

## Embodied Realisms and Integral Ontologies: Toward Self-Critical Theories

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### Introduction: Ontological pink elephants and self-critical theories

In this chapter I will explore how embodied approaches impact inquiry into to ontological questions, and will explicitly relate this to integral and post-metaphysical studies. One aim is to support more fully "construct-aware" treatments of integral theories and models.<sup>1</sup> That is, treatments that take account of the indeterminacies and fallibilities inherent in using abstract concepts and models to make claims about reality. In philosophical discourse, *ontology* concerns both the epistemological/pragmatic questions of how to name aspects of reality to best meet certain needs, and, more famously, the metaphysical questions concerning the ultimate or foundational components of reality. At stake is what can be considered *real* (vs. epiphenomenal or derivative; merely subjective, imaginary or fictitious; or fallacious and groundless). And what is considered *real* or to exist (or the definitions, meaning, or deep nature of real things) is often at the core of disagreements about the *truth* of claims—giving ontological considerations significant importance in dialogue that may not on the surface seem to contain ontological themes.

In modern thought it is widely acknowledged that the way a given group's vocabulary conceptually slices up the world has a significant impact on what is given salience and importance. The "ontological legislation" of giving things names, and thus tendering more reality to the objects they denote, whether it happens culturally (organically, bottom up), or through the power structures of institutions (top down sanctioning), partitions the buzzing booming chaos of reality into things of importance, those of lesser importance, and that which can barely be

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<sup>1</sup> In this paper Integral Theory references Wilberian integral theory, and "integral theory" references a wider set of theories.

considered or known to exist.<sup>2</sup> The differentiations (and integrations) provided by ontologies-in-use constrain the set of choices one has in dialogue, action, and even thought.

Philosophical arguments trying to establish the reality or nature of abstract objects such as time, space, causality, god, soul, ego, evolution, freedom, consciousness, life, or democracy have been famously thorny, convoluted, or inconclusive throughout history. Not only are such philosophical arguments and claims problematic, but, more fundamentally, so are the very constructs (concepts, terms, or objects) that these claims refer to and are built up from. (Note that while the *answers* to core ontological questions seems ever problematic, the investigations into those questions are often fruitful.) A substantial segment of philosophical text labors to work out the hermeneutic issues of what others mean by their terms. For example, Steven Wagner notes: "Everyone knows Poincare insisted, against Russell, that logic depends on psychology, which makes him a 'psychologist about logic'. What Poincare actually meant by 'logic' or 'psychology' and what drove his insistence are far less clear." (Wagner 2001, p 35). Among philosophers who disagree on whether "knowledge is justified true belief"—do they agree on the definitions of these five terms? What did Heidegger mean by being? Plato by form? Freud by ego? Kant by things-in-themselves? These questions are highly contentious.

In this paper I am less interested in the ontological status of any specific object or construct, but rather in the general nature of objects and constructs and the genesis and use of categories to describe reality. This relates to philosophical inquiry, but also more broadly to all forms of deliberation and knowledge building. How can scholars fully acknowledge yet successfully cope with indeterminacies inherent in category-conferring and reality-conferring ontological decisions? How can one make sturdy ontological commitments yet avoid degrees or styles of certainty or foundationalism that are outmoded by an emerging understanding of the fallibility of knowledge? So many academic authors bemoan, in their introductory paragraphs, that one of the problems needing to be addressed in their field is insufficient agreement or excessive ambiguity about the meaning of the key terms of the field.<sup>3</sup> In most "soft" science and humanities domains, though understanding surely evolves, this problem never seems to go away. Rigorous efforts must be made to clarify key terms, but many authors do not seem to acknowledge that

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<sup>2</sup> For many concrete objects the senses (bare or through instrumentation) by themselves reveal definitive entities (the dog, the city), without much need for language, but nomenclature and ontology have a strong role in the genesis and perception of *abstract* constructs, including classes of concrete objects (dogs, cities).

<sup>3</sup> Many areas of scholarly work are, as Michael Shermer puts it, "notoriously fraught with definitional disagreement" (Shermer, 2011a).

indeterminacy is, to some degree, natural and unavoidable, and a great deal of the indeterminacy must be "coped with" rather than solved or debated.

Ontological issues are particularly relevant to those making or using theories and models, and thus are of great importance to integralists (those creating or using integral theories). Integral theories are trans-disciplinary meta-theories or meta-maps that take very general perspectives, coordinate systems of systems, use highly abstract concepts, and make claims about the most essential components of reality. Integralists often note that "the map is not the territory" and then go on to explain how we need good maps to navigate our complex world. The admission of fallibility or indeterminacy is too often a closure to preempt common concerns, and not often enough an opening into deeper questions. Here I aim to use the notion of embodiment to explore more deeply and precisely exactly *how* (and why) maps and the abstract objects they are built up from differ from the territory, so that we can be more skillful makers and users of such maps.

As an example of the difficulties inherent in ontological claims, consider Ken Wilber's treatment of perspectives, a central concept in Integral Theory's AQAL model. AQAL includes categories for a fundamental structure or makeup of reality (Wilber 2006). In *Integral Spirituality* Wilber says:

...all objects are first and foremost perspectives. NOT 'are seen from perspectives,' but ARE perspectives...there is no 'apart from' how a thing appears...'things' do not exist in a pre-given world... (IBID, p. 252).

There are several assumptions or implications here. The idea that our mental apparatus constructs our perception of objects and even their appearance *as* objects, is generally accepted. But this quote leaves open the question of whether *perspectives* exist in a pre-given world (and whether they might reasonably be considered "things"—which would lead to a contradiction in the quote). One of Wilber's primary students and colleagues, Clint Fuchs, says that "Put as simply as possible: perspectives are primordial, which is to say they are the most fundamental or primeval elements of reality, existing at or from the beginning of time" (2010, p. 1). On the other hand, in the same paragraph, he says "It is through perspectives and perspectives alone that we come to understand anything about our world."

Are perspectives then things that humans have/use, or are they fundamental components of the world?<sup>4</sup>

Wilber's claim that "there is no 'apart from' how a thing appears" seems to be taking the non-realist (or radical social constructivist) position that a world "out there" does not exist—a position known to lead to performative contradictions. Collier notes that "Heidegger...argues forcefully that non-realism is a non-starter, as it presupposes a worldless subject, and we are essential Being-in-the-world" (Collier, 1994, p. 30). On the surface Wilber's claim also appears to fall prey to what Roy Bhaskar calls the epistemic fallacy: "the view that statements about being can be reduced to or analyzed in terms of statements about knowledge" (1975, p. 36; and see Collier pp. 76-84). Yet in the larger context of his body of work Wilber does *not* take a radically anti-realist or social constructivist position, *nor* fall prey to the epistemic fallacy. Demonstrating how Wilber's theory is more nuanced and sophisticated than these labels can capture is beyond our scope here. The quotes are given simply as examples of a broader phenomenon.

These sorts of terminological pickles and conceptual paradoxes appear regularly in philosophical/ontological inquiries into the essential or fundamental nature of things. They easily become the pink elephants dodged in an extended argument, or the endless mazes of clarification and hedging that seem necessary to keep from contradicting oneself. For some the solution is the anti-foundationalists (or anti-essentialist) perspective that all claims about the essential or foundational elements or structures of reality are wrong-headed or meaningless, and should be avoided. Yet foundational claims, even if fallible, do have significant meaning-generative potential ("meaning-generative claims" are mentioned later, and explored in depth in Murray, 2011). In fact, those probing into the deepest philosophical questions can hardly avoid taking on foundational models, if only hypothetically.

Emerging post-post-modern and "embodied" frameworks are ameliorating some of these ontological elephants, pickles, and mazes. In this article I will mention the theories of Wilber, Habermas, Bhaskar, and others compatible with the embodied perspective, but will focus on George Lakoff and Mark Johnson's Embodied Realism, which is based on findings from cognitive science. Wilber's Integral Theory is not incompatible with Embodied Realism, but does not much incorporate it; and I believe that all integral frameworks could benefit from a deeper application of a cognitive-science-inspired embodied perspectives.

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<sup>4</sup> In Wilber (Excerpt A, online) he again seems contradictory regarding whether perspectives are inherent in the universe or aspects of human cognition: "These four perspectives are not merely arbitrary conventions. Rather, they are dimensions that are so fundamental that they have become embedded in language as pronouns during the natural course of evolution. These embedded perspectives show up as first, second, and third person pronouns." That something seems to be universally embedded in human languages tells us something about how the mind works, but not, I would argue, anything about the deep nature of reality.

In "Toward post-metaphysical enactments: On epistemic drives, negative capability, and indeterminacy analysis" (Murray, 2011, henceforth "PME") I distinguish approaches with greater "positive capability" from those with greater "negative capability" (a term coined by the poet John Keats). Positivistic approaches provide high level models and concepts enabling more reasoning power, and can increase clarity and confidence in certain areas of inquiry. Approaches with more negative capability expose indeterminacy in human beliefs. They reveal ever deeper unsettling territories of unknowing and fallibility that call for the "negative capability" of being able to tolerate cognitive dissonance and work within uncertainty, fallibility, ignorance, mystery, and paradox.<sup>5</sup>

Importantly, while both types of approaches can form the basis of *critical theories* (both Wilber and Bhaskar use their frameworks to validate arguments for human social and spiritual growth and emancipation), approaches with negative capability, Habermas' work, Lakoff and Johnson's work for example, provide a richer tool set for a deep and embedded *self-critique* and reflective auto-awareness ("self" here referring not to a person but a theory or worldview's ability to speak to its *own* limitations explicitly).

Andrew Collier notes that a philosophy takes on the function of critique (as in "Critical Theory" or "Critical Realism") "when it exposes internal contradictions in the beliefs implicit in the practice" of some theory or ideology (1994, p. 18). Critical theories are usually thought of as critiquing social norms, especially dominant narratives. Habermas' post-metaphysics, which comes out of the Frankfurt School's Critical Theory, exposes the deep fallibilities in knowledge and knowledge-generation processes, and does so in a way that not only questions dominant social norms but can be used self-reflectively to critique a theorists' or group's *own* stance.<sup>6</sup> Habermas calls the knowledge gained by critical self-reflection "emancipatory." Without this negative capability that allows for such self-reflection, even post-post-modern theories are still susceptible to certain types of ontological conundrums.

This work follows in the spirit of Habermas' post-metaphysics, which speaks to the modern understanding that all knowledge is fallible. I offer some analysis of the sources of this fallibility allowing interlocutors to better ameliorate or cope with it. In particular, I explore how ontological questions about the fundamental categories of nature, what entities should be considered primary or real objects, and how to best name and classify objects, are all imbued with fallibility due to how the embodied mind processes categorical and theoretical ideas. In this paper we

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<sup>5</sup> A popular quote attributed to Voltaire says: "Doubt is uncomfortable, certainty is ridiculous."

