questions in a survey format can reveal issues of meaning or behavior with clarity. In the aggregate, they serve as general markers—chaotic attractors or "meme" descriptors at best. Such an approach does have its advantages. Culture is perhaps best studied in broad strokes, a tack that may be less predictive of individual meaning and behavior, but can nevertheless teach us about shared meaning, which is arguably a stronger motivation for individuals.

In the Tucson Consciousness Conference sample, a significant finding was that the religious affiliation of "own beliefs" (53%) was a significant predictor of transcendentalism, as well as predicting higher scores with the Extraordinary Experiences subscale (e.g., having had an out-of-body experiences); the Extraordinary Beliefs subscale (e.g., that extra-sensory perception likely exists); and the Inner Growth subscale (e.g., introspection is necessary for understanding consciousness and reality) (Barušs, 1998, pp. 489-493).

In the current study, the demographic questionnaire was altered to capture a more detailed examination of religion that included 12 different categories; therefore the analysis was not replicable. While we regret the lost opportunity for comparing such a large effect, we also are keenly aware of the fact that the integral community is concerned with a dynamic that Wilber (2006) calls "boomeritis" (pp. 103-105). Boomeritis, or pluralitis, covers several topics, but the main tenet is that a *merely* eclectic or "spiritual-but-not-religious" belief system is going to lead to narcissistic inflation. Because members of the integral community are concerned with this tendency, our view was that an answer of "own beliefs" would reflect this slippery-slope to narcissism, and we would be guilty of a measurement bias. Another confounding factor we considered was that participants might see a simple approach to religion in the answers *none*, *traditional*, and *own beliefs*, and we would be inviting a non-response bias. Because of this issue—that people from different subcultures are likely to not select "own beliefs" *for different reasons*— we did not think that this question was precise enough for our research purposes.

Comparing the Communities

Our main discovery is that the integral community scored significantly higher on the overall *transcendentalism* scale, and in each subscale, compared to the consciousness studies community. The lower one's score on the transcendentalism scale, the more likely it is that they will believe that consciousness is an illusion or an epiphenomenon. The overall measure had good internal-consistency reliability (users' responses to similarly grouped questions were consistent), but only two of the six subscales in the ITC sample were found to have adequate internal consistency reliability (users' responses to different versions of the same question were consistent in only two categories). Either the emerging integral community does not hold similar perspectives on specific areas of their beliefs that consciousness is transcendent (e.g., we differ on what "Antiphysicalism" actually means), or the measure itself is not adequately capturing the similarities. Upon further exploration, we also found that the integral community did not factor out to the subscales from the "Beliefs About Consciousness and Reality" 1986 study (Barušs, 1990).

Barušs did not recreate scales from the 1996 population; rather, he used the same scales from the 1986 population because he thought he was essentially studying the same community. But later he noted that the consciousness studies community scored higher in the transcendental direction than his original 1986 sample;

he reflects that there are likely differences between people who could potentially *write* about consciousness (the original basis for inclusion in the sample), and those who actually *attend* a conference dedicated to consciousness (1998, p. 492). This is important for our findings, as the integral community scored significantly higher in the transcendental direction than the consciousness studies community. In other words, the integral community might not only *attend* a conference dedicated to consciousness, they might also be more inclined to actually engage in a *practice* of consciousness reflection or self-observation.

Overall, the total Transcendentalism scale had good internal consistency for the integral community sample, while most of the subscales did not (internal consistency was determined by calculated the coefficient alpha for each subscale). One reason why the integral sample had unacceptable coefficient alpha scores could be due to the lack of variability in the sample. This group as a whole has consistently responded to many of the items in the measure, which would reduce variability, thereby lowering internal consistency scores. However, this also could mean that in the emerging integral community the items are measuring one overall concept and *not* several related sub-constructs as found in the Tucson II sample. If it is true that there is a valid difference in the epistemological approaches of "interdisciplinary" and "transdisciplinary," this would clearly explain why the emerging integral community showed less variability. We explore this below.

