A Process Model of Integral Theory

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Abstract: In this article I introduce a Process Model of integral theory, combining Dzogchen ideas and Western works on process philosophy. I make a distinction between Wilber's notion of perspective and the Dzogchen notion of view. I make the further distinction between Wilber's use of process in his writings from what I consider to be a process view. I distinguish epistemological categories of knowing from ontological ways of understanding and propose ways to integrate the epistemological field with the ontological dimension by contextualizing both the ways they are related, and the characteristics that distinguish them. This article outlines the conditions of structural enfoldment and shows how they can help contextualize the limits of structural frameworks. I introduce how process models of cognition, conceptualization and value can be integrated into the Process Model.

Keywords: Dzogchen, epistemological field, Guenther, integral theory, microgenesis, ontological dimension, perspective, process model, states of consciousness, structural enfoldment, structure-stages, view.

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Introduction

In a recent talk on Integral Spirituality in New York City,[1] Ken Wilber highlighted Dzogchen[2] philosophy as one of the world's greatest contemplative systems. He mentioned this at the end of a day focused on talking about the structure-stages he has mapped in his AQAL ("all quadrants, all levels, all lines") framework. Wilber's AQAL model does not contradict Dzogchen thought per se; but, as this article argues, Dzogchen cannot be fitted into its framework. Dzogchen therefore presents a certain challenge to the goal of making the AQAL model a "Theory of Everything." The challenge Dzogchen presents has to do with the notion of *fundamental view*. In *Integral Spirituality* Wilber (2006) writes:

> This **Integral Post-Metaphysics** replaces perceptions with perspectives, and thus redefines the manifest realm as the realm of perspectives, not things nor events nor structures nor processes nor systems nor vasanas nor archetypes nor dharmas, because all of those are perspectives before they are anything else, and cannot be adopted or even stated without first assuming a perspective (p. 58, emphasis in the original).

View is closely related to Wilber's understanding of perspectives, but unlike Wilber's perspectives, *this notion of view* cannot be coded by such things as integral math.[3] We can say, for example, that the *view* through which Wilber's notion of perspectives arises is a *structural view*, since it arises through the structural approach that is the AQAL framework.[4] A structural *view* crosses all perspectival lines; for example, talking about structural levels of consciousness when approaching consciousness as a subject in dialogue (Wilber's example of '*1p x 1-p x 2p*'); or writing about cultural structure stages from a third person point of view (*3p x 3-p x 2p*). Nevertheless, the structural view itself governs what kinds of "things" arise, what kinds of "things" the theory has the capacity to see—beyond which the theory cannot think. Is the structural approach itself a perspective? Or are the perspectives structures? If the former is true,

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[1] Ken Wilber and Traleg Rinpoche in dialogue on September 9, 2006 at the Society for Ethical Culture, New York City—sponsored by EVAM Institute.

[2] The term "Dzogchen" is a shortened version of "rDzogs-chen" pronounced so that the initial 'D' is almost silent, and the 'g' makes a softer, almost 'k' sound, and with emphasis on the second syllable. Dzogchen refers to the philosophy and practice of Tibetan Buddhist lineages originating from Tibetan Bon (pre-Buddhist) traditions.

[3] Wilber introduces the notion of integral math in an appendix to Excerpt C (Appendix B. An Integral Mathematics of Primordial Perspectives) which is available online at http://wilber.shambhala.com/html/books/kosmos/excerptC/appendix-B.cfm

[4] None of this is to suggest that Wilber's thought is static. On the contrary, much of what underlies his AQAL model and his theories of structural relations are the kinds of processes that give rise to them. On the other hand, I am making a strong distinction between starting with such a structural view, and working process terms into it, versus reasoning from a process view. The very term "process" has one meaning from a structural viewpoint, and another meaning from a process viewpoint. I believe that the fundamental basis from which Wilber assigns meaning to the term "process" comes from his quadratic orientation, and the taxonomic (structural) relations that describe them holonically. Further on, the article will discern these as *conditions of structural enfoldment*, hence arising from a structural approach. For an example of how these two views on process compare and contrast, see Appendix C: The Process Model "In Conversation" with Ken Wilber on the Mind-Body Problem.

then what kind of perspective *is* a structural approach? How would we do that math? If the latter is true, then perspectives cannot be primary. What is the relationship between the primary perspectives and the approach from which they are derived?[5]

View refers to something more basic and more nuanced. Newton, Einstein and Bohr argued from a common *perspective: third person, objective.* But Classical Physics, Special Relativity, and Quantum Mechanics each have a different *view* of reality. Likewise, just as a structural approach can cross over into different perspectives, so too can a process approach: there can be process-based dialogue on interior experiences as well as scientific observations (*1p x 1-p x 2p*; *1p x 3-p x 2p)* as well as process-based third-person points of view on interior consciousness, cultural values and the like. Structural approaches and process approaches can cover the same territory, through all the various perspectives, yet a process approach will have a completely different *view of reality*.

At the same event in New York City, Traleg Rinpoche suggested, "be mindful of what is your *view*." One of the goals of this article is to help us be more mindful. To help us understand our *view*. My approach is to present an alternative to the structural view in the form of a process view, so we can be more aware not only of the benefits of a process view, but also of the limitations and constraints of a structural view. I will propose a *process view of integral theory*— not *only* to compare and contrast views, but also with the belief that a process view captures more of the Dzogchen intention of *being mindful of our view.*

Language Issues

This article is an introduction to a Process Model of Integral Theory.[6] It is written from a *view* integrating Dzogchen and Western process thought. Like Guenther, I hope to tease you, the reader, into a pure process orientation. This requires adopting a certain attitude—allowing one's mental framework to release its grip on thinking in terms of things, and following me into a world of process or flow in a field of dynamic forces. It requires you to suspend structurally based perceptions to allow for new ways of orienting perceptions.[7]

The challenge a process view presents is not only in the way our thought tends to be, but also in the way our language tends to limit how we *can* think. The English language is a major

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[5] According to Wilber's model, the *discipline of structuralism* is a zone 2 (3p x …) investigation of reality "which can be approached with methodologies such as developmental structuralism …. cultural anthropology, neostructuralism, archaeology, genealogy" (Excerpt D, p. 1). I am trying to point to something more fundamental than the self-referential loop of "a zone 2 approach deriving itself." I am referring to something else—the view that originally drives the approach that derives the perspectives; to distinguish that view, for example, from the view that would drive one approach over the other, in this case a process approach, to derive the perspectives. This notion of view, and its relationship to perspectives, is treated again and again in this article, in an attempt to clarify the distinction.

[6] I have included two appendices with this article that focus on illustrating specific points about the Process Model and its relation to Wilber's thought. They are intended to address issues relevant to those readers who want to go deeper into matters that are tangential to the main text, but important to gain a more refined understanding of some of the finer distinctions being made. There is also an appendix with extensive quotes from Herbert Guenther that more fully illustrate some of the distinctions related to his understanding and approach to a process view.

[7] See Appendix B: Guenther Notes.

obstacle in any presentation of process thought—Dzogchen and otherwise. David Bohm (1980) noted:

> . . . every language form carries a kind of dominant or prevailing world view, which tends to function in our thinking and in our perception whenever it is used, so that to give a clear expression of a world view contrary to the one implied in the primary structure of a language is usually very difficult (p. 46).

English is primarily a noun-based one that leads almost exclusively to subject-verb-object constructions—constructions which in turn implicitly lead to a world view in which subjects and objects are separate "things" that require conjoining. In verb-based languages, subject and object are wholly implicit in the verb which is itself sufficient to convey meaning.

Reader and writer therefore share this challenge—not only to suspend our usual ways of interpreting text, but to experiment with new ways of writing it.[8] Both reader and writer need to stretch.

Presentation Issues

An introductory article such as this one hopes to stretch and bridge—new territories and familiar ones. The first step will take up the already familiar structure-stages in integral theory, and show how they can be derived from something deeper; namely, the dynamic fields or processes that generate them. The second step will be to show how and where *states*, as opposed to the structures, map onto the Process Model. The third step will be to give a brief preview of how the Process Model can be used as an orienting map to integrate process-based theories of development, in much the same way that Wilber has used his structure-based map to integrate structure-based theories of development. Each Appendix offers material to support deeper understandings in selected areas without interfering with the flow of the main text. This preview involves incorporating Jason Brown's process-based theories of cognition and value into the Process Model.

This article is written from a view that carries many idiosyncratic connotations within the language I use. It may be helpful for readers to go through the entire article once to simply get a picture of the whole view being presented, and then re-read it with this view in mind to better understand how it informs the language being used. Ultimately, I hope to show you that a process approach to thinking about integral theory—a process *view*—can help expand our understanding of consciousness and the nature of reality beyond what is possible within a structural view. It is a way of thinking that creates extraordinary new potential for understanding development and evolution in relation to consciousness, and can be applied in the designing of

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[8] Experimenting, as Guenther did, with entirely new kinds of language would be a detriment, given the scope an introductory article such as this one. However, Bohm has already done some experimenting with language that might more easily lend itself to a pure process view. Bohm (1980) experimented with a verb based language he called a "rheomode," noting that "in the ordinary mode of language, truth is taken as a noun, which thus stands for something that can be grasped at once and for all or which can at least be approached, step by step" (p. 41). Developing the beginnings of a verb based language allowed him to point to ways in which language could be used to imply and coherently reveal a world view based in the kind of wholeness and process he perceived at the heart of reality.

new types of transformative practices—all of which constitutes the topics of future articles concerning a process approach to integral theory.

Process Views

Buddhist/Dzogchen

Buddhist scholastic thought includes an enormous number of structural systems. Generations upon generations of scholars, east and West, have studied them and added to them. As Herbert Guenther (1989) says:

> The earliest Buddhists prided themselves on having reduced the whole of reality to discrete entities and their transitory relations. This made it impossible for them to account for the unity of the human individual and even more impossible to account for the unity of the multifarious programs of his brain/mind. Clearly, there must be something wrong with the initial premises; when they are pursued to their logical conclusions as was done by the Madhyamika thinkers, they are found to be self-destructive. A change in perspective not only was called for but actually took place, ushering in, if not part of, a Zeitgeist that made Buddhism move in a new direction (pp. 23-24).

According to Guenther, Tibetan Dzogchen thinkers made a critical distinction between a reductionistic, self-limiting view, and an open *dynamic* approach. They considered the earlier view as a strictly Indian view that "was structure-oriented and tended toward reduction of reality to a model that could not but rigidify what is better left flexible and alive" (p. 23).[9]

Herbert Guenther is perhaps the only Western philosopher to attempt maintaining the essential Dzogchen view—which is a pure process view—in a Western translation. In order to do this, Guenther had to invent an entirely new language; one that could convey some of the content of Dzogchen ideas on spirituality and reality to the Western mind, without compromising Dzogchen's pure-process view.[10] Guenther combined the deeply intuitive and rigorously hermeneutic language of Heidegger with the mental framework of systems science. Guenther found the language of systems science useful to describe a reality not made of particles, but of deeply dynamic interactions in a field of forces and relations. In Heidegger's work, he saw an opportunity to convey the thoroughly dynamic character of Dzogchen in Western terms in the ways in which Heidegger had endeavored to get beyond the ontic or thing-centered interpretation of reality, to explore a deeper ontological reality.[11] Not surprisingly, Guenther's writing is complex, and despite his extraordinary effort, his work draws a very small audience—although in some circles he is revered for it. This is unfortunate, since his expositions of Dzogchen thought are revelatory.