<sup>6</sup> Habermas (2003, p. 9) says "the post-metaphysical awareness that even the best results of these fallible learning processes remain, in a significant sense, our insights. Even true assertions can realize only those ways of knowing that our sociocultural forms of life make available to us. This insight teaches us the limits of philosophical thought after metaphysics."

will explore some of these specific sources of this "concept indeterminacy," along with approaches for dealing with it. Though Habermas' work substantially acknowledges psychological and cognitive principles, it does not draw deeply from that field. My goal here is to more fully connect embodiment-based theories of mind with the post-metaphysical (and thus Habermasian) idea of knowledge fallibility.

I will explore the implications of the embodied mind, including: graded conceptual boundaries and metaphorical pluralism (from Lakoff and Johnson); Integral Pluralism; adequatio, and epistemic drives—all of which stem from an embodied perspective on ontological issues. Various perspectives on embodied cognition will be explored, including Ontological Pluralism, Metaphorical Pluralism, Critical Realism, and Embodied Realism. In the final sections I will apply these themes to explore the consequences of indeterminacy in the ontological claims of integral theories. The Conclusion applies what has been illustrated about embodiment and ontological to discuss self-critical theories.

Why is concept indeterminacy important for integral theorists and practitioners to consider and understand? As long as one is developing and using integral theories and models within the community of the enculturated (preaching to the choir), these issues seem inert. But when one tries to (a) cross disciplinary boundaries to interact with other communities, (b) apply these ideas and explain one's purposes to stakeholders, or (c) have a constructive dialogue with others who don't agree with some aspect of the theory or model—that is, when the integral world view needs to reach across and communicate with other world views or conceptual frames—then the ontological issues of concept indeterminacy are critically important to understand (and ameliorate or cope with). And of course, such reaching out to, positively affecting, *and being affected by* individuals with other conceptual frames is the real end goal of integral theory and practice.

For short hand, I will call this "The Idea Portability Principle:" that *understanding and dealing with the indeterminacy of ideas is more important the greater the distance between the world views or beliefs of interlocutors*. Integral theories straddle and connect relatively rigorous fields of science (e.g. evolutionary biology, psychology, systems theory) with less exact fields of inquiry in the social sciences (e.g. education, psychotherapy, leadership) and even with highly speculative or esoteric ideas about spirituality, mind, and the cosmos. To make credible arguments in the less concrete domains, it behooves us to develop styles of argumentation, meta-dialogue, and self-reflection that speak directly to the greater degrees of indeterminacy of our more abstract, metaphysical, or esoteric claims.

**Of author and reader.** In ending this introductory section I would like to position the author and indented reader. My academic background is in the areas of physics and engineering, educational theory, cognitive psychology, knowledge engineering, and various areas of software and computational systems. I have no formal training in philosophical topics or methods (aside from an undergraduate minor in philosophy). In whatever field I have worked in I find myself drawn to the bigger picture systemic and philosophical questions, and my readings in philosophy might be considered wide for someone not in the field. As I entered into the community of integral scholars and practitioners (hereafter "the integral community") about eight years ago these interests heightened, and I eventually found myself publishing articles on topics of epistemology, knowledge building, and post-metaphysics as they applied to integral studies. This paper focuses specifically on ontology. I hope it will be of use to integralists interested in deepening their knowledge of philosophy. Though it does assume some familiarity with integral theories (see prior chapters in this book), I hope it will also be of use to philosophers interested in integral theory.

As has been my habit in prior papers, my role is partly that of an appreciative critic who reflects upon how the principles, theories, and values contained in integral theory are, are not, or could better be embodied in the actual work of integral knowledge building, application, and leadership. I see myself not as a crafter of new maps, but as an interdisciplinarian bridge builder—between integral studies and other fields that I think are under-considered by integralists; and between the realms of theory and praxis (including between knowledge building/theorizing and ethics).

## Conceptual orientation and road map

The chapter takes a many-branched journey through territory that connects embodiment, ontology, cognitive psychology, post-metaphysics, and integral theories. The intended contribution is in establishing new mutually enriching connections among prior ideas and findings in these areas. Because this narrative fabric weaves in many elements, it is important to keep the central issue in sight.

To explain the central focus I first need to lay out a categorization of ideas and knowledge which I explain more deeply in Murray (2011). This scheme is basic, not particularly original, and is only one of many ways to categorize these phenomena, but makes distinctions that are central to my approach. Knowledge and ideas (both loosely defined) can be categorized thus:

1. *Concepts* (constructs or categories). These can be thought of as the words or terms, especially (but not only) nouns and verbs, they are the building blocks of language and verbal thought. They work to break the world into categories—conifer vs. not conifer; democratic vs. not democratic; subjective vs. not-subjective (or objective), etc.

2. *Statements* (propositions, claims, etc.). Statements are built up from concepts, and state relationships among them.

3. *Models*, theories, worldviews, and other systems of concepts and statements.

4. *Pre-linguistic* or pre-symbolic thought and *experience*. The first three categories are meant to point to explicit ideas and knowledge, i.e. ideas and knowledge put into words. This category is a catch-all for other types of knowledge, including raw sense data, non-conscious knowledge that we don't explicitly "know" we have; and the underlying ideas that our words and concepts are trying to point to.<sup>7</sup>

In a sense, statements (and thus models) are claims about what is *true*; and concepts are about what is *real* (both what is part of reality and what can be counted as a distinct object of consideration).<sup>8</sup> As explained below, according to this scheme ontological concerns are centered at the *concept* level (and my focus is particularly on *abstract* concepts). Ontological theories also make claims about the relationships between concepts, but our focus here is on the concepts themselves, and these relationships are of interest only insofar as they are essential to the definition of the concept or of existence of its referent.

One of the central things that embodiment approaches contribute to philosophy is an explanation of and argument for knowledge *fallibility*. The categories above are as much about *reason* as they are about knowledge (which is both a basis for and product of the reasoning process). It could be argued that modernity, both as a sociocultural phenomenon and as a cognitive style, is about the power of knowledge and reason. Post-modernity can then be seen as an emerging understanding of the limits of knowledge and reason. This understanding, if taken too far, or actually, if not taken far enough, can lead to relativism, intellectual paralysis, and nihilism. One could then define the post-post-modern phase as one that acknowledges fallibility but is not lost or frozen in a resulting despair,

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<sup>7</sup> The experience of a grueling effort to find the right word to express a complex idea shows that, *before* the thought is in verbal or symbolic form, there is *something* there.

<sup>8</sup> The use of concepts involves *implicit* claims (statements), but I put these at the concepts level. For example, a claim connecting drug use and crime in urban areas involves implicit claims about the nature the individual concepts: drugs, crime, and urban areas. Of course the full text containing such a statement may or may not try to make such assumptions explicit.

indecisiveness, or indifference. It is discerning about levels and types of fallibility, and how knowledge and reason (and action) can progress in light of this meta-understanding.<sup>9</sup> Our goal here is to support deeper understandings of the *sources of knowledge fallibility*, particularly as this relates to ontological questions.

Many sources of knowledge and idea fallibility have been uncovered and studied. Studies of sensory illusions and fallibilities in memory expose fallibilities at the pre-linguistic level (Travis & Aronson 2007; Wilson 2002). Studies of "bounded rationality" and cognitive biases show how peoples' conclusions and inferences are prone to a large number of systematic errors and biases—that our supposedly rational and logical thought processes are neither (Kahneman et. al. 1982; Gigerenzer & Selten, 1999; Gladwell, 2002; Meyers 2002; Sunstein, 2002; Shermer, 2011b).<sup>10</sup> There are also analyses of fallibility at the level of models and theories (Kuhn's study of paradigm shifts in science being one of many).

This article focuses on fallibilities (also called indeterminacies) at the level of *concepts*. This is the level of idea and knowledge analysis most central to ontology.<sup>11</sup> Almost all theories about the fundamental nature of reality propose models that define conceptual categories: time and space; subjective and objective; causality, change, structure, and stasis; mind and matter; earth, fire, water, and air. Theories might include particular *statements* or claims about the nature of these categories, but our concern here more fundamentally at the level of concepts.<sup>12</sup> That is, we are not so interested in the nature of claims such as "desegregation is fair"—in whether it is valid or in how people argue for or against it (that is the level of statements)—rather we are interested in the nature of the component concepts/constructs "desegregation" and "fair" (and even "is").<sup>13</sup> Are these real things? How well can they be defined? How do we deal with indeterminacies in their meaning? Can the world be adequately described using such categories? Or, more to the point, since it is obvious to the modern intellect that words are imperfect tools, what is the nature of this inadequacy and how can we compensate for and cope with it? For surely, any

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<sup>9</sup> The post-post-modern view includes, but is not identical to, the post-metaphysical view.

<sup>10</sup> For work specifically addressing the role of emotions in reason see: Goleman, 1995; Damasio, 1999; Matthews et al., 2002; Fischer et al., 1990.

<sup>11</sup> Ontology is "the philosophical study of the nature of being, existence, or reality as such, as well as the basic categories of being and their relations...[it] deals with questions concerning what entities exist or can be said to exist, and how such entities can be grouped, [and] related" (Wikipedia's definition suffices quite well). It is traditionally thought of as a branch of metaphysics, but, apropos to emerging post-metaphysical and pragmatic approaches, it is also simply about how we name and categorize aspects of reality.

<sup>12</sup> We also address the nature of conceptual models, such as Wilber's AQAL model, which are based on a set of conceptual categories. Clearly, anything we conclude about the nature of concepts and categories applies directly to such models.

<sup>13</sup> Of course, claims concerning the reality or categorical placement of an object can also be statements—such statements *do* fall within our scope.

statement or claim we make using such concepts will itself be flawed with indeterminacy if the component concepts exhibit indeterminacy (notwithstanding any additional flaws at the level of statements/reasoning and logic).

Ontology is interested in the "ontological status" of all sorts of concepts, not only those put forth as foundational aspects of reality. Ontology is interested in whether and how the referents of concepts are or are not "real." Freedom, evolution, pain, money, symmetry, religion—in what ways are such things real? Do they point to actual objects in reality? Does reality even contain "objects"—or is what we perceive as an object (merely) a creation of thought?

The reader can begin to sense that questions about what is real cannot be divorced from an analysis of the way language and concepts are used to describe things, categorize things, and create (or enact) objects. This chapter focuses on what the embodied philosophical perspective can teach us about ontological questions about the nature of objects, reality, concepts, and categories. The purpose is not to reveal anything deep about the nature of reality, but rather to provide conceptual tools and principles that explain and help us deal with the fallibilities in making ontological claims about "what is."