Caution should be used when extracting meaning from individual subscales, especially the Antiphysicalism, Religiosity, Meaning, and Inner-growth subscales, as their reliability was quite low. So, when taken as a single scale of Transcendentalism, this survey tells us that people in the integral community are much more likely to have beliefs about consciousness and reality that are transcendent (i.e., non-materialistic). This follows well from the Integral Theory criticisms of both "gross reductionism" (i.e., atomistic views) and "subtle reductionism" (i.e., reducing reality to holistic systems) (Wilber, 2006). We concluded that for the integral community this measure is best used as one large scale. There are several possible reasons for this, but it seems likely that the tendency in the integral community to view "reality" as composed of meta-perspectives that disclose a pluralism of epistemologies is the largest reason that Transcendentalism was relevant as an overall scale. We hypothesize that this is the reason why results from the integral community did not factor out according to the original six subscales.

Unlike the consciousness studies community, which found strong sex differences in both the 1986 and 1996 samples, we found no sex differences for Transcendentalism. Barušs (1998) suggests that there may be something fundamentally different about women's views on consciousness and reality (p. 493). We suggest below that this may have more to do with a communities' worldview than with fundamental differences between men and women.

Another difference we found was with age. In his original 1986 sample, Barušs found that an increase in age correlated with a decrease in Transcendentalism. In his 1996 sample, Barušs found a significant inverse effect: an increase in age correlated with an increase in Transcendentalism (p. 493). We found *no significant age differences* on any of the subscales nor on the total Transcendentalism scale. Barušs makes some interesting suggestions regarding age and the Extraordinary Experiences subscale, which showed the opposite effect from the overall age effect of the 1996 sample (i.e., an inverse correlation between age and the tendency to report "extraordinary experiences"): "…it may be that those who feel that they have had unusual experiences have been screened out by the educational system or…have learned to make mundane attributions for experiences that would otherwise be identified as transcendent" (Barušs, 1998, p. 493).

We chose the age of 40 to be a possible indicator for attributing extraordinariness to one's experiences. Although we initially chose this age because it represents the median, we remembered that Kegan (1994) reports that most developmental research shows that the self-transforming mindset or teal/turquoise altitude occurs only in people over the age of 40 (p. 352). Sure enough, with our integral community sample we discovered that when looking only at this 40+ group, age was inversely proportional for reporting extraordinary experiences. We decided to follow the possible developmental thread here, rather than follow Barušs' sug-

gestions that education screens out extraordinary experiences. It is likely that with several *transcendental* experiences, one no longer reports these experiences as "***extra***ordinary"; they become ordinary. There is evidence that correlates meditation practice with an increase in ones level of development; this research also specifically cites that such people increasingly experience transcendence as "ordinary" (Wilber et al., 1986).

Barušs' initial motivation for doing this research was to show the effects that belief has on one's orientation to the study of consciousness. His main finding with respect to materialism was that materialists (i.e., those who scored very low on the overall Transcendentalism scale) were the *only group that did not examine their own beliefs regarding consciousness and reality*. Furthermore, Barušs (2008) found that those who carefully examined their own beliefs also scored higher on Transcendentalism overall, and on every subscale except for Extraordinary Beliefs (p. 289). We found that 90% of people in the integral community reported that they carefully examine their beliefs regarding consciousness and reality; we also found that the integral community scored much higher on overall Transcendentalism, with a mean of 50.5 as compared with 18.2 for the consciousness studies community.

In 1986, Barušs found that only 47% of his sample reported a religious, spiritual, or mystical experience. According to Barušs (1998), this figure was "…somewhat higher than figures for the incidence or endorsement of similar statements on other surveys" (p. 492). In 1996, this figure rose to 66%. In the integral community (2008), this figure was 90%. It is likely that the passing of two decades has had an effect on the nearly 100% rise in the report of religious, spiritual, or mystical experiences, with the events of the past two decades responsible for some of this rise (e.g., the September 11th terrorist attacks in the United States and the ensuing war on terror, the rise of the Internet, and the baby boomer generation taking over leadership positions in many fields). However, we suggest below that this difference may also be accounted for by a difference in worldview, or level of development.