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[9] See Appendix B: Guenther Notes.
[10] See Appendix B: Guenther Notes.
[11] See Appendix B: Guenther Notes.

Western

Western philosophy also has a rich tradition of processed-based thought. Modern process thought primarily traces back to Alfred North Whitehead's (1978) seminal work *Process and Reality*. Wilber himself has incorporated some of Whitehead's ideas in his notions of prehension,[12] dominant monad,[13] and the like.[14] Across fields of interest, philosophers and researchers—thinkers and tinkerers alike—have benefited from the way Whitehead's process philosophy helps to expand the field of inquiry and thereby deepen our understanding. In this paper, Jason Brown (1991, 1996, 1997, 1998, 2000, 2002, 2005), whose process theories on cognition and value make a significant contribution to the Process Model,[15] can be considered one of the most important new thinkers in the post-Whiteheadian tradition.

Not all process thought stems from Whitehead's work. A process approach can also be seen in works over a wide range of ideas—in Otto Scharmer's (www.ottoscharmer.com) U-Process, Eugene Gendlin's (www.focusing.org) Philosophy of the Implicit, Christopher Alexander's (www.natureoforder.com) Nature of Order, Amy and Arnie Mindell's (www.processwork.org) Process-Oriented Psychology, just to name a few. Recently, Nicholas Rescher (1996) has written excellent primers on the history, characteristics and evolution of process-based thought (see especially *Process Metaphysics*).

On the website for The Center for Process Studies—which hosts current articles exploring the nature of cognition, consciousness and spirituality—process thought is introduced as follows:

> With a foundation in the metaphysical system of Alfred North Whitehead (among others), and a methodology that integrates both speculation and empirical verification, process thought brings its unique metaphysical perspective to bear on many fields of reflection and action. Ultimately, process thought seeks to integrate and reconcile the diverse facets of human experience (i.e., ethical, religious, aesthetic, and scientific intuitions) into one coherent explanatory scheme.

> Process metaphysics, in general, seeks to elucidate the developmental nature of reality, emphasizing becoming rather than static existence or being. It also stresses the inter-

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[12] "But the *interior* of the cell contains no proteins, molecules, or organelles at all—it contains sensations, prehensions, proto-experiences, rudimentary feelings, and so forth (a la Whitehead)." http://wilber.shambhala.com/html/books/kosmos/excerptC/intro-3.cfm

[13] "in one sense, an individual organism is a system, because "system" in general simply means "a functional whole;" but this individual system has a center of prehension, whereas a collective system does not—as Whitehead put it, the individual has a "dominant monad." http://wilber.shambhala.com/html/books/kosmos/excerptC/part2-2.cfm

[14] Wilber's more recent writings not only incorporate much of Whitehead's important ideas, but he has also raised several important issues concerning the limitations of Whitehead's process philosophy, especially with respect to the postmodern concern over the intersubjective component of the subjective. Wilber refers us to the intersubjective structures of the LL quadrant which pre-constitute the actual (occasioning) subject. For a discussion on how the Process Model relates to this issue, see Appendix D: Wilber, Whitehead and the Postmodern Condition.

[15] Since this is only an introduction to a process approach to integral theory, I have named the overall approach "the Process Model," in order to "tag" its essential ideas to that title, and to be able to refer back to those ideas, to refer back to its fundamental *view,* as *the Process Model.*

relatedness of all entities. Process describes reality as ultimately made up of experiential events rather than enduring inert substances. The particular character of every event, and consequently the world, is the result of a selective process where the relevant past is creatively brought together to become that new event. Reality is conceived as a process of creative advance in which many past events are integrated in the events of the present, and in turn are taken up by future events. The universe proceeds as "the many become one, and are increased by one" in a sequence of integrations at every level and moment of existence. Process thought thus replaces the traditional Western "substance metaphysic" with an "event metaphysic" (Center for Process Studies, 2006).

From this description, we can see that process thought is in many ways *inherently integral*, in that it "seeks to integrate and reconcile the diverse facets of human experience into one coherent explanatory scheme;" and in that "it also stresses the inter-relatedness of all entities." From a process point-of-view, substantialist "things" are not only defined by their discreteness, but it is precisely their capacity *to be delimited*, that keeps them as separate—*separated entities*. In the words of Nicholas Rescher (1996):

> An adequate substance metaphysics cannot make do without processes. And at this point one is well en route to joining the process philosopher by acknowledging that the integrity of *things* consists in a unity of *process*—that things are being integrated and consolidated as such by acting in a unitary way in relation to others. Unity is as unity does: The unity of things is a unity of process (p. 57).

Wilber's structural approach to integral theory may not stem from a pure process view, but neither is it a *substantialist theory*. Early on in his writings, Wilber (2000a) makes this very clear: "Likewise, reality might be composed of processes, and not things, but all processes are only processes within other processes—that is, they are first and foremost holons" (p. 42). He underscores this in the first of his twenty tenets governing holons: *"Reality as a whole is not composed of things or processes, but of holons"* (p. 43).

It also seems to be the case that as one begins to work in a more sophisticated way with Wilber's AQAL matrix, there is a natural progression[16]—one aspect of which is moving from a static interpretation of the structures and categories in the model, to a more fluid and dynamic orientation which probes for the underlying processes constituting the basis of the structural interpretation. As Wilber's own ideas evolved, he began to emphasize the primacy of perspectives over holons, as in the quote cited above. Our concern here is not whether or not perspectives are "things" or "processes"—that is merely a reductive argument. Our interest is to identify the overall *basis or view*, the structural territory his map of perspectives is being drawn from, and then to distinguish this from new territory—the territory disclosed through a process based *view*.

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[16] Keith Bellamy describes an "Integral Awareness Developmental Line" that outlines the progression of understanding and utilization of integral theory. He describes phases of; emergence, associating, proselytizing, discerning, and benefiting, ending in a trans-rational relationship with integral theory. (Bellamy, 2006).

Structures and States

Structures in the Epistemological Field

Interior Single	Exterior Single
Interior Plural	Exterior Plural

Figure 1. The Four Quadrants

The basis of all of Wilber's recent work is the 4-Quadrant model. In its simplest form it conveys 4 domains: the interior-single, the exterior-single, the interior-plural, the exterior-plural. It is easy to see that the model is a matrix created across two primary conditions: (1) the condition of being interior or exterior; and (2) the condition of being singular or plural. Thus, as we can see from Figure 1, what contrasts both left-hand quadrants from both right-hand ones, is the condition of being interior or exterior; and what contrasts both upper quadrants from both lower ones, is the condition of being singular or plural.

If we relax the box-like structure and reframe the axes from static, either-or language to more process oriented language, it opens toward a more dynamic representation. From this, we come up with the illustration in Figure 2, in which the arrows depict a kind of tendency, drive, pull, or *movement in the direction of those certain conditions.*
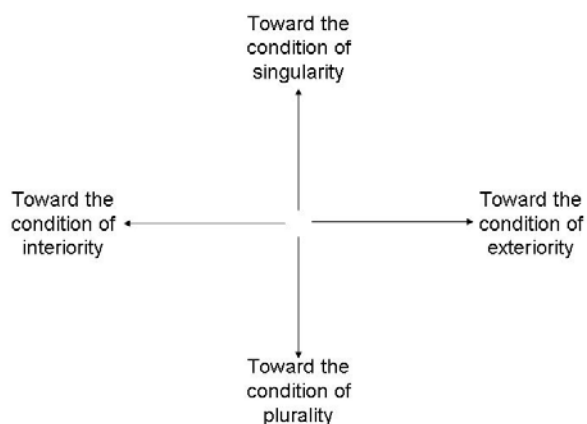
Toward the condition of singularity

Toward the condition of interiority

Toward the condition of exteriority

Toward the condition of plurality

Figure 2. Process View

Figure 2 already suggests that there is something deeper underneath the structural quadrant perspective. It shows that each quadrant is a kind of structure[17] composed of at least *two* tendencies—a tendency toward being interior (or exterior) *and* a tendency toward being singular (or plural).

A process view takes just this kind of approach. Where a structural view "sees," or directs our attention and perception to notice discrete quadrants, a process view "sees" complex relations in a dynamic field. Figure 3 illustrates the field that generates the quadrants. It suggests that there are forces (labeled "interior," "exterior," "one," "many") operating in a field to create an interplay of relations. We

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[17] Of quadrants and structures, Wilber says (in Excerpt D): a structure is a " *holistic, dynamic pattern of self-organizing processes* that maintain themselves as stable configurations through their ongoing reproduction" (p. 2); and quadrants are prior to and somehow occupied by them ("structure" is commonly used in a very broad sense to mean any form, pattern, or agency in any of the quadrants—interior or exterior, individual). The process shows that the quadrants are generated through a dynamic process, and therefore, to the extent that they are considered stable configurations, they can be considered as primary structures.
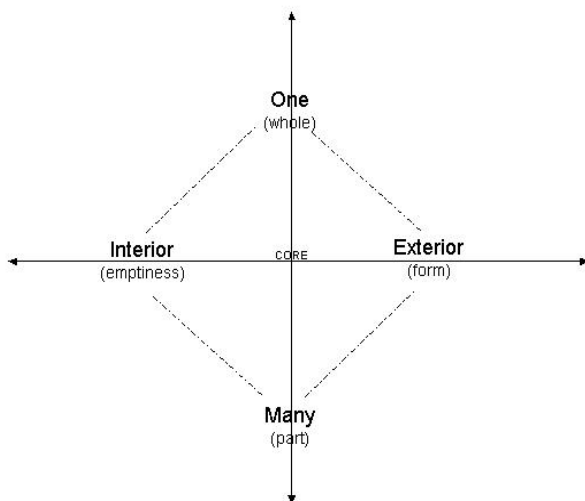
Figure 3. The Epistemological Field

will see that this interplay of relations generates self-world-other—what is known about reality—and therefore it is called the Epistemological Field.

In process language, Figure 3 is described as having two intersecting axes which can be thought of as the two primary valences. Each valence is comprised of a pair of vectors (or forces) acting in opposite directions. The horizontal valence is comprised of the vector pair interior/exterior. The vertical valence is comprised of the vector pair one/many. The vector pairs are considered to be complementary forces, in the sense that they are apparently opposite, but are coupled in such a way that they, in fact, mutually define. Complementary vectors are related in a characteristic way – the more you have of one, the less you have of the other. In the empirical domain, we run into complementarity with such matters like the wave-particle duality, and the relativistic equations between energy and matter. It can be seen that the characteristic of complementarity underlies all dualistic thought. David Loy (1997) writes: [Dualistic thought is] "thinking which differentiates that-which-is-thought-about into two opposed categories: being and nonbeing, success and failure, life and death, enlightenment and delusion, and so on" (p. 18).