Thus, I will occasionally use the term "ontological thinking" to group several types of cognitive processes: (1) the creation and use of (explicit, linguistic) abstract conceptual *categories*; (2) inferences about the *realness* of the referents of abstract concepts; and (3) inferring that concepts refer to *foundational*, fundamental or essential aspects of reality. Also of key importance is the level of certainty that is argued for or felt along with these types of thinking.<sup>14</sup> These three are interrelated. To define or use a category it to differentiate one kind of thing from another, and to draw attention to it as a *thing* or *object* of thought. We usually use language to refer to patterns of difference and similarity observed in the world, conferring a type of realness to abstract concepts (e.g. money and freedom describe actual things or patterns in the world). We naturally assign hierarchies of importance, essentialness, and certainty to our abstract concepts.

The study of ontological thinking is not simply an intellectual or theoretical exercise because, as I will illustrate later, processes and tendencies within human cognition, for example misplaced concreteness, influence our perceptions about the realness, certitude, and simplicity of concepts, categories, and objects. These cognitive distortions can be shown to show up in both mundane and academic discourse. Deeper understanding of embodied

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<sup>14</sup> Ontological thinking is not one type of thinking; it refers to a class of types of thinking. I am not proposing anything about cognition here, but simply coining a term to be able to refer to several related things at once. "Ontological thinking" should be read as "ontological types of thinking."

approaches to ontological questions can clarify many areas of theory and deliberation. Such understanding provides new distinctions for muddled questions, supports a tolerance for indeterminacy where fallibility is inevitable, and shows how certain types of contentious questions are moot or unanswerable.

To outline the remainder of this chapter: I will start with a section titled "*Embodiment Themes in Philosophy and Ontology*," an overview of embodied approaches to and influences on philosophical thought. Much of Western philosophy and current intellectual thought has ignored the implications of humans having physical bodies and brains and being situated in social/ethical contexts that trigger unconscious drives. The overview in this section is general to *all* types of philosophical questions and to all of the knowledge categories mentioned above (concepts, statements, theories, and pre-linguistic thought).

The section "*Reason and Realism*" introduces Lakoff and Johnson's Embodied Realism approach, which I refer to substantially throughout the article. Though this section is also about the embodied perspective on reason in general (all four levels of knowledge), it introduces the focus on the conceptual level, as Lakoff and Johnson's conclusions are based on the study of the nature of concepts.

The embodied perspective is strongly supportive of the post-metaphysical stance on ontological issues, which avoids positing Platonic-type objects (or ideals) that are said to exist outside of both physical reality and subjective (including intersubjective) reality. Cognition (embodied reasoning) produces strong biases and distortions in thinking toward interpreting abstract concepts as being more real and definitive than they are. We also have biases toward metaphysical and quasi-metaphysical thinking. Therefore a deep acknowledgement of concept fallibility and the untenable nature of metaphysical thinking is confronted by various forms of psychological and world-view resistance. It is one thing to acknowledge that metaphysical claims are fallible, and quite another to give up such questions entirely. To support consideration of the later, in the section "*Rational Reconstruction and Post-metaphysics*" I summarize Habermas' notion of rational reconstruction, which argues that, in light of the revelations of post-modern thinkers, the goals of philosophy must be modest. He shows how it is possible and necessary to make philosophical claims without recourse to metaphysical notions.

Having given some hope that philosophical thought can thrive without metaphysical notions, I continue my analysis of the sources of fallibility in ontological issue—i.e. indeterminacies related to abstract concepts and the realness of their referents. The preceding sections were in preparation for the core of the paper: the next three

sections that describe three complimentary approaches to ontological issues. One section looks at what cognitive psychology tells us about the nature and structure of concepts and categories. The succeeding section summarizes models that allow for a more nuanced and differentiated treatment of the question of "what is real?" (or "what exists?"). The final core section returns to psychological and epistemological territory, but focuses on phenomenological and self-reflective questions of what ontological thinking feels like, and what motivates it. Below I say more about these three sections.

In the section "*Prototype Theory and Metaphorical Pluralism*" I summarize the two primary components of Lakoff and Johnson's Embodied Realism. Prototype Theory explains how abstract concepts have an inherently fuzzy, graded, or indeterminate structure. Metaphorical Pluralism argues that our interpretation of abstract concepts is limited by the sensory-motor metaphors available to us, and that many concepts key to philosophical thought are subject to a burdensome plurality of meanings. These notions are used to illustrate the fallibility or even fallacy of metaphysical and other modes of reasoning that take disembodied stances on ultimate truths and ontological foundations of reality.

In the section "What objects are real?—Critical Realism, and Integral Pluralism" I move from psychological to philosophical treatments of ontological issues, and also move from treatments that support negative capability (Lakoff & Johnson and Habermas) to those that support positive knowledge (Wilber and Bhaskar). Wilber and Esbjor-Hargens' Integral Pluralism and Bhaskar's Critical Realism both provide models and categories for more nuanced and differentiated inquiry into ontological questions.

In the section on "*Epistemic drives and structure of the real vs. ideas*" I again return to psychologically oriented treatments of ontological issues, and also return to approaches that support negative capability. I explore ontological thinking from the *inside*, including some of its motivations, and thus support self-critical and self-emancipatory reflective processes.

The penultimate section I discuss practical and ethical implications to integral theory, and finally in Conclusions I summarize and tie to critical theory and self-emancipation.

## **Embodiment themes in philosophy and ontology**

Before exploring how embodiment influences *ontological* themes and thinking, and before focusing on the works of Lakoff & Johnson, Habermas, Wilber, and Bhaskar, I offer a survey of how embodiment theories impact

philosophical questions in *general*. There are several flavors, often mixed, of what could be called embodied approaches. Their focus can be on: (1) the role of *action and enaction* in cognition and belief; (2) the importance of the social-cultural context in (*situated*) reasoning; (3) the role of *psychological* (cognitive and affective) processes on reason; (4) the role of *neurological* processes on reasoning (this theme is not covered in this article); (5) the *phenomenology* (experience) of ontological forms of thinking, and (6) ethical questions of whether one embodies one's beliefs (or practices what one preaches).<sup>15</sup> All of these counteract the disembodied, view-from-nowhere, hyper-rational forms of philosophical argument that have dominated much of western philosophy.

Let us look first at approaches that anchor knowledge and thought in human *activity*. Speech Act Theory (see Austin 1962; Searle 1995)—which show that words in and of themselves don't refer to anything but rather the *use* of words refers to things—was an early framework that grounded some philosophical questions in the pragmatics of human activity. Vygotsky's Activity Theory (investigating the role of artifacts and social nature of knowledge production) and Heidegger's philosophy (which made use of terms such as "ready to hand" and "present at hand") helped pave the philosophical road out of "disembodied objective scientific realism" toward anchoring philosophical questions in human physical and social activity.<sup>16</sup>

Wilber and Esbjörn-Hargens' Integral Post-metaphysics is one among a number of recent theories that see objects and phenomena in reality as *enacted*. Esbjörn-Hargens says "the ontological status of [a soda] bottle is enacted in part by the method of interacting with it. . . The reality of the bottle as instrument, vase, or cash refund is not dependent on your viewpoint but rather on the social practice of interacting with the bottle" (2010, p. 13).

The above mentioned theories are "embodied" in that they consider the role of the human actor embedded in the physical world in addressing questions about truth/reality (ontology) and knowledge (epistemology). Other theories go further by incorporating what *cognitive and brain science* has taught us about how the mind works. In PME I argue that the "linguistic turn" and the "post-metaphysical turn" in philosophy (and related shifts in culture) stem in large part from an "epistemic turn" that, starting with Kant, incorporated insights about how the mind works from phenomenology, then later psychology, sociology, and modern brain science. This epistemic turn has increasingly elaborated how the nature of mind/thought/knowledge (both cognitive and socio-cultural processes)

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<sup>15</sup> In terms of Wilber's methodological Zones, roughly: the phenomenological perspective corresponds to Zone 1; the psychological to Zones 2 and 5; the situated to Zones 3 and 4; the neurological to Zone 6; the action-based to Zones 7 and 8.

<sup>16</sup> "Situated" theories of cognition and knowledge, which emphasize the role of context, collaboration, and social roles, could also be seen as early contributors to embodied philosophy (Lave & Wenger, 1991; Brown et al., 1989). Humans are both physically/biologically embodied and socioculturally embodied.

influence validity claims. As Lakoff and Johnson say: "the question of what we take truth to be is therefore a matter for cognitive science because it depends on the nature of human understanding.... Truth is, for this reason, not something subject to definition by an a-priori philosophy" (1999, p. 108). (Note that all references to Lakoff and Johnson are from the 1999 *Philosophy in the Flesh*, which will be abbreviated PITF). The abstract constructs used by philosophers are *constructed* by their biological wet-ware—which evolved so that humans could perform certain concrete tasks related to survival and reproduction (including tasks requiring mammalian social/emotional skills).

Philosophical thought in general, including ontological theories, is usually based in classical rational/logical reasoning. A large body of recent work under the umbrella of "bounded rationality" or "cognitive biases" is illustrating systematic errors found in (supposedly) rational/logical thought.<sup>17</sup> This work shows that no thought process is purely "rational" in the classic sense, and that *unconscious* and *emotional* processes introduce systematic distortions into reason and decision making (for example, "loss aversion" and "confirmation bias").<sup>18</sup> Importantly, research shows that academics, experts, highly intelligent people, and, one must assume, philosophers, are not immune from these fallibilities. (Most of the biases can be compensated for in some way—in fact this is one purpose of the scientific method—but their influence can not be eliminated completely.) While this body of work is germane to embodied philosophy in general, there is as yet little within it related specifically to ontological reasoning and theory-construction. However, both Lakoff and Johnson's work and "epistemic drives," discussed later, can be seen as falling under the umbrella of bounded rationality.

There are a number of scholars who draw from cognitive science, neuroscience, sociobiology, and evolutionary psychology to support an "embodied cognition" perspective. In *The Embodied Mind: Cognition, Science and Human Experience*, Varela, Thompson, and Rosch (1991) argue that a deep understanding of the mind must incorporate (phenomenologically) the concrete experience of consciousness-in-the-body as supported by certain contemplative practices. For them embodiment is about the enactment of knowledge in the "bringing forth of meaning from a background of understanding [that depends on] being in a world... inseparable from our bodies, our language, and our social history" (pg. 149).

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<sup>17</sup> These findings go beyond deconstructing knowledge and thought—showing *that* it is fallible—to articulating some of the mechanisms and specific biases found in cognitive and social processes, and thus, more than supporting epistemic relativism or solipsism, allows knowledge creation to become more informed, flexible, and reflexive.