Although he does not explicitly use any developmental models to characterize his "materialist–transcendental" continuum, Barušs nevertheless discusses the development of beliefs in a recent summary and extension of his work (2008). He states that he has found:

> … the frequent appearance of a developmental sequence from materialist to transcendental beliefs. In the 1986 study by Moore and myself, the occurrence of extraordinary experiences was correlated with the statement that one's beliefs about reality had changed dramatically in the past. This is consistent with accounts found in the altered states literature of individuals whose beliefs changed radically as a result of the occurrence of unusual experiences. (p. 289)

Barušs (1998, 2008) presents a breakdown of this continuum, from materialism to conservatively transcendent to extraordinarily transcendent. We suggest that a developmental lens best accounts for the disparate data that Barušs has found.

Conclusion

We draw two conclusions herein, one ontological and the other epistemological. The epistemological conclusion is that implicit in Barušs' results is the fact that our beliefs affect our acceptance or rejection of "valid evidence gathering." The ontological conclusion is that a conference participant's level of development will affect their interpretations of their own experiences. One implication of this is that the collective level of development of participants in these communities will be reflected in how the epistemic and ontic aspects of their beliefs are held.[5]

The data that we have gathered clearly show that the integral community is oriented to transcendent beliefs about consciousness and reality, and that this correlates strongly with having had transcendent state

experiences. The great advantage that scientific-materialism has over religious/spiritual/mystical orientations to the world is that beliefs about consciousness and reality are checked against empirical standards of repeatability and falsifiability. In the consciousness studies community, there is little or no dialogue around the epistemological agreements between scientific and religious approaches to consciousness. This is a sharp difference between these two cultures—the integral community engages in intense discourse around the points of connection and departure across many disciplines, paying special attention to scientific-empirical vs. religious-experiential.

Because of this, we are confident in claiming that the consciousness studies community represents an eclectic confederation of disciplines, an interdisciplinary approach to evidence (and beliefs) about consciousness and reality. The integral community, on the other hand, represents a subculture that shares certain core values. Central to those values is the fact that epistemology is transdisciplinary. In other words, the acquisition of knowledge follows broad guidelines that can be seen across every discipline. Wilber (2001) refers to these as the injunctive, apprehensive, and verification strands of epistemology.

In his paper on the beliefs about consciousness and reality at the second Toward a Science of Consciousness conference, Barušs (1998) discusses the need to enhance communication across the spectrum of materialism–transcendentalism. We agree with this approach, and we agree with Barušs that trying to "convert" others to our own privileged epistemology would be a futile and unwelcome effort. However, a *transdisciplinary* approach to the study of consciousness would circumvent these limitations; a transdisciplinary approach accepts the validity of discipline-specific evidence as long as the discipline supports rigorous injunctive, apprehensive, and verification strands of gathering data.

A Special Note about Mindsets

We have intentionally minimized the issue of "mindsets," or level of development, throughout this article. However, because of the global and extensive way that our "worldviews" are as much about our beliefs as they are about our mindset, it is clear that one's level of development will have an enormous impact on how one makes sense of their own beliefs about consciousness and reality. In other words, it is not *what* you believe, it is *how* you believe what you believe that is important for teasing out the issue of mindsets in the study of consciousness and reality.

Which brings us to *ontology*. Once we gather data from a particular epistemological position, that data must be interpreted. The interpretation of data always occurs through a developmental lens (see Kegan, 1994; Mischel, 1971). Because we know that there are at least three full stages of development in adults (Kegan & Lahey, 2009), we can be confident that the interpretation of data can take three distinct forms. Owing to the significant correlation between adult education and adult development (Kegan, 1994, p. 293), we can, for the purposes of the following speculation, leave out the earliest of the adult levels (the "Socialized Mindset"). This leaves us with the "Self-Authoring," the "Self-Transforming," and the transitional identification between the two ("Authoring à Transforming"). These correspond, respectively, with orange altitude, teal and turquoise altitudes, and green altitude (Kegan & Lahey, 2009; Wilber, 2006).

One important fact about the transitional identification between these two mindsets is that it is often expressed as eclectic and inclusive, but lacking in cohesion or agreed-upon purpose, even within a given individual (i.e., a kind of "cognitive lability"; see Kegan, 1994, pp. 327-29; Berger, 2005). We believe that the consciousness research community exhibits many of these same qualities. At the same time, we are encouraged that this community continues to be robust, and continues to forge a path in the world of science without ultimately bowing to any single epistemology. Preliminary evidence from the "iTEACH" project at John F. Kennedy University shows that leaders in the emerging integral community are rated at "Self-Transforming" mindset (see www.integralresearchcenter.org). While we are not suggesting here that members of the consciousness research community are less developed than members of the emerging integral community, we are

suggesting that there is enough indirect evidence to warrant a direct developmental comparison of members from each community.