The Process Model suggests that *everything* that arises through the dynamic interplay of complementary forces—everything that is generated in this dynamic field, being composed of dualistic categories, has this dualistic nature. This is a critical condition for the kinds of structures that arise there. We tend to interpret these structures—and their taxonomic organization—as somehow precisely delimited; that, for example, once a level in a structure-stage emerges, the lower levels are transcended and included in such a way that the lower can be seen by the higher *in a transparent way.* According to Wilber, this transparent seeing happens because the subject of the prior level becomes the object of the subject of the next level. The Process Model says something different. The Process Model says that since the structure-stages arise in a field of complementary valences, they are *inherently dualistic* and therefore, relations between them are also complementary and self-define—in other words, the relations which delimit the structures, relations such as lower and higher, before and after, whole and part, subject and object—are dualistic.[18]

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[18] The Eastern notion of reality pervaded by dualistic thought closely parallels process thought on the nature of structural relations. Process philosophy considers that any given set of structures that are related, must be internal to a process that generates them (generative process). From a process point of view then, only the generative process exists at a higher order, namely, the generative order which undergoes changes of dynamic natures—changes in forces such as rate—as opposed to differences in static "properties." Relations between structural properties in turn, are considered to be more like "Cambridge Properties"—a term coined for relations that are not real changes but rather are properties of an event only from a certain *perspective,* such as change in relative motion, all of which depend upon a situated frame of reference. While we are used to identifying perspectival conditions across the quadrants, the

The problem with dualistic thinking, Loy (1997) goes on to say, is that

although distinctions are usually made in order to choose one or the other, we cannot take one without the other since they are interdependent; in affirming one half of the duality we maintain the other as well. . . . What kind of thinking remains? If all language seems to dualize, in distinguishing subject from predicate/attribute, how can there be such a thing as nondual, or nonconceptual, thinking? Can we get along without dualistic categories? And even if we can, is it desirable? The nature of any alternative—or is it no thinking whatsoever?—needs to be explained, and its feasibility defended (pp. 18-21).

If there is non-dualistic, non-conceptual thinking then it must arise through another kind of process—and the Process Model reveals an entirely new dimension, which will be introduced later in the article. After doing this, I will introduce a new understanding of cognition, which can address the question of the desirability of thought itself. For if we can *understand the process that is "thought,"* then we can better engage its usefulness. *If we can understand the process that is "mind,"* then we can be more *"mindful."*

In summary, the Process Model suggests that conventionally structured experience—including the experience of thinking—is constituted by these fundamental valences, with their four complementary vectors (forces, aspects). The dynamic field in which all this takes place—represented by those fundamental valences, is considered to be the Epistemological Field, because it generates the ways in which we know reality.

I have deliberately chosen the vector labels to be as simple as possible—with as little metaphysical baggage as possible, as it were. However, since they are relevant to some very important metaphysical discussions on spirituality, I have also added the labels emptiness/form and whole/part which correlate to them.[19]

Figure 4 illustrates how the 4-quadrant domains can be seen to arise through a dynamic interplay among neighboring aspects: the interplay between the force, drive, tendency towards, or aspects of interior and one ("interior x one") generates the UL or subjective quadrant; the interplay "one x exterior" generates the UR or objective quadrant; and likewise, "exterior x many" generates the inter-objective quadrant; and "many x interior" the inter-subjective quadrant.

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process model pushes further, and identifies perspectival conditions within the structure-stage lines that occupy the same quadrant.

[19] It is relatively well known that there is a deep spiritual awakening that takes the form of realizing not only *that*, but also *just how* "form is emptiness, and emptiness is none other than form"—a realization that can be described in the process model as *collapsing* the movement along the interior-exterior valence, or, in the words of Mipham, a 16th century Dzogchen author of *The Beacon of Certainty*, *coalescence* of the aspects of interiority and exteriority. The non-dual stage after coalescence can then be described as achieving equanimity of opposites, or return to a fully open dynamic field. There is a similar, but less known phenomenon, with respect to the one-many valence—a phenomenon which on the one hand creates a holarchic (or whole-part) apperception of reality, which gives way to the collapsing or coalescence of the whole-part relations—a theme taken up early on by Plotinus, and in modern times by, among others, David Bohm.
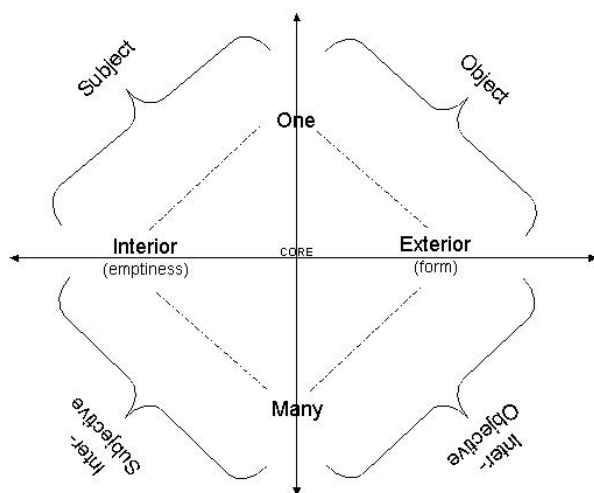
Figure 4. Four Quadrant Domains

Since they are shown to be derived from such a process, the Process Model considers the quadrants to be *structures*. We can also say the quadrants are *primary* structures, since they are derived from simple operations—merely combining two aspects. In other words, we can say that these kind of simple operations are "first-order dynamics." (It will be shown later in the article how more complex structures arise from 2nd, 3rd… nth-order dynamics). We can also add primary operations to primary structures in various ways. For example, when each of the quadrant-structures undergoes a second iteration along the interior-exterior valence, Wilber's 8 indigenous perspectives are generated, namely, the insides and outsides each of the four domains (as he describes online in Excerpt D: The Look of A Feeling[20]). Similarly, Wilber's holarchic organization, or the whole-part relations that prescribe all the various lines in each of the domains, is a second iteration along the whole-part valence. Looked at from this view, the Process Model helps explain the deep coherency in Wilber's model—both the 8 indigenous perspectives and their holarchic organization arise within a single iteration in the dynamic field.

By applying this process of moving through the fields in successive iterations, it can be shown how more complex structures like self-world-other and values/beliefs result from the interplay of these higher-order dynamics. Wilber maps these more complex structures in developmental lines as structure-stages, according to his holarchic understanding of development. The Process Model can show how *all of the structure-stages* are generated by process dynamics operating in this field of valences. A pure process view reaches even further: it has the capacity to integrate, in new ways, models of development that are not limited to structure-stage taxonomies, but arise from a process-oriented approach, such as Jason Brown's theories of Cognitive Microgenesis and his Process Theory of Value, which we will take a brief look at later in this article. In turn, the Process Model reveals new understanding of the very *nature* of development and evolution when these process-based theories are mapped as a coherent whole in the Process Model (in ways similar to how Wilber has organized structural models in his structural AQAL framework).

States in the Ontological Dimension

The previous discussion described the field of valences that generates all the structure-stages. Because here is where the Process Model describes how reality is *known*, we refer to it as the Epistemological Field. But what of the *states* of consciousness—where do they fit? In *Integral Spirituality* (2006, p. 96) Wilber identifies five primary states of consciousness:

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[20] http://wilber.shambhala.com/html/books/kosmos/excerptD/part1.cfm/

1. gross-waking states, such as what I might experience riding a bike or reading this page; or doing bodywork;
2. subtle-dream states, such as I might experience in a vivid dream, or in a vivid "daydream;" or visualization exercise, as well as in certain types of meditation with form;
3. causal-formless states, such as deep dreamless sleep and types of formless meditation; and experiences of vast openness or emptiness;
4. witnessing states—or "the Witness"—which is a capacity to witness all of the other states; for example, the capacity for unbroken attention in the waking state and the capacity to lucid dream;
5. ever-present Nondual awareness, which is not so much a state as the ever-present ground of all states (and can be "experienced" as such).

He goes on (p. 98) to make the following distinctions between *structure-stages* and *state-stages:*

1. States by their very nature are much more amorphous and fluid than structures, this stage sequencing of states is very fluid and flowing, while *structure-stages* are fairly discrete levels or rungs in development.
2. You can peak experience higher states, but as research shows time and time again, *you cannot skip structure-stages, nor can you peak experience higher structure-stages*.

The relationship between the structure-stages and the state-stages lends it self to some fine-tuning in Wilber's model. In his earlier writings, the state-stages were conceived as being part of a continuum related to the cognitive line in the UL quadrant. However, the notion of accessibility to states, i.e., that all people everywhere, regardless of their structure-stage of development, have access to all the *states of consciousness,* became problematic.[21] The resolution of this problem is understood to be the following:

> The point is that a person can have a profound peak, religious, spiritual, or meditative experience of, say, a subtle light or causal emptiness, but they will interpret that experience with the only equipment they have, namely, the tools of the stage of development they are at (Wilber, 2006, p. 112).

And its representation became known as the Wilber-Combs lattice, (Wilber 2006, p. 90.) in which the state-stages at the top are loosely correlated with the state-stages running in various lines below them. Looking at the Wilber-Combs lattice, we see that the structures that arise in the epistemological field constitute the lower half. What if we imagined an entirely new process plane—and entirely new dimension where the state-structures arise? What kind of dimension would this be? Contrasting the Epistemological Field where structure-stages arise and reality is *known*, the Process Model posits what it calls the Ontological Dimension, where *states of being arise* and "suchness is."

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[21] Of his earlier work, Wilber (2006) notes, "we early researchers tended to confuse higher states with higher structures, and then stack the higher states on top of the conventional structures. I did so in Up from Eden, where the structures are called "average mode" and the states are called "most advanced mode" (p. 284).

To represent the Ontological Dimension, we add an ontological valence labeled "anterior" and "posterior" as a third axis parallel to the two axis of the Epistemological Field. We can see from Figure 5, that this third axis prescribes a three-dimensional diagram—the two dimensions of the epistemological plane, and the third dimension which is imagined as the plane running directly out the back of the page in the anterior direction, and straight out up from the page in the posterior direction. The Process Model represents the state-stages along the anterior-posterior valence as described in Figure 6. (Figures 5 and 6 can be found in <u>Appendix A</u>: Figures).

Like the Wilber-Combs lattice, the Process Model recognizes that the states of consciousness are of a different sort than the stage-structures of consciousness. But whereas in the Wilber-Combs lattice they are represented as loosely affiliated, through the notion of stages, in the Process Model, the Ontological Dimension is *significantly exceptional from and operates under completely different rules of process than those in the Epistemological Field.* The Process Model suggests that these processual differences *are the significant differences that distinguish the structure-stages from the state-stages.*

The first and foremost difference is that unlike the Epistemological Field, where the forces are complementary, the anterior and posterior vectors of the Ontological Dimension are *entangled*. I use the term "entangled" to convey the characteristics of temporal simultaneity and spatial non-locality; but also to contrast it with the dualistic, trade-off characteristics of complementarity. Entanglement entails omni-directionality, coherence (unity) of event histories and the like. As discussed later in the section on The Conditions of Structural Enfoldment, the Process Model shows how movement in a field of complementary forces (in the Epistemological Field) creates both a spatial and temporal dimension, and with it an arrow of time (event history). In other words, the relations among complementary forces in the Epistemological Field create a local point of view, situated in a sense of "here and now."

The ontological dimension provides no such spatial or temporal benchmark. The anterior is related to the posterior not as a "before" and an "after," but as a single simultaneity; a resonant and coherent temporal unity. For example, when I experienced learning algebra as a specific event in time, there was a clear sense of "before I knew algebra" and "after I knew algebra." This kind of event occurs in the Epistemological Field and correlates to the structure-stages having specific temporal conditions, namely that "*structure-stages* are fairly discrete levels or rungs in development" and "*you cannot skip structure-stages, nor can you peak experience higher structure-stages*" (Wilber, 2006, p. 98).