<sup>18</sup> On bounded rationality see: Kahneman et. al. 1982; Gigerenzer & Selten, 1999; Gladwell, 2002; Meyers 2002; Sunstein, 2002; Shermer, 2011b. For work specifically addressing the role of emotions in reason see: Goleman, 1995; Damasio, 1999; Matthews et al., 2002; Fischer et al., 1990. And on systematic errors of memory and perception see Travis & Aronson 2007; Wilson 2002.

Andy Clark, in *Being There: Putting Brain, Body, and World Together Again*, uses findings from neuroscience to claim that "at root, our minds...are organs exquisitely geared to the production of actions, laid out in local space and real time" (p. 8); and that "language and culture...emerge as advanced species of external scaffolding 'designed' to squeeze maximum coherence and utility from fundamentally short-sighted, special-purpose, internally fragmented minds" (p. 33).

Neuropsychologist and philosopher Jason Brown bases his theory of Cognitive Microgenesis on research on brain activation and linguistic pathologies. Cognitive Microgenesis argues that our perception of objects (and the gestalt of the objective world) is constructed in wave-like sequences of activation from central brain regions out through more distal regions (articulating from presence to affect to image to object/body/space, to object/world) (Brown, 2002; and see Roy, 2006). Bonita Roy explains that "these dynamics can be described as generative processes that create conditions of structural enfoldment through interior- exterior 'movements' and whole-part transformations" (Roy, 2008, p. 22). Brown echoes Varela and Clark in saying that "evolution delivers a mind that is prepared to replicate the world we live in...The human mind/brain is equally ready to be shaped by the world..." (p. 23). In particular his theory offers a neurology-informed rendition of how our most basic ontological constructs, such as objects, space, time, category, and whole/part, might be produced.

These theories explain "how the mind works" from particular, usually scientific and materialistic, perspectives. They should not be seen as providing the answers to philosophical questions, but they do offer unique and often surprising troves of data and lines of inquiry. Integralists are all too aware that cognition cannot be reduced to "right hand side" phenomena. A robust reflective understanding of ontology must supplement the biology, phenomenology, and cognitive psychology that grounds embodied theories with the type of rational reconstruction and critical reflection employed by philosophers such as Habermas.

The main point here for us is not so much to describe what the mind is or can do, but to describe many approaches that speak to how the products of thought are fundamentally constrained by its embodiment. Humans are limited in what they can perceive, conceive, and deduce, and, though in some ways we see no limits to what the mind is capable of, in other ways the mind is limited in very predictable ways. The brain evolved genetically in response to a complex set of universal and stable needs (territory, reproduction, sustenance, safety, group life, child bearing, etc.) within a very particular environment (diverse and changing as it was, it was defined by basic givens of

physics, terrestrial geology, and biology). And, as we will see, this embodiment has a direct impact on ontological issues.

## Reason and realism

Next I elaborate on Lakoff and Johnson's Embodied Realism (or "Embodied Scientific Realism") which is quite compatible with Wilber's, Bhaskar's,<sup>19</sup> and Habermas' frames, but includes a detailed account of (some aspects of) how the mind works, which I claim is an important ingredient in addressing ontological questions. In *Philosophy in the Flesh* Lakoff and Johnson describe traditional "disembodied objective scientific realism" as containing three claims or assumptions (PITF, p. 90):

- There is a world independent of our understanding of it.
- We can have stable knowledge of it.
- Our concepts and forms of reason are not constrained by physicality, allowing science to discover absolute truths.

They take the first two as true and the last as problematic. The first claim can not be proven but must be assumed for life and thought to be other than absurd—we assume that most of what we observe is not a dream or a product of pure imagination. Because we speak and act as if an external reality exists, to argue otherwise would involve a number of performative contradictions. (Recall Collier's quote from Heidegger above that non-realism is a "non-starter.") The second claim is not only an ancient pre-modern philosophical assumption but can also be claimed in contradiction to the post-modern critique that all knowledge is subjective and relative, and that no idea can be privileged over another. The (extreme) post-modern stance denies the embodiment of thought and ignores the pragmatics fact that ideas survive or perish according to their practical usefulness in a real world. All scientific results include assumptions as well as cultural and personal forms of bias, but, as Lakoff and Johnson put it: "this does not mean that there is no reliable or stable science at all and that there can be no lasting scientific results...we are not likely to discover that there are no such things as cells or that NDA does not have a double-helix structure" (p. 89). The scientific method of convergent evidence adjudicated democratically yields stable, practical, and trustable, though not infallible, knowledge. In fact a core aspect of the scientific method is that all findings are open to future refutation in the face of evidence (or the reevaluation of assumptions).

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<sup>19</sup> Throughout this chapter when I refer to Bhaskar's work I am referring to the first of his three "phases," drawing critical realism, and not the dialectical or meta-reality phases of his work.

Lakoff and Johnson's Embodied Realism uses the findings of cognitive science to reject a strict subject-object dichotomy and replaces assumption #3.

Disembodied scientific realism creates an unbridgeable ontological chasm between "objects," which are "out there," and subjectivity, which is "in here..." [first, such realism] is erroneous because the subject-object split is a mistake; there are no objects-with-descriptions-and-categorizations existing in themselves, [and second, mere subjectivity or] intersubjectively leaves out our contact with the world... Embodied Realism [claims that] we are coupled to the world through our embodied interactions... *we never were separated or divorced from reality in the first place.*" (p. 93, emphasis in the original)

Lakoff and Johnson describe the *three major findings of cognitive science* this way (p. 3-4):

- The mind is inherently embodied.
- Thought is mostly unconscious.
- Abstract concepts are largely metaphorical.

Above I described scholars arguing for the first two points—Lakoff and Johnson's main contribution is on the third point (which draws on the first two). They go on to say that "More than two millennia of a priori philosophical speculation about these aspects of reason are over," and that because these "findings from the science of the mind are inconsistent with central parts of Western philosophy...philosophy can never be the same again" (p. 4). What tends to distinguish philosophical thought from other domains is that, while all arguments *use* reason, philosophy tries to be explicit about the nature of reason itself, even as it proposes things about the nature of reality. Lakoff and Johnson are telling us that the understanding of human reason that underpinned traditional philosophy was deeply flawed, and thus so are many of its methods and conclusions. Here are more of their claims (pp. 4-8).

- "Reason is not disembodied [but] arises from the nature of our brains, bodies, and bodily experience [such that] every structure of reason...comes from the details of our embodiment, [from] the same neural and cognitive mechanisms that allow us to perceive and move around."
- "Reason is evolutionary...[it builds upon forms present in] 'lower animals'...reason makes use of, rather than transcends, our animal nature."
- "Reason is not 'universal' in the transcendent sense; that is, it is not part of the structure of the universe. It is [however] a structure shared universally by all human beings."<sup>20</sup>
- "Reason is not dispassionate, but emotionally engaged."<sup>21</sup>

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<sup>20</sup> Wilber and Bhaskar have a more satisfactory analysis of this theme, describing reason as a property of a particular level of reality that emerged out of the biological level.

<sup>21</sup> Lakoff and Johnson go on to describe how the embodied perspective contradicts common philosophical positions: "there is no Cartesian dualistic person with a mind separate and independent from a body;" "since reason is shaped by the body, it is not radically free [and] we have no absolute freedom in Kant's sense...no full autonomy;" "the utilitarian [economically rational] person does not exist;" "phenomenological introspection alone [can not] discover everything there is to know about the mind;" and "there is no...decentered subjective...poststructuralist person...for whom all meaning is arbitrary, totally relative, and purely historically contingent, unconstrained by body and brain."

The implications are important beyond academic philosophy, because "radical change in our understanding of reason [leads to] a radical change in our understanding of ourselves" (p. 3). The embodied perspective is radically post-metaphysical in the following sense. It rejects or ignores any spiritual or metaphysical perspective on the mind. Human reason is a function of the biological mind/body which developed in response to evolutionary and developmental necessities. It does seem astounding that human capacity, in terms of reason, aesthetics, and morality, has developed as far as it has given the same genetic blueprint and brain structure that existed for the cave man, but, according to this perspective, we do not need to introduce any metaphysical higher self, spirit, over-mind, reincarnated soul, collective consciousness, or transcendental Mind to account for creativity, intuition, insight, or non-dual experiences. I take a less positivist version of this perspective, believing that even if there are spiritual or extra-physical influences or inputs available to the mind, they are filtered and formed by the physical body/mind before entering into conscious thought and action, so the end result is the same.<sup>22</sup>

Socio-biologists and evo-psychologists offer convincing arguments for how higher capacities such as logic, aesthetic sense, and compassionate selflessness could develop based upon more primitive drives (see Pinker 1997; Wilson, 1998). Developmental theorists including Kegan (1994), Fisher (1980) and Commons (et. al., 1984) show us how complex forms of reason are built up from primitive elements (through processes such as reflective abstraction, subject-object transformations, or hierarchical complexity), which again controverts the need for metaphysical propositions to explain higher human capacities. (Note that none of the above authors have the scientific materialist denial of subjective interiors.)

Above I have given a general overview of embodied perspective on philosophy, which can be applied to many areas of philosophical inquiry. In the remainder of the chapter I will focus on the implications of embodied philosophy for *ontological* questions concerning the nature of concepts, categories, and objects.

## Rational reconstruction and post-metaphysics

The embodied perspective is one among a family of related philosophical approaches, including pragmatism, social-constructivism, and post-metaphysics, that take an explicitly fallible stance on knowledge. It could also be said that each of these philosophical approaches contributes an important lens on the fallibility of knowledge. Because no species could survive without perceiving accurate information about the external world, we

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<sup>22</sup> Lakoff and Jonson make clear that they are not just saying that the mind needs matter to exist, that the mind must have a neural realization in the brain, or that interiors always have corresponding exteriors. They claim that the way the mind works depends heavily on the *particulars* of embodiment and experience (p. 37).

have a strong innate desire to know what is *really* the case—not just what *seems* to be the case, but, damn it!, what is *really true*. Thus, the fallibilistic approaches can leave one with a dissatisfaction and discomfort (which runs much deeper in some than others). These approaches tell us that ontology (and ethics and all philosophical questions) cannot divorce themselves completely from epistemological and cognitive concerns.

We have come far enough down the road of the "epistemic turn" that an analysis or acknowledgement of the limits and biases of the theorist's reasoning must accompany any philosophical exploration into the nature of objective reality. So, though some might argue that such approaches "confuse" ontology with epistemology, the deeper claim being made is that they cannot be separated.<sup>23</sup> (We will take up Bhaskar's notion of "epistemic fallacy" later.) The post-metaphysical pill can be a hard one to swallow. The Platonists and metaphysicalists among us, and the Platonist and metaphysicalist impulses within each of us, might need a variety of different lines of reasoning to relax that need for the certainty, essentialism, and purity than can come with metaphysical claims.