A questionnaire that is not designed to get at this deeper issue will have limited value for gleaning specific information about mindsets. However, the overall differences between the consciousness studies community and the integral community do tell a tale of different mindsets. Respectively, the "worldview" of these communities are: a loose confederation of interdisciplinary subgroups with diverse epistemological values vs. a subculture that shares core epistemological values while maintaining a diversity of disciplinary interests. Such a description does approach a developmental perspective on these two communities, which of course hinges on the word *community*. We will let sociologists advocate for that which makes a community when attempting to argue for a developmental perspective (Wilber's version is "nexus agency," or the agency that emerges from the cumulative and relative amount of influence that each member of that community holds). Rather, we will just say that the consciousness studies community shows signs of an *early* Self-Transforming mindset, while the integral community shows the signs of a *mid* Self-Transforming mindset.

In the consciousness studies community, many views are invited into the tent, but everyone is allowed to disagree and the core value issues are not up for reflection, discussion, or debate. Everyone gets a "voice," but you will go your way and I will go mine and there will be no authentic connection between us. In the integral community, many views are invited into the tent, everyone is allowed to disagree, but the core values *are* up for discussion because the general outlines of any given epistemology are extremely important for integrating valid data into the Integral model. In other words, the integral community maintains a plurality of views (including differing views on the relative value of different epistemologies) while maintaining a core connection through their shared values that every epistemology has injunctive, apprehensive, and verification strands. Such a view transcends but includes the more eclectic *early* Self-Transforming mindset–generated view that different epistemologies are incompatible (even at-odds, although this is rarely acknowledged in the consciousness studies community).

If we are correct, then there are a few implications of this difference for the emerging integral community. It means first and foremost that any integral endeavor that assumes a person or group can self-generate a fluid capacity for holding "contradictory" means of gathering evidence will likely go over the heads of the vast majority of the population. Furthermore, trying to explain *why* the seeming contradictions are actually not a problem is likely to stimulate the defensive inoculation that every worldview counts on to maintain its integrity. It is ineffective and inconsiderate to go over someone's head in the developmental sense. However, meeting a person "where they are" and reflecting that knowledge to them first, and then inviting a conversation about getting beyond such "contradictions" (*dissonance*, by any other name) is a way to build a bridge.

The emerging integral community could use more bridge building and less jargon. Requiring people to study reams of texts and learn the integral lexicon is a barrier to entry. If we really want to grow this worldview, then maybe we need to give up the ways that we are using the writings of Ken Wilber as a shield against being vulnerable with other humans who may not be able to see us for all of our wonderful, complex, aperspectival meaning-making. For years Wilber has made it clear that he is already doing his role, and that his role does not include the actual intersubjective engagements that serve as such bridges. Despite this, he has made himself available as much as he can for actual dialogue (via the Integral Life website and this journal, to name just two avenues).

The consciousness research community speaks the languages of modernism and postmodernism with respect to research, and the languages of science and meditation when it comes to practice. Even with such an eclectic approach it has grown into an international movement, with conferences around the globe, robust book sales, and a thriving community. Because members of this community cannot assume that they are speaking the same language, they must retranslate the meaning of what they are doing and what they are saying in order to be understood. This allows their members to also communicate clearly with traditional and

modern worldviews.

The shared language of the emerging integral community is one of the most refreshing aspects of being together. With no need to engage in endless qualifiers or debates, we can hit the ground running. But if we consider what it would mean to face the world as a group, this same benefit might actually mean that *we are not challenged to retranslate integral for the world-at-large*. Indeed, in a recent dialogue with Wilber for the Integral Life website, "The Integral Movement: Past, Present, & Future," Roger Walsh claimed that this issue of retranslation was one of the single most important challenges that we face, and provides a number of helpful ways for individuals to do this more. We would like to add our voices to this call for retranslation, and believe that our research supports the view that this is a major reason why the emerging integral community has not yet reached a tipping point.