On the other hand, a peak (peek) experience of a higher *state* of consciousness is an Ontological event—when I have a glimpse of the subtle ground of reality, I experience it both as having come to that realization *in time but also as having re-remembered it as always already having been.*[22] The Ontological now is *significantly different than* the epistemological here-and-now; there is a kind of collapse in the feeling, or apperception of time in the ontological now.

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[22] Heidegger emphasized in many different ways the recollective or remembering that accounts for the ontological difference, as David Michael Levin points out: "So we see that the Lighting of Being gives way to … [a] 'recollection' of that more primordial decision, the ontological difference. In such 'recollection,' we go down into ourselves—this is the phase of *Erinnerung*—and we attempt to retrieve, on this journey of return, that which has been forgotten. This retrieval is a W*ederholung,* a process of healing integration, of re-membering … (Levin, 1988, p. 386). And of its atemporality, Levin goes on to write: "The past is not simply past, the future not simply future; and the present, therefore, 'is not shut up within itself but transcends itself towards a future and a past. … Understanding the sense in which the past and future are gathered into their presence, the seer, holding herself open, may accordingly say that

Wilber's finest spiritual writing eloquently captures both the feeling of the "always already" and the ontological "now-ness," as when he writes:

> It is always already undone, you see, and always already over. In the simple feeling of Being, worlds are born and die—they live and dance and sing a while and melt back into oblivion, and nothing ever really happens here in the world of One Taste. … And I-I will be there, as I-I always have been, to Witness the rise and miraculous fall of my infinite easy Worlds, happening now and forever, now and forever, now and always forever, it seems (2000b, p. 623).

> … in that unitary seamless sizzling Now, which is this very moment before you do anything at all, it is, quite simply, over. Which means, it has, quite simply, begun (2006, p. 346).[23]

Therefore, as Figure 6 (in Appendix A) shows, a gross state of consciousness "sees" only gross subjects and objects (the posterior view) as arising from other gross level causes (the anterior view), but a subtle level of consciousness "sees" gross *and* subtle level subjects and objects arising from subtle level causes (and so forth for the higher states, not illustrated). In other words, there is a kind of entangled relation that is disclosed between the gross and subtle levels. An ontological experience doesn't see levels stacked up uni-directionally in time. The relations in its generative processes are two-directional. The states are experienced as both *higher and more fundamental—they stack up in both directions at the same time.*

The second difference is that reasoning from the Epistemological Field is inherently dualistic, indeterminate, and unsolvable; it is a kind of reasoning that creates infinite complexity. This accounts for the quintessential characteristic of that field, which is unlimited movement. "Which came first, the chicken or the egg?" is an impossible question. *Questions are not solved* in the ontological dimension—they simply don't arise there. In the ontological dimension it is *clearly seen* that/how the chicken and the egg arise. This "clearly seeing" is not given as a reasoned account of things, it is apperceived in a "feeling of Being-such."[24] This is a simple analogy, but many of our deepest spiritual questions, questions of involution and evolution, the nature of

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she has 'already seen' what is to come" (p. 459). Note also in this sentence, the "open aspect" of the ontological difference—discussed in the following section.

[23] "The presence of what is present is not finally and also something we *face*, rather *it comes before. Prior to all else it stands before us,* only we do not see it because we stand within it. *It is what really comes before us"* (Heidegger, 1968, p. 44).

[24] The distinctions we are making in the Process Model, between reasoning from the epistemological field and understanding Being-as-such in the Ontological Dimension—a distinction between perception and conceptualization of reality on the one hand, and apperception of reality on the other—closely parallels the Buddhist distinction between *vijnana* and *prajna.* Loy (1988) quotes D. T. Suzuki's paper on *Reason and Intuition in Buddhist Philosophy* to help distinguish between the more conventional way of knowing, vijnana, and prajna, that which goes beyond vijnana:

> Prajna goes beyond vijnana. We make use of vijnana in our world of the senses and intellect, which is characterized by dualism in the sense that there is one who sees and there is the other that is seen—the two standing in opposition. In prajna this differentiation does not take place: what is seen and the one who sees are identical [author's note: or alternately, entangled]; the seer is the seen and the seen is the seer (p. 34).

unbounded wholeness, the infinite regressions of the self, and the like, come to us in a similar fashion.

It is very difficult to capture these kinds of ontological relations from a structural view. A process view is more helpful in understanding the nuances of the Ontological Dimension. Take for example, the chicken-and-egg paradox. A structural view can only say that process P generates products (structures) A,B,C; and even if P and A are related in a holarchic way, their whole-part relations are uni-directional. I will show in the conclusion just how a pure process view can legitimately say that P generates A, *and* A actualizes P.

The Relationship between the Ontological Dimension and the Epistemological Field

According to Guenther, the process-dynamics that the Yogacara thinkers used to derive a system of mind/mentation revealed an interplay of human psychospirituality, in terms of two "movements"—one that corresponds to the processes in what we have been referring to as the Epistemological Field, and another that correlates with the ontological dimension. The first movement pertains to conventional ways of thinking; the second, ontological movement is not a kind of thinking, not a movement of mind, but a kind of *ontological encounter—a transformational, not informational, experience.*[25]

In this section of this article I discuss the relationship between the Epistemological Field and Ontological Dimension in more detail. This will help give you a context for the discussions that follow. There are some easy tests to see whether one is reasoning in an epistemological framework or understanding from an ontological view. For those of you who like to read philosophy, you can use the three questions below to test for "epistemological reductions"—i.e., those ways in which philosophers confuse ontological categories by reducing them into (reasoning from within) an epistemological framework. If answers to any of these questions are "true," then we are reasoning in an epistemological framework (or from an epistemological view).

These tests are as follows:

1. Are the concepts (or perspectives) delimited by an implicit or explicit one/many divide, or, in other words, are they related as wholes and parts?
2. Are the concepts (or perspectives) delimited by an implicit or explicit interior/exterior relation, or, in other words, are they related as subjects and objects?[26]
3. Is there an implicit arrow of time (or fixed starting point) in a narrative perspective?

We can use these tests as guides to thinking about the relationship between the Ontological Dimension and the Epistemological Field. Since the Ontological Dimension cannot be reduced to the Epistemological Field, they must not be considered as being related in any of the above three

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[25] See Appendix B: Guenther Notes.

[26] There is a huge amount of literature exploring just this one relationship, and it reaches a much broader range than even the enormous amount of writing, both East and West, on the subject-object/mind-body "problem," when one considers the theoretical work being done on the "problem" of observation and perspectives itself in physical science, mathematics, and AI; for a good primer, see Atmanspacher & Dalenoort (1994).

ways. From this set of questions or tests, we can further distinguish three points that describe how they are not related, and in this manner of elimination, begin to approach how they are related.

1. The ontological does not contain the epistemological, nor vice-versa; neither should it be imagined that the epistemological somehow arises from the ontological, or vice-versa. Neither can be seen as a greater whole or lesser part in relation to the other.
2. It is a common mistake to construe the ontological as being an interior state, relative to the epistemological, but the relations of interiority-exteriority are strictly epistemological relations.[27]
3. An ontological understanding cannot be elucidated in a narrative form that benchmarks or fixes a starting point. As I will discuss in more detail below, it is this kind of benchmarking that creates an arrow of time. Without an arrow of time in the ontological dimension, we experience reality as being simultaneously in this moment, and always already. An experience of ontological discovery comes simultaneously with an experience of re-remembrance. In addition, it cannot be the case that the ontological comes before (in time), nor after, the epistemological.

We experience the movement in the epistemological field as "mind." There is a Zen story that captures this:

A monk and three students were walking past a school, where a flag was flying in the wind. The monk asked the students "what do you see?" The first student said "the flag is moving." The second student said "the wind is moving." The third student said, "the mind is moving."

Relative to the experience of "moving mind," the ontological dimension, by contrast, has the feeling/aspect of stillness. However, this "stillness" is not to be construed dualistically (that would be an epistemological reduction); rather, it is a dynamic stillness—like the axel of a cart wheel rolling down a hill. Both the axel and the wheel are moving down the hill together, at the same rate; but relative to the axel, the wheel's surface tread seems to be moving more; the latter due to its relative motions (revolutions) with respect to the "non-moving" axel. The non-dual apperception of movement and the Intellect is a familiar thread in *Mahamudra* text, as Loy (1997) quotes:

One cometh to know that neither the "Moving" other than the "Non-Moving: nor the "Non-Moving" other than the "Moving" ….

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[27] This distinction is critical to understanding the non-conceptual, non-dual apperception of reality. Without this understanding, one merely keeps chasing apparently deeper and deeper levels of interiority; associated with the capacity to build an infinite series of apparent interior-exterior boundaries in the epistemological field, resulting in the infinite regression of self or source, one distal, and one proximate. The Process Model can help design transformative practices by readily pointing out that the capacities that are useful ways of *knowing about* are different from the paths of *discovering or realizing being-as-suchness.* The Process Model can point us in the direction appropriate to where we want to be going, at any given moment.

If the real nature of the "Moving" and the "Non-Moving" be not discovered by these analyses, one is to observe: —
Whether the Intellect, which is looking on, is other than the "Moving" and the "Non-Moving;"
Or whether it is the very self of the "Moving" and the "Non-Moving" (p. 137).

As this text illustrates, nondual thinking is paradoxically both active and passive. This again, is characteristic of ontological understanding. There is a both/and aspect to the ontological dimension, rather than an either/or, if-more-of-the-one-than-less-of-the-other aspect that conditions epistemological reasoning. From an ontological view (vs. an epistemological perspective) there is the stillness that generates the movement, as the axel supports the wheel, *and* there is the movement that actualizes the stillness, as the wheel contextualizes their *relative movement.* Epistemological reasoning frames this in terms of which comes first, movement or stillness? or which is the greater whole? or imagines a stillness that is interior to an exterior kind of movement. In ontological understanding, as Mahamudra claims, "there is movement of nondual thought, but at the same time there is an awareness of no movement" (Loy, 1997. p. 143).

In addition, nondual thinking is, relative to the dualistic arisings in the Epistemological Field, effortless. Returning to our axel and wheel metaphor, it is as if we configured the axle/wheel to drive another contraption, producing "work." Similarly, conventionally dualistic thought—the incessant mentalese of "monkey mind"—is like taking the free-wheeling state of movement/nonmovement, and attaching it to certain "gears" and getting locked into conditioned perspectives. The stillness in the ontological dimension is therefore seen to be in concert with the movement in the epistemological field—it is only when the movement of the mind is free and liberated that it simultaneously achieves ontological stillness.

What distinguishes this free and liberated movement "is the utter freedom of the mind to dance freely from one … thing to another, from one set of concepts to a different and perhaps contradictory set. The difference is not necessarily in the concepts themselves—they may be the same—but how effortlessly the mind is able to play with them without getting stuck (Loy, 1988, p. 148).