Metaphysical questions call out for answers from deep within the human psyche, and metaphysical themes often involve the most generalized, foundational, or essentialist claims (questions infused with the deepest of "meaning"). One goal of this article (and of post-metaphysics) is to show how the answers to such questions are inherently fallible. Fallibility implies that all answers to such questions are to be taken as both tentative (open to revision) and indeterminate (unable to be unambiguously stated). Another goal of this article (and of post-metaphysics) is to show that many metaphysical questions should be avoided entirely. Renouncing metaphysical questions is a more radical step than acknowledge their fallibility. Habermas' *rational reconstruction* provides some support for the post-metaphysical notion that questions one thought to have metaphysical roots can be adequately addressed sans-metaphysics.

According to Habermas the main task of philosophy is not establishing infallible truths, but "rationally reconstructing the intuitive pre-theoretical knowledge of competently speaking, acting and judging subjects" (Habermas, 1992, pg. 38). Reconstructive sciences and reconstructive modes of inquiry make arguments about the preconditions that must hold in order for something observed to exist. They can be employed in domains where experimentation is impossible. For example, archeology, paleontology, and cosmology use reconstructive methods to make arguments about what must have been the case in history for events that can not be repeated or simulated

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<sup>23</sup> It can still be said the ontology is its own field of analysis, with its own concerns and methods, and cannot be *reduced* to epistemology (this would be Bhaskar's "epistemic fallacy"). Just as we might say that biology cannot be separated from physics, but cannot be reduced to physics. Ontological inquiries into the fundamental aspects of reality are, like empirical scientific inquiry, trying to make sense of and find meaningful patterns in our shared reality.

experimentally in the present. Habermas' *rational reconstruction* focuses on human systems. It looks at what people actually do, and makes (always fallible, open to revision) arguments about what must be true for what is observed to be the case (it infers "the conditions for the possibility of..." apparently universal patterns in human behaviors).<sup>24</sup> In this way its post-metaphysical methodology avoids positing metaphysical realities or truths. Pragmatists in general see little value in establishing how certain things are *really* real (or really true or good), and are satisfied with investigating how and why they *appear* to be real to competent reasoners, and asking how the answers to such questions affect human inquiry and life conditions.

For example, consider Habermas' approach to ethics (which he calls discourse ethics). Many traditional philosophical ethics arguments make claims about what is or is not ethical, how people should behave, or how to determine ethical validity. This assumes that there is some real (metaphysical) category of "ethical" things (or some universal, cosmic, or spiritual moral law) that can be referred to, such that one can make claims about when something is or is not ethical. From this perspective, one may argue for whether certain acts or intentions are or are not ethical. Rational reconstruction takes a different tact. Habermas analyzes deep universal structures in how people communicate in everyday language and finds that people speak (and act) *as if* they valued inclusion, fairness, and related ethical constructs. There is a shared intuitive or common-sense "pre-understanding" of the value of these things. Competing values or impulses may override ethical values in particular situations, but his finding is that we don't need to make metaphysical claims or take prescriptive leaps to argue for the validity of ethical claims, and to figure out ways to support ethical actions. We seem to be hard wired for ethical action (though it is expressed in highly individual and culturally specific ways, and ethical drives can be faint or overridden depending on context). The same for truth, beauty, goodness and related constructs. We are hard-wired to value them, they do not exist "out there" independent of us, and investigating them involves rational reconstruction.

A "pre-understanding" is something we usually don't know or understand how we know, but *must* know (unconsciously) because we act *as if* we know it. For example, the individual cannot sense, by observing oneself, how language understanding or generation work in the mind. Yet we must have an intuitive (pre-conscious)

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<sup>24</sup> The Stanford Encyclopedia of Philosophy says reconstructive sciences "aim to render theoretically explicit the intuitive, pretheoretical know-how underlying such basic human competences as speaking and understanding, judging and acting. Unlike Kant's transcendental analysis of the conditions of rationality, reconstructive sciences yield knowledge that is not necessary but hypothetical, not a priori but empirical, not certain but fallible. They are nevertheless directed to invariant structures and conditions and raise universal, but defeasible claims to an account of practical reason" (<http://plato.stanford.edu/entries/habermas>).

understanding of the many language rules that constrain speech. (This is related to Argyris' (1995) notion of theories-in-use vs. espoused theories.)

If we apply a rational reconstruction approach to our questions about ontological status, then rather than trying to make an argument for the real realness of some class of things we would argue that (rational or otherwise competent) people invariably speak *as if* certain things were real.

We treat a river as if were a real object like a tree, even though it is a pattern of water movement with different material stuff in it each time we look. To engage in quasi-metaphysical deliberation about whether the river is a real object or not might serve to uncover important aspects of rivers but any definitive answer to the original question is moot.<sup>25</sup> Thing-ness is a valid perspective on rivers, and non-thing-ness is another valid perspective.

We can support Heidegger's claim that "non-realism is a non-starter" using rational reconstruction, without resort to metaphysical conjecture. The existence of a real world is a truth performatively assumed by all humans. To assume otherwise would be impossible (or self-contradictory). (It is perhaps conceivable that all of what we see is a dream, but Popper's principle would say the question is non-falsifiable on either side. Thus though the question is non-provable, the realist position *must* be assumed, because we can not do otherwise.)

Rational reconstruction provides a post-metaphysical orientation to ontological questions. While not giving up the traditional question for valid knowledge of a real world, it refocuses arguably futile questions about Reality toward question of how it is we come to perceive and believe as we do. It is thus a tool for the critical self-reflection upon knowledge that can both improve knowledge (positivistically) and make it more useful by marking its limits (negative capability).

Not only is the category "river" defined by how interlocutors use it, but so are more abstract constructs: object, real/reality, perspective, structure, objective/subjective, ego and change. For example, when Wilber makes arguments about Perspectives (or non-duality, or states vs. stages), he is making a claim about perspectives (or non-duality, etc.) *as he defines them*. This point seems trivially obvious at the intellectual level, but at the level of "intuitive pre-understanding" and enactment, it would appear to be little known. I will make the claim here—without

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<sup>25</sup> Linguists have shown that the meaning of a construct, e.g. "river," varies according among contexts and groups. To the extent that there is overlap in meaning between any collection of people, they can negotiate meaning and build new knowledge (e.g. discover things about how rivers work). Therefore, dialogue about the nature of objects is far from being moot or useless.

taking the space to cite examples, but I believe the reader will have her own abundant experience to support it—that much of philosophical (and other) disagreement hinges on divergent meanings of abstract terms.

Interlocutors may argue over whether a certain country is *democratic*, or whether Barack Obama is *integral*, or whether desegregation is *fair*. Philosophers argue about whether animals have morals or plants have consciousness. Interlocutors on opposite sides of an argument will often be pointing to different key examples, indicating that differences in the meanings of these abstract terms (including spirit, ego, freedom, consciousness, god, time, the environment, etc.), unexamined, play strongly into the debate.<sup>26</sup> What is of interest to us here is not the hermeneutic issue of how meaning is interpreted, nor the social-constructivist point that the meaning of constructs is determined by personal history ("psychic causality") and sociocultural history—but rather what cognitive science can show us about the deep structure of concepts themselves.<sup>27</sup>

Lakoff and Johnson's Embodied Realism yields insights into the indeterminacy of meaning that goes beyond the relativistic notion that everyone (or every culture) gets to assign meaning according to their individual perspective. It makes universal claims about the structure of language and thought. A surprisingly large proportion of arguments (in mundane conversation and in scholarly writing) hinge on categories, classification, definitions, and choice of exemplars. Philosophers are not naïve enough to assume that concepts have definite meanings. Most go to great lengths to define terms and clarify concepts using key exemplars. Some contemporary philosophers (e.g. Foucault, Derrida, Rorty) deal with the indeterminacies of language playfully, poetically, or irreverently. But new insights about the reasons for concept indeterminacy are little used. Embodied Realism (including Prototype Theory and Metaphorical Pluralism) allows us to investigate the interstitial and liminal—the areas at the overlap between and at the boundaries of constructs—and engage in more nuanced ontological inquiry.

## Prototype theory and metaphorical pluralism

**Graded concepts and Prototype Theory.** Conceptual categories split the world into parts while joining parts into categories.<sup>28</sup> When we employ the knife of the concept important truths or nuance can get left on the

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<sup>26</sup> I am not implying that interlocutors actually agree and don't know it; but that the dialogue is inefficient to the extent that they fail to examine differences in meaning.

<sup>27</sup> For example, Lakatos' (1976) investigation of the knowledge building processes illustrates the dynamic interplay between abstract definitions and the examples we consider important; each of which evolves continuously through inquiry. Therefore, in any area where there is active inquiry, such as in science or the law, meanings evolve continuously.

<sup>28</sup> With each split-and-join operation we risk making two types of errors: overgeneralization and overspecialization, i.e. treating things as similar that are in some important way different, and treating things as different that are in some important way similar (analogous to Type I and Type II errors from statistical analysis).

cutting room floor, so to speak, and troublesome grey areas can be ignored. The mind (or, we could say, the symbolic nature of language) has a tendency to treat conceptual boundaries as black-and-white.<sup>29</sup> As Bateson says: "[the] world begins by making splits, then drawing boundaries, then solidifying these boundaries. Then we fool ourselves into believing what we have made ourselves see. Solidifying boundaries is very comfortable, because it allows us to deny our experience... We miss the whole system" (1979). This "symbolic impulse" compels us to, for example in integral studies, to classify some phenomena as a state phenomena vs. a stage phenomena (or neither, but not both); or to classify a performance as being on the cognitive line or the ego line or some other specific line, when the phenomena in question may more accurately be said to exist between categories, outside of them, or in more than one category.

Lakoff and Johnson illustrate how real phenomena don't tend to exist in the neat categorical boxes that correspond to the constructs we create. Sophisticated modern thinkers *intellectually* know this about concepts—we know that things do not exist according to black and white categories—and our language often tries to compensate for the distortions introduced by this symbolic impulse. However, the impulse and its consequences go deeper than most imagine. A deeper understanding of the symbolic impulse, *taken home* to apply to ones own beliefs, can help one avoid its unwanted effects.