NOTES

[1] Participants were given verbal information with regards to the voluntary nature, confidentiality, and anonymity of the research. Furthermore, they were told that any and all evidence would be presented in the aggregate, and that a completed survey would serve as their consent.

[2] The modifications made to Baruss' religiosity demographic ("Spiritual/Religious affiliation") limited our capacity to compare the results of that question with Baruss' original results for the same question. Baruss' biggest predictor of "transcendentalism" (his main effect) was *religious affiliation*, particularly with regards to the "own beliefs" category of religious affiliation.

[3] I (D. Zeitler) am basing this assumption on my extensive involvement with this community from the late 1990s to 2010. I have attended, organized, and trained at weekend workshops, academic conferences, graduate seminars, and week-long professional development trainings. One of the most common tendencies that I have witnessed on each and every occasion has been the cross-pollination of Eastern and Western contemplative practices, and the religious texts and scientific evidence that support those practices. Obviously there is a range of expertise in any community with respect to the literature and practices of that community; but just as one might expect the scientific method to be a part of the jargon at a science conference, or hermeneutics at a humanities conference, so too can one expect that the jargon of Eastern spirituality will be extensively represented at an "integral" conference. Indeed, this has been the case at the first two Integral Theory Conferences in 2008 and 2010.

[4] An analogy would be that if a physiologist was working with athletes and believed that athletes in different sports had different molecular structures to their muscles, they would need to look inside the muscles to see if the molecules were indeed different; furthermore, they might *also* want to look at differences *between* the main areas of the body—arms, legs, torso, and neck/head—of athletes from each sport.

[5] One of the epistemological advantages of an integral worldview is that the perspectives of the people gathering and reporting on the validity and reliability of information are also themselves an important factor in how their research is presented and accepted or rejected by the community of the adequate. As such, we were rightly challenged to include our own level of psychological development, if we indeed had evidence for such. Setting a precedent for this certainly piques my interest as both a researcher and as a member of this community. Indeed, a public and open use of adult levels of development for decision making or communal value judgments is likely far off. The abuses of those in power are fresh in the postmodern hearts of many. However, we do see value in speaking to this in the form of this endnote. In lieu of a garish electronic scanning of my own (D. Zeitler) developmental tests, I will say that the two measures that I have engaged rated me at the Strategist level (Cook-Greuter's nomenclature) or "self-transforming mindset" (Kegan's nomenclature). I (T. Cox) have also been tested using Cook-Greuter's SCTi measure and was likewise rated at the Strategist level.

Appendix A

Questionnaire Item Frequencies: Comparison between ITC and Tucson II Samples

Section I: Personal Statements					
		ITC *N = 150*		Tucson II *N = 212*	
Item #	Item	Yes %	No %	Yes %	No %
1	I think about the ultimate meaning of life.	96	2	93	7
2	My ideas about life have changed dramatically in the past.	92	6	75	25
3	My spiritual beliefs determine my approach to life.	95	3	68	30
4	I have had experiences which science would have difficulty explaining.	86	12	66	34
5	I feel a need to find a real meaning or purpose in life.	87	9	72	26
6	I have had an experience which could best be described as a transcendent or mystical experience.	90	8	66	34
7	It is important to me to spend periods of time in contemplation or meditation.	94	4	77	22
8	I have had an experience which could best be described as an out-of-body experience.	61	36	31	67

Note. Response categories for the original measure range from Strongly Agree to Strongly Disagree. For this table, responses were collapsed into two categories, Agree or Disagree. Any percentages totaling less than 100 are due to missing or ambiguous responses. For items 9 to 38, the response option "Don't Know" also contributes to percentages totaling less than 100. The values for the Tucson II sample have been taken from Barušs & Moore (2005). [table continues on p. 122]