The notion of getting stuck is applicable to the understanding of peak experiences, versus a deeper understanding of the nondual. Nondual, effortless movement implies free wheeling in the dynamic field of complementary valences, without benchmarking any vector complement, or becoming embedded in any conditioned perspective. Peak experiences, however, are extreme experiences of getting stuck entirely, at one of the extreme ranges of the Epistemological Field. For example, if I get "stuck" at the far interior pole—I can have a peak experience of radical formlessness. If I get "stuck" at the far pole of "one"-ness—I might have a profound Unity experience; or if I get "stuck" at the far exterior pole, I can experience nature mysticism. Peak experiences can be profound and deeply meaningful experiences. They can help disclose the nature of mind, how it moves through complementary poles. However, they are essentially exclusionary experiences—and therefore it is a serious error to interpret them as "the ultimate canister" of reality. For example, for so many of us in the West who are conventionally embedded in a perspective of separate selves, a peak experience of Unity Consciousness is profoundly spiritual—but for someone like Jonathan Livingston Seagull, conventionally

embedded in a group morphic field, a peak experience of distinct "I am-ness" can be an equally profound experience. Likewise, for so many of us in the West who are conventionally embedded in a perspective of a "solid world-out-there" an experience of radical formlessness is profoundly spiritual—but for someone brought up in a Buddhist monastery, absorbed into radical formlessness since childhood, the living, throbbing manifest world of sensuality may be experienced as profoundly and ecstatically spiritual.[28]

This difference—the status of altered states—"is the crux of the debate between conventional and transpersonal psychology" (Wade, 1996, p. 191). The Process Model is in agreement with Wade's position in the debate. The power of "altered states," i.e., epistemic peak experiences, is in their ability to point to how the mind works, by interrupting one's habituated, therefore hidden, epistemic thought processes. What we can *correctly learn* from experiences of this sort is the way that reality is constructed through such an epistemic process. What is most commonly interpreted to be the case—incorrectly—is that such epistemic experiences disclose some ultimate, if otherworldly, reality.[29]

The atemporal nature of the Ontological Dimension is responsible for the characteristics of the ontological now-ness, the feeling of always already, and by extension, the identity of movement and non-movement. The ontological also has an a-spatial character, which is experienced as an open dimension.[30] The Process Model warns us that this "openness" is not the same as what we can imagine conceptually as emptiness or radical interiority (subject permanence).[31] This openness, rather, is also something experienced as a dynamic *opening-up-to*

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[28] There is a great movie that deals with just this situation, *Samsara* directed by Nalin Pan

[29] Wade (1996) writes:

Plasticity of space and time, the loss of self-boundaries, hallucinations—especially unusual percepts such as light, ineffability, and sensations of infinite energy—are subjectively experienced as a non-Newtonian reality, such as another dimension or spiritual realm.... Sensitives, psychics, athletes, religious ecstatics, recreational drug-users, survivors of near-death experiences, and many "ordinary" people typically experience altered states—if not by accident, most often for egoic reasons unrepresentative of this [Transcendent] stage. They may never progress through the discipline and noetic development beyond strong imagery and bodily sensations to realize that reality is constructed. Hence, they experience a convincingly real "other" world—and their numbers are legion compared to the small proportion of people operating at the high end of Transcendent consciousness (p. 191).

[30] Guenther (1984) points out the corollary relationship between Being's atemporality and open capacity, in characteristically obtuse ways, among them by describing "Being's dynamic character" as "exhibiting [the] atemporally abiding aspect of … Being's essentially open (that is, nonreductive) character, termed utter openness (stong-pa)" (p. 8).

[31] The Process Model maps out why this is the case, since it shows that emptiness *as* interiority is part of the complementary valences in the epistemological field. The actual exegesis of the relationship between openness, or open awareness in the ontological dimension and the notion of emptiness, is well beyond the scope of this article. Suffice it to say that the Process Model is aligned with the Dzogchen Bon texts in which open awareness is contrasted to both sunyata (emptiness) and the permanent subject that realizes it; for example:

The tradition of *Authenticity* does not consider phenomena empty because they are unfindable; it sees all appearances as empty because they are one in essence (ngo bo gcig) with mindnature (sems nyid). This is pivotal to understanding Dzogchen's view of the authentic. Neither the merely empty nor the wisdom realizing it can be authentic in the way that, finally, our text will propose that reflexive open awareness is authentic. (Klein & Tenzin Rinpoche, 2006).

what is absent, what is be-coming—a kind of clearing that allows the presencing of Being. Heidegger borrowed a Greek term *aletheia* to describe the kind of ontological truth that is disclosed by an *opening-up-to*:

> Heidegger [redefines] aletheia: no longer understood as truth, it is now that opening which first grants the possibility of truth. ... Metaphysics asks about this Being (i.e. the ground) of beings, but "does not ask about Being as Being, that is … how there can be presence as such. There is presence only when opening is dominant. To "think this opening" is the future task for thought (Loy, 1988, p. 173).[32]

Finally, according to Guenther (1984), Dzogchen contrasts the two great realms (the Epistemological Field and the Ontological Dimension) in energetic terms. The movement in the epistemological field is imagined to dissipate the extremely high energies that are in a sense "stored" in the open and boundless ontological dimension. Therefore, training the mind to be still builds up greater and greater energies (or higher and higher energetic frequencies) which are required to create stable meditative states. According to Guenther, the two realms are coupled in a very interesting way: although the energy from the ontological is dissipated by the epistemological movement, it cannot be exhausted by the epistemological; rather, all the complexity that thereby arises in the epistemological field from that movement*, actually fuels or recharges the energies in the ontological dimension.*[33]

Well, that is a good story to think on. Let's now investigate some of those complexities that arise in the epistemological field.

The Conditions of Structural Enfoldment

The section, Structures in the Epistemological Field, discussed how primary structures arise in the Epistemological Field through simple operations between vector(aspects). In this section I will show how more complex structures can be seen to arise through 2nd order and 3rd order (and by extension on to… nth order) iterations.[34] In Figure 7 (see Appendix A: Figures) I have drawn

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Just how far the Process Model can take us with regards to highly complex and esoteric themes as those taken up by the best Dzogchen texts, is a challenge for future process thought.

[32] In *End of Philosophy,* Heidegger (1973) writes of this openness in terms of light and its clearing:

> Light can stream into the clearing, into its openness, and let brightness play with darkness in it. But light never first creates openness. Rather, light presupposes openness.

> In the Greek language, one is not speaking about the action of seeing, … but about that which gleams and radiates. But it can radiate only if openness has already been granted. The beam of light does not first create the opening, openness, it only traverses it.

> We have already reflected upon the fact that the path of thinking … needs the opening. But in that opening rests possible radiance, that is, the possible presencing of presence itself (pp. 384-387).

[33] See Appendix B: Guenther Notes.

[34] "Iterations" simply means one complete revolution through the process field. It is important to note that such a revolution requires a directional component (imagined as either clockwise or counterclockwise

these higher order structures as layers of something like a conch shell growing in a clockwise spiral direction in the epistemological plane. If we imagine the layers growing in both breadth along the interior-exterior valence *and* depth along the one-many valence, we can imagine a conch shell-like structure that grows both wider across the page and thicker as it expands up from the page. The operations that drive the expansion(breadth) in the page-plane represent oscillations along the interior-exterior valence; and operations that drive the thickening(depth) up from the page-plane represent oscillations along the one-many valence.[35] In this way the Process Model gives a dynamic representation of how structure-stages arise—oscillations along the interior-exterior valence(increase in breadth) represent Wilber's phase dynamics wherein "the subject of the prior stage becomes the object of the subject of the later stage;" and the oscillations along the one-many valence(increase in depth) represents the holarchic (whole-part) relations of the structure-stages.

We are now ready to identify the process under which structural enfoldment occurs, namely, (1) through a directional process of iterations (2) within a field of complementary valences (3) deriving interior-exterior and whole-part relations. In Excerpt D, Wilber writes "any integral metatheory might best be guided by three heuristic principles: nonexclusion, enactment, enfoldment" (p. 1). Of enfoldment in particular, Wilber says in Excerpt B:

> Each moment unfolds a new and creative expanse that enfolds and embraces its predecessors… . The prehensive process of unfoldment/enfoldment in any stream could also be called the "natural growth principle" in any stream, and I very much agree with Whitehead that without both an unfolding-creative novelty and an enfolding-loving embrace, it is just damned difficult to account for moment-to-moment existence in any domain at all.[36]

In Figure 7, structural enfoldment is represented by movement in the clockwise direction; and so unfoldment is represented by counter-clockwise movement. Unlike Wilber, however, the

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movement in the field); and that this directional component constrains the kinds of structures that arise. I would also like to make a point of some terminology distinctions that relate to the discussions that follow. Primary structures result from combinations that happen in the field of valences without re-iterative cycles. Quadrant-structures arise from interplay of neighboring aspects without iteration—there is no axis or direction of revolution. An iterative process may be composed of any number of operations through a single revolution, depending on how finely one slices the pie. Theoretically, there are an infinite number of gradations that can be described through any process, from "start to finish" that alternately, can be viewed as a seamless whole. The Process Model attempts to describe individual transformations for each structure that is introduced in its structural counterpart. Therefore, a structure that has been given four developmental stages will be assigned an operator between each step. A secondary structure of this sort will be described as a 2nd order structure of 4th order operations.

[35] I introduce this level of graphic complexity to give the reader a simplified re-representation of the kinds of dynamic interactions that go on in Herbert Guenther's (1984) *Matrix of Mystery*, in which "simultaneously encircling and encompassing oscillating isotropic radiations" radiate outward, creating "omni-directional outward-pushing fields;" the former, he calls "the inextricably connected dynamic nature of homogenous openness and isotropic omnidirectional lucency (stong-gsal dhyer-med), and the latter, he terms the "meaning saturated field of pristine cognitiveness (chos-dhyings ye-shes)" (pp. 49-51)—none of which can be imagined to be limited to a three-dimensional interpretation such as ours, rather, Guenther's graphics requires one to be able to imagine many more multiple levels of dimensional space.
[36] http://wilber.shambhala.com/html/books/kosmos/excerptB/part2.cfm

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Process Model suggests that enfoldment*, rather than being essential to an integral view, is conditioned by only a particular view (the structural one) and therefore enfoldment itself needs to be contextualized.*

We can look how different creation stories arise from a different set of enfoldment conditions as a simplified example of how these conditions constrain our notions of reality. For example, if I start at the far end of the "one" vertices and move in a clockwise direction, I arrive at the typical Western scientific view of creation: Starting with the One Singularity, an Exterior world was created and the Many things combined and evolved until Interior consciousness evolved, giving rise to the sense of One self, namely me. Or I can start from the far end of the interior vertices and move in a counter-clockwise direction, and tell a radically different story: Starting at the far pole of Interiority (aka radical emptiness) arises One self in which arises the Exterior world of maya, in which the illusion of Many and separate Interiors (other(s)) namely me. If we "reverse" direction of movement in either of the above two stories, we can create different involutionary narratives. In the first sequence I unfold from, and am part to whole of a greater Exterior reality; in the second sequence, the world unfolds from, and is part to whole of a greater Interior reality.

These are simplistic versions of rich, complex stories shown here to illustrate how using the Process Model can generate the kinds of meta-narratives that are the foundations of our beliefs about reality. To move into a more sophisticated use of the Process Model, we begin by examining how it can support a process theory of cognition—a central issue in any integral metatheory. To do this, we will look in more detail at a modern process theory of cognition, and see how it can be mapped onto the Process Model.