Prototype Theory in cognitive science has revealed how the nature of concepts differs from what we normally assume about them (Mervis & Rosch, 1981; Lakoff, 1987). *All* concepts, not just poorly defined, culturally relevant, or complex ones, have "graded" or indeterminate boundaries (though some are more indeterminate than others). Some conceptual exemplars are more central than others (the most central are called "prototypes" of the concept). Conceptual categories universally admit to fuzzy boundaries as an outcome of how cognition works. The traditional logic-based notion of concepts, based on necessary and sufficient conditions, does not match well to actual human cognition. One can usually imagine things that exist in the gray area between being X and not-X, things that are sort-of X or more-or less X (or not X).<sup>30</sup> Exactly what exists at these boundaries will vary according to individual or group, but the indeterminacy itself is a universal cognitive phenomena.

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<sup>29</sup> In part such categorization is the mind's attempt to establish a comfortable condition of certainty, and avoid dissonance-producing states of uncertainty and ambiguity. Definitive categorizing enables definitive decision and action. In evolutionary terms, quick and certain categorization means catching the prey or avoiding the predator.

<sup>30</sup> This is true for concepts indicated by words that have evolved naturally in language. We can of course define a new concept in a very specific way, and, until it undergoes the hermeneutic transformations in the "telephone game" of real use over time, it can maintain a strict definition.

Graded concept boundaries make universalizing claims of the form "all X's are Y" particularly fallible, because there will always be examples of things that are not exactly X but not exactly not-X either. It would be more correct to say "all X's are Y *to the extent that* instances of X and Y are prototypical of the categories as the speaker intends them."<sup>31</sup> Disagreements about whether "all X's are Y" will often hinge on the fact that the objects offered up as exemplars may not be included in both party's meaning of X or Y.

In this article I will call the mutually exclusive, black and white, definitive, clear bounded model of concepts the "simple" model, and graded, fuzzy-bounded, prototype-centered, or otherwise complex models of concepts "indeterminate." The *symbolic impulse* is thus a tendency of thought that biases one to perceive or interpret phenomena (subjectively) as *simple*. Phenomena in nature are usually (some would say always) more indeterminate than simple; *and* Lakoff and Johnson show that the internal structure of concepts, that is, the way they behave when seen objectively, is also indeterminate.<sup>32</sup>

Lakoff's work on conceptual structures indicates that the indeterminacy of concepts becomes progressively worse the more *abstract* they are, i.e. the further removed from concrete sensory experience and exemplars.<sup>33 34</sup> A claim about the healing power of crystals is fairly concrete. There is a fair chance that, with appropriate resources, it can be tested in a fashion agreeable to many stakeholder perspectives. "Crystals" and "healing" might be well-enough defined for such a deliberation. But the concepts philosophers work with are particularly abstract, having exacerbated indeterminacy.<sup>35</sup> The concepts at the heart of integral studies, e.g. holon, perspective, subjectivity, spirit, omega point, collective consciousness, and non-duality, are also wildly indeterminate, which calls for theorists to explicitly address this indeterminacy.

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<sup>31</sup> Lakoff and Johnson describe *graded propositions* that "...contain linear scales [that] define the degree to which a given property holds of an individual [as] defined by a graded category..." (pg. 288).

<sup>32</sup> The symbolic impulse is exacerbated in contexts that involve emotional charge, importance, or ego attachment, as we will discuss later under "epistemic drives."

<sup>33</sup> For a deeper discussion of abstract constructs, see the section on "the indeterminate nature of concepts" in PME.

<sup>34</sup> Similarly, Chris Argyris says "the likelihood of differences in the interpretations of different observers increases the higher one goes on the ladder of inference" (1995, p 58). Rungs along this "ladder" are inferential steps that can represent increases in abstraction, complexity, or just a sequence of inferences—any of which lead one ever further from concrete facts. Esbjörn-Hargens (20110) uses the term "epistemological distance" (from Carolan, 2004) to describe differences along this ladder of inference that, to my reading, map to hierarchical complexity, which is essentially a combination of complexity and abstraction (Commons & Richards, 1984).

<sup>35</sup> It seems still true that, as Descartes said four centuries ago, that "[philosophy] had been cultivated for many centuries by the best minds that have ever lived and that nevertheless no single thing is to be found in it which is not a subject of dispute and in consequence is not dubious" (Descartes, 1637, p. 10). Descartes actually thought he had discovered a solution, and did not count himself among the plagued philosophers. Post-metaphysical philosophy, which foregrounds knowledge fallibility, avoids such blind spots.

Prototype theory and concept indeterminacy have significant implications for abstract ontological claims, as described next in discussions of Metaphorical Pluralism.

**Metaphorical pluralism.** The reader is likely to be familiar with the notion that much of language and thought is metaphorical. Lakoff and Johnson argue that thought and reason are *primarily* and *fundamentally* metaphorical, and that the metaphors we employ are grounded in our embodiment—that abstract thought is composed of conceptual building blocks at the sensory-motor level.

Of course, there are an infinite number of variations built up from on any set of primitive building blocks—so thought is limited in one sense and unlimited in another (just as there are an infinite number of valid sentences, but valid sentences are constrained to be made of real words ordered according to certain rules). The key point for us is the (perhaps exaggerated) conclusion that if it can't be built up from basic sensory-motor primitives, *we can't think it*. Our embodied experience determines the limited conceptual pallet that we have at our disposal with which to paint all of our ideas (a pallet determined both by the genetically established structure of the brain and the embodied experiences of early childhood mental development).

Developmental theory (Piaget, 1972; Fischer 1980; Commons 1984; Kegan, 1994) shows us how mental constructs are built up from lower level constructs, in response to (in interaction with) events and pressures from our environment. As far as we know, people cannot directly transmit ideas or concepts mind-to-mind. We externalize our ideas into words, other artifacts, and actions; ideas are mediated through the external sensory-motor world, and then perceived and assimilated by others. Concepts and ideas come from (one's own) prior concepts and ideas, and from sensory-motor experiences (including verbal and textual communication)—they have nowhere else to come from (as far as we can tell). Even if one assumes that we have direct access to intuitive or creative knowledge outside the self, to be expressed the pre-verbal knowing must be translated into symbolic language and thus into metaphorically-bound concepts.

Lakoff and Johnson show how all abstract ideas "such as importance, similarity, difficulty, and morality" and our abstract understanding of subjective experiences such as "desire, affection, intimacy, and achievement" are based on concrete metaphors (p. 45). "As rich as these experiences are, much of the way we conceptualize them, reason about them, and visualize them come from [concrete, mostly sensory-motor] domains of experience" (ibid). For example, our understanding of friendship or intimacy is not simply *related* to experiences and concepts of closeness, warmth, smiling, touch, and satisfying conversation, in a sense it *is* the combination of such things and

nothing more. One can think of the abstract concept as the node in a semantic network that has no content in itself, but serves as the connection point pulling together other nodes (which, according to Lakoff and Johnson, bottom out in concrete experiential categories).

This connection between abstract thought and concrete experience is the center of Lakoff and Johnsons "primary theory of metaphor." In their theory "metaphor is *not* the result of...interpretation [it is] a matter of immediate conceptual mapping via neural connections" (emphasis in original; p. 57). (Non-abstract or literal ideas need not be metaphorical; grasping a hammer is literal, while grasping an idea is metaphorical.)

Lakoff and Johnson map out the sensory-motor roots of abstract concepts. I list some below. The first concept in each list is abstract and the second is concrete. I have highlighted those abstract concepts that are particularly important in philosophy and theory-making:

Importance as bigness; happy as up; bad as stinky; *knowing* or *understanding* as seeing or grasping; difficulties as heavy burdens; more as up; *similarity* as closeness; *organization* as physical structure; time as motion; *change or transformation* as motion; *states* as locations; *purpose* as destinations or desired objects; *causes* as physical forces; *relationships* as enclosures (PITF, p. 50-54).

The metaphorical connections between abstract ideas and concrete metaphors are not always simple or obvious. Primary metaphors are combined in complex ways. For example, Lakoff and Johnson examine the "life as a journey" metaphor and uncover a wealth of depth and breadth.<sup>36</sup> When they say that, for example, importance is metaphorically connected with bigness, it is not to imply only bigness. Importance may be metaphorically associated with many sensory-motor metaphors.

Lakoff and Johnson's *Philosophy in the Flesh* is not only about the pervasive role of metaphor in reason and language (their prior books *Women, fire, and dangerous things*, Lakoff 1987; and *Metaphors we live by*, Lakoff and Johnson 1980, covered that territory). They have bigger fish to fry. They are out to show how the most prestigious of all ideas and theories, philosophical and scientific ones, which are also among the most abstract ideas and theories, are on dubious ground—they point not so much to eternal truths but back to concrete embodied experience. "Our most fundamental concepts—time, events, causation, the mind, the self, and morality—are

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<sup>36</sup> For claims about instances whose categories follow a *graded or prototype* structure the claim is true to the extent that the instance fits the prototype or central meaning. But for concepts with more *metaphorical pluralism* the situation is even more fraught with indeterminacy because the structure of the category may be more like distant islands of prototypes with no central meaning.

multiply metaphorical" (or metaphorically pluralistic, p. 128). Metaphysical philosophical arguments seem to be telling us more about how the mind works than about how the universe works.<sup>37</sup>

**Metaphorical Pluralism: time as an example.** Lakoff and Johnson show that many abstract concepts are understood in terms of a "metaphorical patchwork, sometimes conceptualized by one metaphor, and at other times by another." For example, consider our concept of time, which is based on a patchwork conglomerate of more fundamental experiences and schema, mostly involving space and motion (from PITF Chapter 10). The future is in *front* of us and the past *behind* us. We *face* the future. Time *passes* by or the time has *arrived*. Time durations can be *large* or *small*. One date is *close* to another. Events occur *at* times or *in* time. Also mentioned the "time as a resource" metaphor—we can waste time, steal time, budget our time, etc.<sup>38</sup>

These metaphors "structure not only the way we conceptualize the relationship between events and time but the very way we experience time" (p. 153). "We have found that we cannot think (much less talk) about time without those metaphors" (p 166). Thus "the metaphorical conceptualization of time is constitutive, at least in significant part, of our concept of time"(p. 166). That is, the metaphors are not just *an aspect* of our understanding of time, together they *are* our understanding of time.<sup>39</sup>

Lakoff and Johnson go on to "consider the classical ontological question: *Does time exist independent of minds*, and if so, what are its properties? [We] reject the question. It is a loaded question" (p. 167). Answers to the question are meaningless or not useful. "Yet the biological and cognitive construction of time does not make it subjective or arbitrary or merely cultural...the metaphors are not arbitrary; they are deeply motivated. They permit the measurement of time, our very notion of history, the science of physics, and much more" (p. 168). The metaphors are "apt" and extremely useful, but "being metaphors, can get us into silliness if we take them literally" (ibid). And, reading Lakoff and Johnson, there seems to be much of such silliness in traditional philosophy, if seen from a modern post-metaphysical perspective.