Section II: General Statements					
		ITC *N = 150*		Tucson II *N = 212*	
Item #	Item	Agree %	Disagree %	Agree %	Disagree %
9	There is no reality other than the physical universe.	4	91	24	58
10	Extrasensory perception is possible.	89	5	67	17
11	The inner experiential world is vaster, richer and contains more profound meanings than most people think.	99	0	80	9
12	The existence of human consciousness is evidence of a spiritual dimension within each person.	83	3	61	26
13	Religion has much to offer about our understanding of consciousness.	72	21	82	11
14	Introspection is a necessary element in the investigation of consciousness.	98	0	93	4
15	Statements about human cognition are meaningless without reference to particular states of consciousness.	75	15	52	32
16	Reincarnation actually does occur.	46	7	23	41
17	The concept of limits does not apply to consciousness.	57	15	32	37
18	In order to fully understand human consciousness, a process of psychological change is necessary which may be achieved through meditation or a spiritual way of life.	93	3	52	34
19	The accepted methods of science are the only proper way in which to investigate consciousness.	9	89	27	67
20	The reason the universe is the way it is, is to support human life.	15	54	11	66
21	Physical reality is an extension of mental reality.	42	31	35	37
22	Consciousness gives meaning to reality.	87	7	77	13
23	Consciousness is more real than physical reality.	51	28	43	34
24	Human consciousness would not exist without the brain.	44	24	74	13
25	There is an absolute truth which is not context-dependent.	55	21	37	29
26	Culture can be viewed as a basic conspiracy against self-knowledge and awakening in which we collude together to reinforce one another's defenses and insanity.	33	53	42	46
27	There are modes of understanding latent within a person which are superior to rational thought.	87	6	69	20
28	It is possible for there to be consciousness in which there is awareness but no object of awareness.	87	3	73	10
29	Human consciousness is an emergent property of complex neural activity.	47	27	59	24
30	Consciousness is the key to personal growth.	91	3	77	10
31	There are some truths concerning reality which, in principle, are not amenable to scientific investigation.	76	11	51	33
32	Even though we are not yet able to explain mental events in terms of physical processes, an explanation is, in principle, possible.	60	21	69	16
33	The harmony of nature reflects the existence of an original creator.	31	30	24	48
34	Consciousness transcends time.	84	3	53	25
35	Knowledge of people achieved through literature is more profound than any knowledge of people that can be achieved using the scientific method.	22	51	21	56
36	Personal consciousness continues after physical death.	42	19	27	41
37	There is a universal consciousness of which individual consciousness is but a part.	90	3	55	24
38	A process of psychological change is necessary in order to fully experience human consciousness.	82	7	65	19

Appendix B

Factor Analysis of the "Beliefs About Consciousness and Reality" Questionnaire in the ITC Sample