Cognitive Microgenesis

Jason Brown (1991, 1996, 1997, 1998, 2000, 2002) has used the termed *Cognitive Microgenesis* to describe the process-based theory of cognition that he developed through years of clinical research on linguistic pathologies, as well as pathologies and anomalies concerning object relations. Simply stated, cognitive microgenesis says consciousness is a symphony-like process in which innumerably simultaneous "waves" advance from an unarticulated core through discrete steps (micro steps) toward a more and more fully articulated cognition, and then recede back to the core through the same steps. These micro steps are:

Core > Presence > Affect > Image > Object(body) Space > Object(world) Space

Microgenesis describes a process of *articulation*, in the sense of a further and further reaching out from a central core, so that we can say of the above sequence, presence articulates to affect, affect articulates to image, image to Object(body) Space, and that Object(world) Space is the final (or mature) articulation of the cognitive occasion. In addition, the innumerable simultaneously articulating waves do not necessarily reach the same levels of articulation, and are in different phases of advancing and receding—together which constitute the complex landscape of the cognitive occasion. In turn, each cognitive occasion is determined by a particular length or duration over which the microgenies are summed to produce it. Finally, the entire complex landscape of microgenies can be imagined to grow out in a branching structure, like an evolutionary tree, with mature forms arising and receding, with interference and resonance creating something along the lines of what Stuart Kaufmann (2000) calls "a fitness

landscape"[37] that lays down both the evolutionary history and the future potentials of cognition. This and many other implications stemming from Brown's theory of Cognitive Microgenesis concern topics outside the scope of this article, but I introduce them to give the reader a summary overview.

These "steps" can be described briefly as:

Core: The unarticulated core is aspectless.

Presence: … is the spontaneous potential of a cognition—the simple feeling of being.

Affect: Cognitions that articulate to affect stage are primordial feelings, like a deep intuitive feeling that has not yet attached itself to an image or word. For example, it is common to wake up from a dream with a clear "feeling" of the dream without being able to ascribe images or words to the dream. For example, instead of being able to say that in the dream "I opened a door," one would be pressed to say "*it was as if* there were a door and I opened it." The affect level "meaning" is clear, but it is only after the fact of awakening that we are required to search for appropriate or sufficient symbolic or linguistic forms for it—and the measure of sufficiency of those attempts can be gauged against the clearly present affect. Affect-level cognitions are not to be confused with "emotions," which are more complex structures.[38] [39]

Image: Image stage cognitions are like dreams that have an image form, thinking in pictures or symbolisms or various sorts, and visual hallucinations (pathological or otherwise); images that

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[37] The concept of a fitness landscape with respect to a population of cognitive microgenies is a significant hypothesis of the Process Model, with huge implications on the nature of cognitive development and evolution. In *Investigations,* Kaufmann writes;

> [consider] a population of replicators, say viruses or bacteria, evolving on a fitness landscape with many peaks of high fitness, valleys of low fitness, and ridges. In general, if the mutation rate is low enough, a population located at one point on the landscape will have a few mutants, one or two of which are fitter. These will replicate faster than the less fit cousins, eventually replacing them, so the population as a whole will move to the new point of higher fitness on the landscape. If the process is continued, the population will climb steadfastly uphill to a local fitness peak and remain in its vicinity (2000, p. 155).

If we imagine populations of microgenies evolving on a fitness landscape, where the fitness relationships among them are complex patterns over ranges of constructive and destructive interference, we can imagine a process through which cognition advances not only further from the core, but also through novel forms.

[38] The affect level of cognition is strikingly similar to what Gene Gendlin calls "felt-meaning," meaning which is implicit, that is, prior to any explicit forms, such as symbolic or linguistic thought. Here is Gendlin (1997a) describing it:

> Consider a poet, stuck in midst of writing a poem. The poem is unfinished. How to go on? The already written lines want something more, but what? The poet rereads the written lines. The poem goes on, there, where the lines end. The poet senses what that edge there needs (wants, demands, projects, *entwirft,* implies . . .) But there are no words for *that*. It is ah, uh,. . . . The poet's hand rotates in the air. The gesture says *that*.
>
> Many good lines offer themselves; they try to say, but do not say—*that*. The blank still *hangs there*, still implying something *more precise*.
>
> The . . . seems to lack words, but no. It knows the language, since it understands and rejects—the lines that came. … It knows what must be said, and knows that these lines don't say that (p. 17).

[39] Pathologies of the affect stage are paranoias—the feeling/affective layer is not susceptible to objective or rational interpretation that otherwise would present contrary evidence.

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are not yet associated with or alternately have become dissociated from, the concretizing operation of object perception.

Object(body)Space: Further articulation of the cognitive process generates the spatial dimensioning of the kinesthetic body and its perceived "dominion"—that of the will (willing my finger to move, for example).

Object(world)Space: The furthest articulation (or discharge) in Brown's theory of microgenesis. This is the point where cognition has articulated to object orientation that constitutes a world. We shall use our process model to take this articulation two steps further than Brown has proposed.

Brown describes the process of cognitive microgenesis in terms of discrete steps. To map this with the Process Model, the discrete steps of his micro-process can be seen as structures generated by moving through the Epistemological Field. We can easily map the microgenetic steps as enfolded (micro)structures onto our process model and create a model of cognition, as illustrated in Figure 8 (See Appendix A: Figures).

Brown's micro-states are represented as structures that are enfolded in a developmental series, building layers through clockwise movement.[40] Moving clockwise from the central "core," this movement progresses from the "deep interiority" of pure presence toward greater degrees of exteriority, through the steps of affect, image, object(body) space and world. As the microstructures build up like layers of a conch shell, there is a consistent dynamic associated with the progressive exteriorization of cognition. As pure presencing begins to articulate affect and images, a "self" is imputed as being "subject to" affects and images. In conventional cognition we still consider that feelings and dreams are part of our interior, and not somewhere "out there" in the world; yet there are micro-layers delimiting a deeper interior of affect, and an outer layer of image. (We are not our dreams, for example, but we have dreams, i.e., dreams are "exterior" to a deeper presence.)

Moving clockwise in the process model, we progress from "one and interior" toward "exterior and many." This is associated with a persistent dynamic—a progressive loss of agency that correlates with operations along the one-many valence (or the arising of a shared world). The affect level then "recedes" to a new interior layer, as the cognition articulates to image stage, which "emerges" into a new, yet still interior level—we still feel that feelings and dreams pertain to our sense of self and agency, more so than to the world "out there." But as cognition further articulates toward exterior and the first object cognition arises as "body," there is a sense of shared or relational agentic aspects that arises as the notion of internal *will*—the feeling of internal agency—and *intention*—the projection of will out in the world. The body represents the boundary between these two senses of agency, and is itself a combination of the two, since we feel we can will our body to act, but we do not have control over all the activities of the body.

Finally, further articulation of the microgenetic series toward the 'many' generates object(world) space. At this stage, interior agency completely withdraws, as we come to know objects in a world space that operates according to external causation and the independent laws of nature.[41]

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[40] In other words, the conditions of its structural enfoldment are (1) clockwise direction, (2) revolution in a field of valences, (3) deriving interior-exterior and whole-part relations.

[41] This of course describes the microgenry of conventional cognitions based on Newtonian view of reality. We can use the process model to describe trans-conventional cognitions also. For example, out of body experiences can be described as cognitions in which instead of an exteriorizing object-world "outside a receding self" (central agentic node), the self is experienced as outside of the object-world that

Mapping the cognitive microgenetic series onto the Process Model reveals the dynamic operators of cognitive articulation: a) *emergence* characterizes the phase from core to presence; b) *articulation* characterizes the phase from presence to affect; c) *withdrawal* characterizes the phase to image stage; d) *will* characterizes the phase to object(body) space—the final vestige of interior agency in a progressively exteriorizing cognition; and *protraction* characterizes the cognition of object(world) space.

Here is where Brown's theory ends, with the articulation of an independent subject sharing agency with an exterior world. While Brown considers the problem of other selves a condition of object relations, we can utilize the Process Model to continue to map the cognitive process from world(space) or the domain of 'exterior and many' all the way around the Epistemological Field, toward the 'many and interior' and finally back to the 'interior and one.' Proceeding through the Epistemological Field, clockwise from object(world space) and the inter-objective domains, we then generate other selves, or the inter-subjective domain. In the Process Model, the dynamic operator from world to others is *projection*—corresponding not only to the recognition of other human selves, but also associated with the dynamics of primary projections onto non-humans, animals, dolls, amulets, idols, etc. A complete turn ends with the operations between the 'interior and one' which constitutes what Whitehead termed *subjective unification*; or a coherence among parts; namely the experience not of a series of operations, or discrete stages, but a unitary expression of the enveloped parts as one structural whole (aka "self-world-other" or Wilber's co-emergent quadrants).

With respect to a structural view of integral theory, the Process Model asks us to think in terms of micro-steps that are transformationally related through a generative process. We can describe these transformations as operators that generate self-world-other. At a meta-systemic level call it A!. The processes in transformational relation to and generated by A! are:

emergence→articulation→withdrawal(1. will 2. intention)→protraction→projection→unification

Thus A! is the generative process that creates the complex landscape where

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arises within it. Stable out-of-body experiences verify that the conventional subject-object/interior-exterior relations are, as Guenther noted above, "*far from being normative for all experience,*" but dependent upon the conditions of structural enfoldment—the very framework through which cognitions arise. Experiences such as these also verify the notion held by process thinkers, that all relational change within a process—relations between structures, stages, "things"—are more like "Cambridge Properties" than real properties; in other words, they are not real changes, but rather are properties of an event only from a certain perspective, such as changes in relative motion, all of which depend upon a situated frame of reference. A stable out of body experience makes this very real—of numerous experiences of this kind, I have had the opportunity to note how the sounds and kinesthetic aspects of movement still point *to that moving is happening*—like the truck I can see myself driving "down there" from my vantage point of 30,000 feet above the world—but that inference *that something is moving*—is more like an intellectual assumption, since for all intents and purposes, nothing can actually be *seen moving relative to anything else.* That this is the case is consistent with the out-of-body cognition that the world and all its occurrences are happening "in me" rather than there being a "me" that is negotiating within a world "out there;" like the passenger on the train, he cannot "see" that the bag at his feet is moving at 80 miles per hour.

'presence,'
  'presence-affect,'
    'presence-affect-image,'
      'presence-affect-image-object(body),'
        'presence-affect-image-object(body)-object(world),'
          'presence-affect-image-object(body)-object(world)-others,'
            'presence-affect-image-object(body)-object(world)-others-unity'
              (and their respective, receding counterparts).

are in continual transformational relation. It is important to note that, from a process point of view, these micro-structures are not nested sets, but a much more fluid and dynamic set of articulations in continual transformation. In Brown's (2002) words:

> Stages in the microgenetic series are not only levels but ancestral minds given up in the growth of new form. A stage that is traversed can also be outcome depending on where the process terminates at a given moment. When a preliminary stage becomes a final one, as in a dream, the stage is part of another mental space. Intermediate levels in this transition are not traversed and abandoned in the progression to endstage, but lay down content at each ensuing segment. *The sequence is not an ascending stairway where each step is bypassed, nor is it like the passage from ice to water to vapor where physical effects on a single element impel it through a series of forms. Rather, the microgeny is like the growth of a sapling to a tree, or a child to an adult, where the form of the juvenile slowly disappears into that of the adult, but that which in the juvenile is unchanging continues long after in maturity to play a shaping role* (p. 46, emphasis added).