Importantly, the metaphors that underlie a particular concept can be incompatible or contradictory, and yet we unreflectively jump from one metaphorical basis to another. For example, on the nature of *causality* Lakoff and

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<sup>37</sup> Lakoff and Johnson may make metaphorical pluralism sound like a more revolutionary idea than it is, especially to philosophers. It is the multi-perspectival nature of the metaphorical pluralism of core concepts that enables scholars over the ages to write entire books exploring a single constructs such as cosmopolitanism, hope, patriotism, being, selfishness, pluralism, bullshit, or insecurity (this random list from looking at the books on my shelf). That cognitive science supports the basic intuition of metaphorical pluralism is, however, new in our era.

<sup>38</sup> These metaphorical explorations are for English language speakers, but the authors give interesting examples of alternative conceptualizations from other languages and cultures.

<sup>39</sup> Or most of it, as Lakoff and Johnson mention, there are some non-metaphorical, i.e. *literal*, aspects of time such as its directionality and irreversibility.

Johnson's analysis shows that "over the course of history, philosophers have formulated a wide variety of theories of causation, each substantively different from the others and therefore each with its own distinct logic" (p. 173). Are they talking about the same thing? "Philosophers may disagree as to what is the *right* theory of causation, but the philosophical community recognizes all of them as theories of the same thing. Why should philosophers have come up with this particular range of theories of causation?" (ibid). We will never answer this question if we only keep looking "out there" to the external world of physics for the real answer. The answer comes only when we investigate the cognitive aspects of the concept itself.

As in their analysis of the concept of *time*, Lakoff and Johnson show how our conceptualization of the abstract concept of causation is based upon a plurality of metaphors, not all of them compatible with each other, that are brought in and used unawares. Philosophers base their theories on different metaphorical bases of the concept, and thus come to different conclusions.<sup>40</sup> Like the concepts of chair and game, the concept of *causation* is understood in terms of a loose collection of features and exemplars having a fuzzy "family resemblance" or "multivalent radial structure" but having no precise definition, specific nature or essence beyond human thought. Though having diverse facets, these concepts have an undeniable unity. The various senses of the word have enough overlap of use and understanding that the mishmash holds together as a single concept for us.

Lakoff and Johnson continue with an analysis of *mind* and *self* (constructs more central to integral theories than time and causality), and find a similar type of metaphorical pluralism. The constructs thing, object, law, real/reality (featured in Bhaskar's work), because they are highly abstract ideas, are also metaphorical pluralisms.

**Metaphorical Pluralism: more examples.** Many classic philosophical and academic debates lose much of their steam in the light of Embodied Realism. Do slugs have emotions? Are dolphins intelligent?—are computers intelligent? Do apes use language? Do humans have free will? Heated arguments ensue without a thorough investigation into how each party's interpretation of the abstract concepts (emotion, intelligence, language, or free will) differs. Slugs, dolphins, apes, computers, and people do what they are observed to do, and scientists can propose deeper mechanisms and predict or explain behaviors based such mechanisms. But the *categorical* types of questions are uninteresting because inquirers are free to count whichever behavior they want as being emotional, or intelligent, or language-bearing, or free, and rest confidently, though

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<sup>40</sup> They also make the argument (p. 198) that for incompatible metaphorical senses of a concept, we have to (usually unconsciously) choose between them and can't conceive of the concept in a way that includes both. They make an analogy to perceiving figure vs. ground.

unproductively, in their categorization. Is moral development justice-based, as Kohlberg found, or care-base, as Gilliam found? Both types of phenomena are observed (with interesting differences on average between the sexes)—so we can say "both," or "it depends" on one's meaning of moral development. There are interesting phenomena and questions to be instigated, but whether moral development "*is*" [*something*] is not among them.<sup>41</sup>

Wilber uses multiple metaphors for key concepts: developmental levels are also referred to as stages, ladders, spirals, concentric circles, waves, etc. Developmental lines are sometimes referred to as streams. As another example, in writing this paper I have had to struggle with how to refer to what some call the fundamental elements of reality (such as time, space, interior, exterior, etc.). Are to be called fundamental elements, categories, aspects, objects, properties, or components of reality? Because the concept is abstract one is forced to search among a limited set of concrete metaphors, each highlighting some flavor of the idea, but none being completely adequate.

Each interpretation of an abstract concept might be grounded in a different metaphorical base. And, as quoted above, though the metaphors are useful, "being metaphors, [they] can get us into silliness if we take them literally" (PITF, p. 168). Metaphorical Pluralism even implies that when Wilber uses ladders vs. spirals to refer to developmental levels, he may actually be referring to a slightly different (multiple) object. The above examples illustrate issues onto which Metaphorical Pluralism sheds light. The graded nature of concepts from Prototype Theory sheds light on other issues, in which either/or frames of inquiry must admit to indeterminate categories. For example, scholarly inquiries into cognition vs. affect; or mind vs. body, are often hindered by the under-acknowledged fact that some phenomena fall within the gray (graded) area between core constructs. The same issues arise for facts vs. values; a-prior vs. a-posteriori, and many other constructs debated in philosophy. In psychology one will see debates about long term memory, short term memory, and working memory that ignore the fact that these are somewhat arbitrary categorical delineations for what is really a graded spectrum of memory functionality.

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<sup>41</sup> Related to this discussion is the suggestion, by Alfred Korzybski and others, to use E-Prime, "a version of the English language that excludes all forms of the verb to be" which Wikipedia says is (August 20, 2011) "...a device to clarify thinking and strengthen writing [which] leads to a less dogmatic style of language that reduces the possibility of misunderstanding and conflict...For example, the sentence 'the film was good' could translate into E-Prime as 'I liked the film' or as 'the film made me laugh.' The E-Prime versions communicate the speaker's experience rather than judgment, making it harder for the writer or reader to confuse opinion with fact." We could say that the verb to be suffers from pernicious Metaphorical pluralism. It can imply identity, class membership, existence, or predication.

Metaphorical Pluralism explains how ideas such as love, integrity, sin, or fatherhood can seem so *simple* to us at times, but so *complex* at other times, especially when we are trying to explain ourselves to others. The feeling of simplicity comes from the one gestalt or memetic holon that has formed in the individual mind around this concept. It can seem whole and complete at a feeling/phenomenological level. The complexity comes because, in fact, these words are metaphorical pluralisms (and multiple objects). They not only point to not-exactly-overlapping sets of phenomena among interlocutors, but within each individual mind they are composed of a somewhat unique hodgepodge of component constructs.

### What objects are real?—Critical Realism, and Integral Pluralism

In the previous section I summarized the cognitive-science-inspired Embodied Realism of Lakoff and Johnson. It puts post-metaphysical limits on what can be claimed real or true. But the quest for ontological knowledge must go on despite (and also informed by) revelations of fallibility. Pressing practical and theoretical questions push us to give the patterns observed in nature names and treat them as real objects, despite the pitfalls of the enterprise. Embodied Realism reveals and explains sources of fallibility/indeterminacy, but provides only a few tools for dealing with it. In this section I explore several theories from philosophy (not from cognitive psychology, in contrast to the prior section) that help deal with ontological conundrums by introducing nuances and differentiations into the deliberative vocabulary. First, Bhaskar's domains of the Empirical, the Actual, and the Real, and his emergent strata model of reality, allow for a more precision in ontological inquiry. Next I mention several philosophers who speak to the types and ontological status of abstract concepts. Finally I discuss Wilber and Esbjörn-Hargens' Integral Pluralism, which nuances the question of "what is real" by asking *how* it is real for *whom*, and offering a conceptual framework for categorizing the how (methodologies) and whom (the "adequatio" of developmental levels).

**Navigating around Bhaskar's epistemic fallacy.** Above I noted support, from Lakoff and Johnson and others, for the Realist ideas that "there is a world independent of our understanding of it" and "we can have stable knowledge of it." Fallibilism dictates that we cannot have absolute or certain knowledge about objective reality, but realists (and others who reject extreme relativism) agree that some ideas correspond more closely to reality than others, and that reason can, at least in some domains, do a fair job at discriminating the more from the less valid (or true). Some realists draw the line at sense data, claiming that sense data can yield accurate perceptions about objects

in reality, while abstract ideas are entirely subjective and do not point to real objects. Findings in cognitive psychology (and other fields) put to rest the rationalist vs. empiricist debate over whether the sense *or* reason can yield valid knowledge—both are eminently fallible, and moreover perception and reason are too entwined to differentiate their reliability so strongly.

But the question of whether abstract objects point to anything *real* is still a controversial one. Metaphorical Pluralism sheds some light on this debate. The term "real" itself is a metaphorical pluralism with no single meaning—as is the construct of truth (PITF devotes a chapter to this).<sup>42</sup> Theorists making divergent claims about reality are often referring to different things—their meanings are not identical and ground in different metaphors and key exemplars. Thus, a more tractable question than whether abstract things such as liberty, time, causality, and subjectivity *are* real<sup>43</sup> is: in what *sense* can they usefully be said to be real? Prototype Theory also sheds light on the issue. The objective-subjective (real vs. "in our heads") dichotomy is assumed to be exclusive, yet these are human constructs so we can expect that there are some phenomena that don't fit neatly or centrally into either one category or the other. So the question of "what is real?" needs a more nuanced approach to provide useful insights.

In his *Critical Realism* Roy Bhaskar aims to provide a new and more reliable philosophical foundation for scientific (and rational) inquiry that counters the postmodern repudiation of valid knowledge. He wants to provide a rational foundation for the study of non-concrete objects. Physics must assume that the law " $F=MA$ " is real, and that the abstract concepts of force, mass and acceleration are also real—or we could say that a scientific interpretation of the term "real" should include such objects for it to be useful. We can extend this line of reasoning to concepts from social sciences, including concepts such as fear, agency, values, mind, freedom, the economy, the state, families, and language. Bhaskar argues that these must be taken as real to ground inquiry in the social/human sciences. Bhaskar says, on the ontological status of ideas, that "ideas...are part of everything and everything is real" (1997, p. 139). Things such as force, values, and freedom effect observable reality (as does their absence), and thus must also be real. To Bhaskar, the real includes not only (the referents of) what is experienced by the senses, but: all that is

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<sup>42</sup> In *Theories of Truth, A Critical Introduction*, Richard Kirkham (1992) notes that there are many definitions of what is meant by truth in philosophy and logic. He claims that philosophical disagreements and confusions about the nature of truth are often the result of scholars talking about two different things (both called truth) without realizing it, or the result of a single author using one definition in one place and another definition in another place. He classifies the implicit definitions of truth into categories including extensional, possible worlds, metaphysical, naturalistic, essential, justificatory, assertional and ascriptional.