	1	2	3	4	5	6	h^2
11. The inner experiential world is vaster, richer and contains more profound meanings than most people think.	**.706**	.230	.040	.077	-.072	-.031	.564
12. The existence of human consciousness is evidence of a spiritual dimension within each person.	**.702**	.173	-.012	-.035	.189	.021	.560
14. Introspection is a necessary element in the investigation of consciousness.	**.618**	.133	-.091	.055	-.109	.170	.452
22. Consciousness gives meaning to reality.	**.590**	-.034	.306	-.091	-.160	.226	.527
31. There are some truths concerning reality which, in principle, are not amenable to scientific investigation.	**.535**	.000	.115	-.093	-.014	-.015	.308
37. There is a universal consciousness of which individual consciousness is but a part.	**.510**	.274	.247	.053	-.102	-.289	.493
17. The concept of limits does not apply to consciousness.	**.427**	-.072	.316	-.053	.183	-.002	.324
34. Consciousness transcends time.	**.419**	.302	.203	.221	.227	-.074	.414
18. In order to fully understand human consciousness, a process of psychological change is necessary which may be achieved through meditation or a spiritual way of life.	**.343**	.126	.307	.211	-.140	.047	.294
6. I have had an experience which could best be described as a transcendent or mystical experience	.128	**.771**	-.093	-.151	-.099	-.018	.652
4. I have had experiences which science would have difficulty explaining.	.127	**.689**	.132	.097	-.005	-.011	.518
8. I have had an experience which could best be described as an out-of-body experience.	.052	**.678**	.036	-.232	.060	-.239	.578
3. My spiritual beliefs determine my approach to life.	.055	**.600**	.172	.173	-.102	.412	.603
7. It is important to me to spend periods of time in contemplation or meditation.	-.025	**.518**	-.035	.089	.070	.196	.321
16. Reincarnation actually does occur.	.073	**.508**	.222	.269	.353	-.168	.537
9. There is no reality other than the physical universe.	.159	**.462**	.036	.147	.045	-.108	.276
28. It is possible for there to be consciousness in which there is awareness but not object of awareness.	.271	**.367**	.047	.284	-.191	-.029	.329
21. Physical reality is an extension of mental reality.	.113	.094	**.734**	-.025	.015	-.141	.581
23. Consciousness is more real than physical reality.	.316	-.010	**.602**	.111	.031	.138	.494
26. Culture can be viewed as a basic conspiracy against self-knowledge and awakening in which we collude together to reinforce one another's defenses and insanity.	-.014	-.058	**.592**	-.084	.085	.204	.410
27. There are modes of understanding latent within a person which are superior to rational thought.	.129	.125	**.567**	.035	-.170	.040	.386
33. The harmony of nature reflects the existence of an original creator.	.088	.170	**.470**	-.250	.455	-.091	.535
36. Personal consciousness continues after physical death.	.257	.169	**.459**	.201	.309	-.198	.481
20. The reason the universe is the way it is, is to support human life.	.067	-.101	**.434**	-.396	.104	.133	.389
24. Human consciousness would not exist without the brain.	-.096	.097	.220	**.696**	.007	.025	.552
29. Human consciousness is an emergent property of complex neural activity.	-.013	.062	-.159	**.691**	.142	-.037	.529
32. Even though we are not yet able to explain mental events in terms of physical processes, an explanation is, in principle, possible.	.170	-.025	-.362	**.404**	.109	-.033	.337
1. I think about the ultimate meaning of life.	.006	.395	-.168	-.005	**-.486**	.126	.436
2. My ideas about life have changed dramatically in the past.	.180	.305	-.118	-.024	**-.473**	-.110	.376
25. There is an absolute truth which is not context-dependant.	.156	.149	.031	.070	**.422**	.186	.265
5. I feel a need to find a real meaning or purpose in my life.	.248	-.063	.187	-.126	**-.408**	.015	.283
13. Religion has much to offer about our understanding of consciousness.	.289	.213	-.244	-.287	**.397**	.231	.482
38. A process of psychological change is necessary in order to fully experience human consciousness.	.301	.083	.059	-.098	**-.323**	.282	.295
15. Statements about human cognition are meaningless without reference to particular states of consciousness.	.243	.081	.006	-.166	.098	**.563**	.420
35. Knowledge of people achieved through literature is more profound than any knowledge of people that can be achieved using the scientific method.	-.055	.022	.350	.155	.141	**.502**	.422
10. Extrasensory perception is possible.	.330	.373	.190	.142	.014	**-.489**	.543
30. Consciousness is the key to personal growth.	.278	-.083	.179	.075	-.239	**.399**	.338
19. The accepted methods of science are the only proper way in which to investigate consciousness.	.240	.262	.006	.245	-.036	**-.324**	.293

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DAVID ZEITLER, M.A., M.B.A., is an executive coach and a founding member of Integral Institute. A Senior Associate of Robert Kegan and Lisa Lahey's firm Minds at Work, David coaches to an international clientele of leaders using Kegan and Lahey's revolutionary Immunity to Change coaching method. David lives in Philadelphia, Pennsylvania, with his Rottweiler Bodhi.

AMANDA L. HABOUSH, M.A., is a Senior Research Associate at the Nevada Institute for Children's Research and Policy (NICRP) at the University of Nevada, Las Vegas. Simultaneously, Amanda is completing her doctoral degree in Applied Psychology. Amanda's career focus since 2006 has been to improve research methodology when working with diverse populations. Her work in this area includes examining established assessments to determine their reliability and validity in diverse populations using a more integral approach, as well as using the Integral model to enhance research design and assessment at NICRP.

TIMOTHY R. COX, M.A., received his degree in Integral Psychology from John F. Kennedy University. During his time as a student, his research focused primarily on developing an integrative, mixed-methods approach to better understanding and working with the grieving process. Secondary areas of interest included the process of psyschospiritual development and state-stage experiences as well as examining the hermeneutics of the integral community. As a research assistant at Oregon Social Learning Center, he worked on multiple studies addressing the development and implementation of early interventions for at-risk and foster youth. He currently lives in Portland, Oregon, where he works in a holistic wellness center and is pursuing a doctoral degree in Naturopathic Medicine.