The various microstates don't stack up like the single line-levels representing structure-stage development. Rather, the full landscape of the numerous microstates develops over duration, like evolutionary branching of species develops over deep bio-geologic time. When the structural-stages are represented as a line on which are arranged developmental levels, it is easy to imagine that the later levels both transcend and include the previous levels. There is simply no where to "put" what has been left out, when the paradigm is a series of neatly nested sets. From a pure process view, development does not proceed in neatly nested sets, but through a continuum of transformation that prescribes a kind of evolutionary tree, or a process of later forms branching out from common prior forms. It is a process of iterative parcellation. On any given branch (or within any single microgeny) each later form includes one or more "mutations" or maturational steps, like a root system creating an intricate network of roots, or the cauliflower-like organization of the brain's surface—innumerable parcels stem from terminal mutations. If we trace a mature form back to the core, we map a single local narrative, along the route from which it came. If we benchmark our developmental story to this local narrative, we "see" a single series of development. Our story has no capacity to "jump" across branches to other, simultaneous events in the larger branching whole. A structure-stage approach is analogous to limiting oneself to only one of the branching routes. Hence, the single line approach used to describe developmental lines in a static, structural framework. Brown (2002) writes:

> Branching is a mode of cognition and evolutionary growth; it is how something new happens. In this way it is at the heart of the creative process. A mutation is a new idea in

evolution. In cases in which the mutation has an evolutionary impact, it appears as a change in development at a relatively early phase in ontogeny. Although encoded in the genes, the mutation is a downstream change in the developing organism, a disruption at a *subsurface* phase in maturational growth.

New ideas occur in the same way. An idea does not emanate from the play of introspection but is a deviation—a type of conceptual branching—at deeper form-building layers. The idea emerges from below, rises up, and is disclosed to consciousness. Creativity is a flight from deliberation in the service of a concept rising from below. This is also true for the deep appreciation of creative work. One can say, truly, that you discover the creative by falling into its parts and letting them discover you.

Novel configurations in cognition and development are constantly being generated in this way, either to persist and gradually transform the organism or disappear, submerged, in the weight of habit and the flow. Every so often, however, the slow incremental advance of mutations and ideas gives way to a leap in evolution and thought. The mutation transforms the organism as a great idea transforms cognition (pp. 47-48).

The Microgeny of the Conceptual

In the Process Model, the Epistemological Field is imagined as a field of forces, and the microgenesis of *conventional* cognition is a generative process being "driven" in that field from interior to exterior through whole-part transformations. Each cognition discharges to a specific form (a length or breadth that defines its "duration"); its duration in turn determines the cognitive event that arises, whether it be a primordial affect, an image, or a fully exteriorized world—and then each process recedes back to the core through the reverse sequence of microstates. The sum of numerous microstates going out and receding constitutes the full spectrum of what arises as self-world-other. From a structural point of view, we can say that the seven transformational operations that generate this spectrum generate a 2nd order "structure." This 2nd-order structure, S^2, completes itself with the operation of unification. In the Process Model, S^2 itself can be imagined to be subjected to a higher-order level of iterations in the process field. We can do the math as follows:

$S^1 1 \rightarrow S^1 2 \rightarrow S^1 3 \rightarrow \dots S^1 7^\uparrow \rightarrow S^2$ where S^2 stands in for $S^1 (1 \rightarrow 7)$ at the next processural level.

We can try to (loosely) map the microgenetic sequence onto a developmental narrative of human cognition. It is difficult to judge just when the human body-mind articulates a presence and affect level of cognition. But it is known that human fetuses dream by the second trimester—which corresponds to $S^1 3$ or the image level of articulation. Does a dreaming fetus have a sense of "self that dreams?" No. A "sense of self" arises only at $S^1 7$—the step at which subjective unification occurs. The fetus dreams, but is not "a dreaming self." $S^1 7$ correlates to the level of concrete operations. This is the level in which the original cognitive drive from core to world, discharges as action or behavior.

Can we then map a process of higher orders of cognition where S^2 is the starting condition (or alternately, $S^1 [1-7]$ is *the set of* starting conditions) which iterates in the process field to generate concepts; and then again values? Again, following Brown, we can map such generative

processes. Starting with S^2 another layer of transformation is created as we move a second go-round through the process field. This requires that the cognitive drive to discharge as action or behavior is sufficiently interrupted to propel a new mutation or parcellation over the duration of the microgeny. In other words, an entirely new "family of microstates" branches out, generating the conceptual order. The impulse to discharge as action-in-the-world splits off from a single-choice field towards that actional discharge into a novel series of microstates, constituting an entire range of conceptual enfoldments. Where the bifurcation occurs determines the affect, image, and intentional content of the concept—but the concept itself completely exteriorizes in the "field of the subjective self," which we have assigned the S^2 label. We begin to think our thoughts, bringing implicit feeling "forward" in reflection, in symbolic images or conceptual ideas.

In the conceptual order, concepts themselves fully exteriorize in the way objects had exteriorized, that is, through a withdrawal of agency. As is the case of the "objective world out there," when fully exteriorized (at the rational level), concepts themselves begin to be seen as independent *things* that function by *independent laws such as rules of logic and reason*, just as the object-world is seen to function by *independent laws of nature*. At this level, the primordial temporal and spatial aspects arising in the process field—the original "here-and-now"—acquires a secondary reflective aspect, in the protraction of an independent and abstract space-time field, in which operations are not uni-directional, but theoretically, that is to say, conceptually, reversible and therefore relativistic.

In the microgeny of the conceptual field, there is a kind of interruption or cessura, pointing to a functional neonaty in the higher (neo-cortical) levels of cognition. The act can be interrupted, and reflected upon, conceptually. However, the concepts themselves can reach a level of reification, which effectively discharges the impulse, completes or terminates the generative sequence into a mature form—the conceptualized occasion. It is here, in the conceptualized occasion (as in the lower-order actualized occasion), that the prior infinite potential is discharged into a finite actual, this time resting in a conceptual order rather than in an object(world). Yet this actual is finite in its duration also, and so impermanent, and the process repeats, returning to infinite potential, accompanied by a drive from the core, operating in a field of forces.

We can take this process further afield through yet higher-order transformations, where concepts themselves mediate between immediate apperception-and-action, through speech and other symbolic acts—a higher-order rule of projection, wherein the concept field is exteriorized to shared intersubjective space.

The Microgeny of Value

But what of values? How do they relate to cognition and concept in the Process Model? Consider how Figure 9 (see Appendix A: Figures) illustrates the primary microstates along a spiral path starting from the core at E^1 and ending with the primary quadrant-level components, self-world-other at E^2. From there, a second-order process diverges into microstates along a spiral path ending at E^3. The path $E^2 \rightarrow E^3$ represents the values stream, and completes with the condition of self-world-other-beliefs. Beliefs are rather complex human systems; but the Process

Model suggests that they are systems that arise through a complex web of relations between conditions governing microstates in a process field.[42]

These value-microstates follow a path that parallels the primary cognitive microstates, the path from interior to exterior articulation and through whole-part transformations (parcellation or branching). The values micro-stream goes:

existence > interest > attention > desire > worth > universals > beliefs

According to Brown, the fundamental level of value is existence. What exists for us has inherent value; what has zero value simply never arises. I look out over a springtime meadow, taking in all the colors and textures and aromas. My eye settles on a daisy—not just any daisy, but just this particular one. My mind relaxes in the joyful play of this daisy and I. These are the inherently valuable existents which exteriorize for me over the durations of the cognitive moments. For the bee, bird and butterfly, there are a set of different values, hence a different set of existents.

Primary value then is laid down in the course of the microstates over the various durations of microgenesis. This means, self-other-world arises not as a neutral condition, but already hugely constrained by the conditions of their generative process.[43] Add an affect layer, and existence is imbued with a sense of realness, and *interest in* the real arises. As agency withdraws, value is exteriorized outward as *attention toward* the object(s) of interest. As the values stream further exteriorizes into body(space), attention exteriorizes in the body—the boundary between self and world—as desire. Desire in turn reaches out into the world as desir*e for an object,* and subsequently conceptualized as the object's *worth.* Projection of object worth into inter-subjective space generates the universals (the good, the true, the beautiful). And finally, universals, when incorporated into the self in the process of subjective unification, create the self-system-in-beliefs.

There are extraordinary implications for thinking about values through a process view. This view can be seen to be the same view as the Buddhist notion of root cause. The Process Model can be used to trace beliefs back to root causes in desire, and beneath that, in the nature of mind and cognition. Self-world-other may arise as an inimical triumvirate, but they are not value-neutral. The processes that set down the conditions of their arising, moment to moment, are inherently absorptive of all kinds of conditions determining even the most primitive values. Understanding those conditions can help us design transformative practices for rendering them transparent.

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[42] Note, because this section deals with the processes of *cognition*, it does not account for the conditions external to consciousness which co-determine of the emerging microstates. It is important to note, however, that the nature of these "external" conditions are neither objects nor other subjects per se, since the process model shows us that objects and other subjects are internal to the cognitive process. What then can these "external" conditions be? In future articles I intend to discuss how the Process Model can help describe them, and serve as a bridge between Integral Theory and some of today's most important new thought on process and generative order.

[43] This is one of the main reasons why deepening your integral practice requires you to delve into the subtle nature of mind-and-world, or simply, MindNature. Practices such as Mahamudra and Tibetan dream work and dark retreats work are designed to render the cognitive processes transparent, so that we are no longer bound by their hidden conditions, but liberated to dance creatively in the dynamic field called "mind."

If we chart both the cognitive and value microstates according to the sequence of operators which drive the cognitive microstates, we can easily see the iterative nature of the process field.

Operator	→	Cognitive Microstate	Value Microstate
		Core	Self (ego)
Emergence	→	Presence	Existence
Articulation	→	Affect	Interest
Withdrawal (1)	→	Image	Attention
Withdrawal (2)	→	Object(body)	Desire
Protraction	→	Object(world)	Worth
Projection	→	Others	Universals
Unification	→	Self(ego)	Beliefs

We can see the parallels in the micro-series illustrated in the following figures:
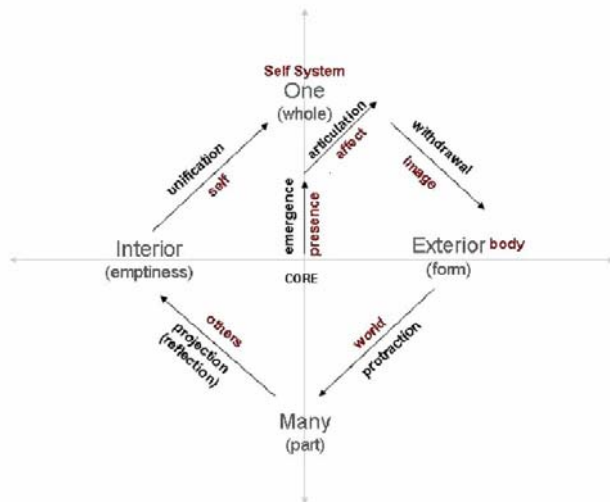

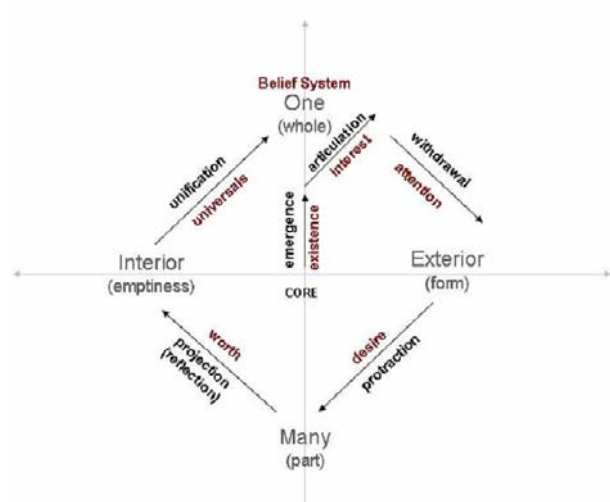
Figure 10. Self System

Figure 11. Belief System

By linking the self-system with its values streams in this way, we can start to look at the genesis of beliefs from a pure process view, namely from the transformations that operate in the wave of cognition from core to world and in return. If these processes are conceptualizable, then it may be the case that they can be made realizable, that is, transmuted into phenomena that can be experienced by the self, rather than properties that condition or constrain the self. This is the Mahamudra path toward liberation.

Conclusion

I was poking around a shop at the seashore and happened upon a large chambered nautilus. It had been carefully sliced open and mounted so as to display both the inner and outer sides of the same shell side by side. On one side, I saw a succession of chambers that began very small and grew evenly as they followed the graceful arch of the shell's unfolding spiral. To me, each chamber represented a human life, a finite stage in larger development, always followed by another larger than it. Round and round the lives unfolded, spinning the archetypal spiral of cyclic yet infinite development.

Next to this spiral of chambers was mounted the outer wall of the same shell. This side spoke of wholeness, for it showed a colorful pattern of strong brown lines that integrated and unified the chambers within. The design was so masterfully executed that it looked as though an artist had picked up a fully grown shell and painted it with a few broad strokes. The brown streaks cut smoothly across the shell's inner chambers as if they weren't there (Bache, 1990, p. 109).

All of reality presents itself in the way of the nautilus: how nature reveals herself to us is conditioned by the perspective(s) we take, that is, by the epistemic framework we build to receive her. If we have only static structural categories in that framework, nature will reveal herself as a succession of structurally related parts, that is, parts related by the *conditions of structural enfoldment in our framework*. We might hear nature speak, but never hear her sing. There are two video clips on the web that give good examples of conditions of structural enfoldment.

One can be accessed at http://www.youtube.com/watch?v=Zkox6niJ1Wc. It shows a metal plate that vibrates at increasingly higher frequencies. A white sandy substance is dusted on the surface of the plate, and at certain intervals, the white sand creates intricate patterns. The patterns themselves go through a patterned dynamic—some phases of increasing fractal complexity, other times creating a newly simplified, novel pattern. Although the frequency rises at a fixed rate, the patterns "emerge" only at certain intervals. What determines the static appearance of these patterns constitutes the conditions of structural enfoldment of the system. These conditions have to do with the nature of the sand, gravity and the like *but also with the nature of the "operational system" that is experiencing the show*—the sand reveals itself in patterns in ways that we can perceive patterns, and as chaos in ways that we cannot perceive as patterns.

The video of Nate True's Time Fountain, at http://cre.ations.net/creation/44, demonstrates the temporal conditions of structural enfoldment. By creating the illusion of stopping or reversing time, the Time Fountain changes what we experience of the fountain. It is because we benchmark a fixed direction of time, that the illusion is successful—the strobe is designed to take advantage of what we have habitually inferred as being fixed properties of time. Experiments like these point to the limits of our perceptual apparatus. But perceptual illusions of this sort are *only possible because we receive them in a limited frame of reference—one that is temporally conditioned by an arrow of time.* It is not only conceivable, but also possible, to experience our perceptions in a more open, transparent way, where time is not a condition of that experience, but the temporal framework itself is seen to arise within the dynamic field called "mind."

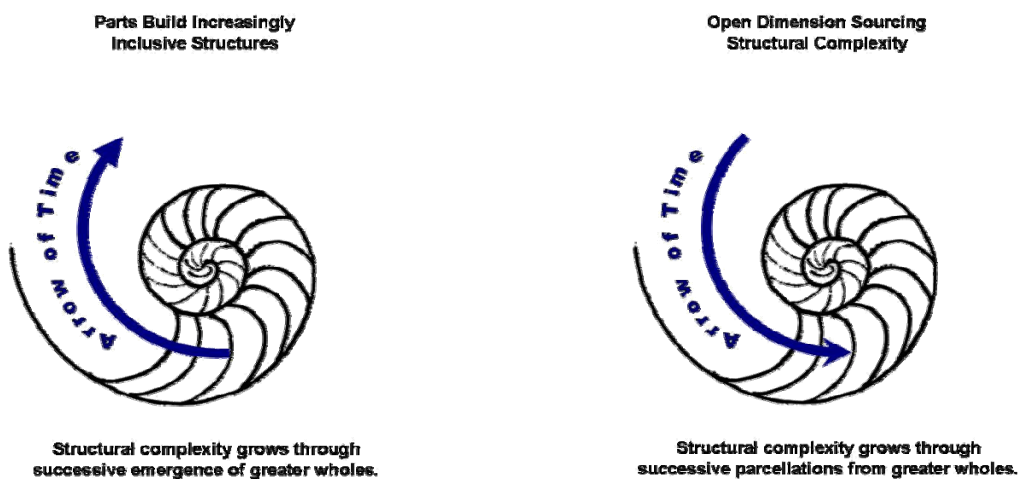Consider for example, the role of time in the following figures:

Figure 12. Arrow of Time

Both diagrams illustrate a process of structural growth, but the temporal condition of their structural enfoldment—i.e., the arrow of time—is switched between the two. In the first diagram we "see" prior parts building greater and greater wholes. This corresponds to Wilber's structural, holarchical view. In the second diagram we "see" a series of finer and finer parts parcellating from prior wholes. This correlates to Jason Brown's theory of microgenesis. In process language, the former "sees" actuals realizing more of the "original" potential; the second "sees" original potential generating more and more actuals. There is also an "interior-exterior" condition that distinguishes the two views, represented by the spatial regions in the illustrations. The first view

"sees" complexity as an ever-expanding evolution into an unbounded aspectless "exterior" wholeness; the other "sees" an unbounded original wholeness penetrating infinite "interior" depth.

If we can agree that there is some truth to both of these views, then it must be the case that each view is *true but partial*. However, since they both arise from a structural approach—within a structural framework which is *itself limited* by the very same conditions of structural enfoldment—that framework cannot show *how* they are true and partial. A structural approach, therefore, is forced to choose one over the other. Only a process approach has the capacity to widen the view beyond the conditions of structural enfoldment, so that they no longer constrain our view, but are contextualized by it. A pure process view, such as a generative process, says that the all of the actual is already *in* the potential as potential actuals. You cannot have, as Rescher (1996) describes below, the notion of an arrow of time pointing to future development, without already having ascribed future actuals as present potentials.

> An important merit of process philosophy is its ability to avert difficulties that afflict substantialism. Consider just one example. Seeing that future things do not (yet) exist, substance metaphysicians have difficulties with the future and cannot confidently accommodate it in their ontology. Process metaphysics avoids this difficulty from the outset. For the processural nature of the real means that the present constitution of things always projects beyond itself into one as yet unrealized future. You cannot claim the arrow is moving now without committing yourself to its occupying a different position in the future. The future has its place within the processural present, seeing that the present is pregnant with the future (p. 54).

Likewise, a generative process says that, simultaneously, all of the actuals reflect their prior "formatted" potential, in the process of realizing (actualizing) themselves. You cannot have, in this instance, the notion of an arrow of time having come from the past potential, without already having ascribed those realized actuals as inherent in that original potential.

Referring then to the set of diagrams above, a pure process approach sees they are saying the same thing, namely that potentials are generating actuals, and actuals are realizing potentials, regardless of the arrow of time—it has been rendered transparent. The whole-part condition between the two has also broken down, since potentials and actuals are *both whole and part to each other*—on the one hand, there is all of the actual potential (but not all of the actual) in the potential, and there is all of the actual (but not all of the actual potential) in the actual.[44] In other words, generative processes are "Janus faced"—they look in two directions at once, inside and outside, past and future, whole and part.

The Process Model goes even further than this. The Process Model shows us that *neither* of the two has the capacity to reason into the ontological dimension, neither has the capacity to address what is your ontological view, since neither has the capacity to go beyond its, and their, conditioned epistemic relations. The problem we face is that our deepest spiritual concerns are ontological ones, and yet we allow our spiritual notions to either flounder around or compete with each other in limited epistemological frameworks. The Process Model points to a different place entirely. It says that although one cannot reason oneself into a deeper ontological view,

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[44] This is the explanation of what was proposed earlier, namely that a process approach can legitimately express that P generates A *and* A actualizes P.

one's ontological view deepens *from the kinds of ontological encounters we are open to receive.* Furthermore, it warns, the most limiting factor in our ability to *open up* to those encounters is our continual embeddedness in one or another, or even a spectrum of epistemological frames of mind, also known as, "perspectives."

This, then, underscores the essential distinction I made at the beginning of this article: a view cannot arise *within or from* a perspective. Rather, *how the perspectives are viewed* arises from a deeper, more fundamental—that is, *ontological*—view. While I consider one of the greatest contributions to integral theory is Wilber's integration of the "Big Three," the "I, We, Its" through the notion of perspectives, I also think the Process Model points out the need to integrate the *Field of the Big Three* (i.e., the Epistemological Field) with the Dimension of the Ontological, through just this notion of view and the role of the ontological that the Dzogchen thinkers have assigned it.[45]

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[45] The Dzogchen notion of *view* is incredibly rich and inherently difficult to describe. I only hope to have been able to give the reader a good sense, first, of what can't at all describe *view*, and secondly, a way to begin pointing out the ontological dimensioning of the notion of *view*. What I have expressed, however, is merely an iota of Dzogchen understanding which posits a state of "authentic open awareness" which corresponds loosely to a state in which there is "no longer a view" or alternately, a thoroughly open view, which Klein and Tenzin Rinpoche (2006) term "authentic open awareness." You can see the connection between this "authentic open awareness," and the ontological dimensioning of *view* in passages such as:

> The view established through reasoning is not the authentic state of open awareness. That state must be described in ontological as well as epistemological terms; hence the conflation, experientially and philosophically, of unbounded wholeness with open awareness. Unbounded wholeness is how and what reality is. In that sense it is an ontological term. Open awareness, fully present to that state of wholeness, is the knowing of it. It is an epistemological unity; open awareness experiencing itself as unbounded wholeness. Establishing the view is not a method for realizing the view (p. 6).

The complexity of Dzogchen thought is nearly incomprehensible. For example, the above passage points to an "epistemological unity;" but the dichotomic mind, according to Dzogchen, is the *vehicle* of knowing. According to Klein and Tenzin Rinpoche, the Dzogchen "resolved" this problem by considering that authentic open awareness is not a consciousness at all.

> Unlike inference and direct perception in classic Buddhist discussions of mind and logic, reflexively authentic open awareness does not take the measure of anything. There is no process of authentication associated with open awareness at all; it is simply, in and of itself, authentic to its own nature. This is possible because, again, open awareness is not a consciousness. This is its unique epistemological characteristic, privileging it over all the other authenticators (p. 37).

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