<sup>43</sup> Even the verb to be is a metaphorical pluralism, as President Clinton famously and disastrously tried to point out as he was trying to deceive his interrogators: "It depends on what the meaning of the word 'is' is.." And see the footnote reference to e-prime.

experienced (including subjective ideas); all that actually happens in the concrete world but is not experienced by a being; and those forces, laws, or tendencies that have causal powers on the concrete world (directly or indirectly). Bhaskar differentiates the domains of the Empirical (experience), the Actual (which includes experienced and non-experienced events), and the Real (which includes events and *mechanisms* with causing those events) (Bhaskar, 1975, p. 13). In Critical Realism deep structures, mechanisms, and tendencies have an equal ontological status to concrete objects (because they are "causally efficacious"). Bhaskar also introduces a distinction between transitive and intransitive objects, where the latter are "the real things and structures, mechanisms and processes, events and possibilities of the world...[not] in any way dependent on our knowledge, let alone our perception of them" (IBID p. 22) (essentially Kantian "things in themselves" but with less metaphysical baggage). Transitive objects are ideas, world-views, theories and other cognitively produced phenomena.

Postmodernists take the fallibility of abstract ideas (or all ideas) to mean that we can't say that they are real (or refer to real things). The post-post-modern interpretation is that we *should* (or can) assume that the abstract ideas mentioned above are real, yet maintain the fallibilistic attitude that our understanding is always open to revision. When several people look at a tree or a cloud, their senses lead to an agreed conclusion that the tree or cloud exists as an object in reality. Knowing what we know about the fallibilities of the senses and of reason and group mind, even perceptions/conceptions such as this are not 100 percent certain. So claiming that a more abstract pattern observed in nature is "real", e.g. force or empathy, is different more in degree than kind—more abstract ideas have additional sources of indeterminacy.

Bhaskar's Critical Realism has an uneasy relationship with Habermasian and Lakoffian post-metaphysics. Consider the quote from PIFT (p. 93) given above: "the subject-object split is a mistake; there are no objects-with-descriptions-and-categorizations existing in themselves...we are coupled to the world through our embodied interactions...we never were separated or divorced from reality in the first place;" and my statement that "ontology...cannot divorce [itself] completely from epistemological and cognitive concerns." These quotes seem to verge on making what Bhaskar calls the epistemic fallacy: "the view that statements about being can be reduced to or analyzed in terms of statements about knowledge" (Bhaskar 1975, p. 36).

Bhaskar's point is that the investigation of reality cannot be reduced to epistemology because it concerns the actually real world, not (only) our *interpretations* or perceptions of the world. Lakoff and Johnson would agree (as do I). But, Bhaskar would agree with the balancing view that conclusions from ontological inquiry, like all

reason and particularly reason about abstract entities, are subject to fallibilities described by cognitive psychology (and studies of epistemology). Post-metaphysics implies that there are certain types of questions about reality that are *unanswerable* and not worth pursuing, and is thus aligned (in this one respect) with postmodernist tenets.

Realists emphasize the *answerability* and validity of certain types of questions that were rejected by postmodernists.<sup>44</sup> Though Bhaskar's and Lakoff & Johnson's views seem counter each other in specific claims, in the larger context of each body of work they are compatible. Each is motivated to fight a different battle on the front of countering (or balancing) the ravages of postmodern and deconstructive trends.<sup>45 46</sup>

Both perspectives can be held simultaneously. When we look at a tree or a cloud it is reasonable to assume that there is some object there in reality. But we don't perceive truth directly, we interpret patterns of data as objects—the tree could be plastic or fake or illusory; and looking at the cloud through infrared glasses might yield a differently shaped object. Bhaskar wants to say that the abstract entities fear, agency, values, mind and freedom are real objects in nature. To be more accurate we would have to say that it is rational to presume that, as with the tree or cloud, there is *something* in reality we are seeing through a perceived pattern, and that it is valid to call these abstract ideas real objects, but that the exact way that one interprets a construct, say the family or freedom, does not correspond completely and fully to any object in reality. We must, and by nature cannot avoid, interpreting our ideas about trees and clouds *and* the family and freedom as if they were pointing to some-thing real (an argument from rational reconstruction); and yet should hold these ideas lightly enough to acknowledge sources of fallibility.

It should be noted that Bhaskar's approach, even though it provides a place in Reality for abstract concepts, is not metaphysical. Metaphysical constructs, e.g. platonic ideals, are assumed to exist independently of both human cognition (subjectivity) and concrete reality (objectivity), while Bhaskar's mechanism, structures, and tenancies have strong interactions with concrete reality and are inferred to exist through observations of concrete (Empirical) reality.<sup>47</sup>

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<sup>44</sup> Post-metaphysics leans toward supporting negative/post-rational capability and realisms lean toward supporting positive/rational capabilities

<sup>45</sup> Developmental theories including Wilber's and Cook-Greuters position post-modern worldview as a necessary and important phase following the modern hyper-rational worldview; one in which post-rational and construct-aware cognition has emerged enough to see the fallibilities of hyper-rational and dis-embodied reason, but throws the baby of rationality out with the bathwater of infallibility and has not reached the ("second tier") stage where both can co-exist comfortably.

<sup>46</sup> In his book on Bhaskar's Dialectics, Alan Norrie explains the relationship between ontology and epistemology in Bhaskar's work as "a complex, co-embedded, constellational relationship... not a clear analytical distinction" (p. 17).

<sup>47</sup> Bhaskar's framework has a place for human cognition and human mind in the scope of what is real. Those who make the metaphorical leap say that there is a substance, essence called "mind" (as in the mind of the universe) that is beyond human mind are thinking metaphysically.

**Adequatio and post-metaphysical approaches to the ontological status of abstract concepts.** For millennia the philosophically inclined have wrestled with questions about the ontological status of abstract constructs such as subjectivity, consciousness, spirit, time, space, causality, god, soul, ego, evolution, freedom, consciousness, life, language, and democracy. Are *properties* such as color, weight, or distance real?<sup>48</sup> Are *categories* such as mammal less real than instances such as the dog? Are *processes, relationships, or laws* of nature real in the same way objects are?<sup>49</sup> Below I will summarize how post-metaphysical and "embodied" philosophies have approached the ontological status of non-concrete objects.

Post-metaphysical approaches avoid positing preordained and eternal metaphysical constructs (Platonic entities) and realities that are independent of any observer. They also, according to Habermas: "call into question the substantive conceptions of rationality (e.g. 'a rational person thinks this') and put forward procedural or formal conceptions instead (e.g. 'a rational person thinks *like* this')" (Cooke, 1994). Post-metaphysical approaches are highly reflective and particularly concerned with method and epistemology, or as Zachary Stein puts it: "[they turn] away from speculative metaphysics and toward the rigorous analysis and critique of inquiry itself" (2008, p. 2). They explicitly deal with the fallibility of knowledge. (See PME for a detailed discussion of post-metaphysics.)

To illustrate the post-metaphysical approach to ontological questions, consider the abstract concept/object *mind* (or, similar enough for this treatment, subjectivity or consciousness). Early philosophers, including Plato and Aristotle (and some still today) held a "metaphysical realism" that assumed that our mind could "grasp the essence of things of the world [and that there] was no split between ontology (what there is) and epistemology (what you could know), because the mind was in direct touch with the world" (PITF p. 94). Many later philosophers, most famously Descartes, argued that mind-stuff and matter-stuff were fundamentally different, but the problems of which one is most primary (idealism vs. realism) and how they interact ("the hard problem" of consciousness) plague philosophers to this day.

Post-metaphysical or post-post-modern scholars, including Habermas, Wilber, Bhaskar, and Lakoff seem to have found related workable solutions to these conundrums. They do so in part by commenting on how the

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<sup>48</sup> Lakoff & Johnson, in Chapter 3, explain that "color does not exist in the external world...light is not colored...it is electromagnetic radiation" and the relationship between perceived color and the combination of color frequencies hitting the eye is not a simple mapping of the rainbow spectrum of frequencies.

<sup>49</sup> For example, it has been argued that processes are quickly changing objects, and objects are slowly moving processes. It has been argued that change and relationships are *more* real than concrete objects (and becoming is primary to being). Physics has taught us that objects only appear to be solid, yet are mostly empty space filled with rapidly moving particles (or, even less concrete, probability waves), and psychology has taught us how the mind biases us to perceive patterns of parts as single gestalt objects.

separation of mind and matter is a false dichotomy, an illusion generated through certain paths of analysis. Wilber's AQAL model solves the problem by treating mind and matter as co-emergent and equally fundamental. He counters scientific materialism (an the extreme realist/empiricist view Wilber calls "flatland") and emphasizes how interiors are just as "real" as exteriors. Habermas' post-metaphysical approach takes a pragmatic stance and tends to avoid metaphysical questions about the nature of reality.<sup>50</sup> The above quote by Lakoff and Johnson summarize their position, including that mind and matter "...we never were separated or divorced from reality in the first place."

**Integral Pluralism and Kosmic Address.** The Integral Pluralism of Ken Wilber and his colleague Sean Esbjörn-Hargens, involves reframing the overly simplistic question of *whether* something exists (i.e. is real) to ask *how* it exists *for whom?* Integral Pluralism says that what is perceived to exist depends on the methodology used to inquire and the developmentally-determined capacity of the observer/inquirer to perceive (Wilber 2006; Esbjörn-Hargens, 2010; Esbjörn-Hargens and Zimmerman 2009). Integral Pluralism proposes a specific framework for classifying methodologies (using eight "Primordial Perspectives" or "methodological zones") and developmental capacity (Wilber's Levels of Consciousness stage model). The move from "whether" something exists to "how and for whom" something exists (which is taken up by other philosophers, including Bateson in his notion of adequatio) enables one to release a number the ontological knots mentioned above.

For example, Santa Claus can be said to "exist," to be real, for those within a circle of 5 year old believers having a conversation about him. "What kind of cookies does Santa Clause like best?" is a valid question in such a circle.<sup>51</sup> Esbjörn-Hargens and Zimmerman give the example of "ecosystem," which can exist, and claims about one can be made, only for those who have an adequate understanding of the concept, which in itself requires the capacity to think at a certain level of complexity. Integral Pluralism also stresses the importance of methodology. What one perceives, and thus considers real, depends in part on the methods and equipment one uses to observe (objects are thus said to be "enacted").

Integral Pluralism proposes that many objects of deliberation are "decentered multiple objects" that exhibit an "ontological pluralism" (Esbjörn-Hargens 2010). That is, when interlocutors (experts or citizens) talk about a complex object such as "climate change," they are often referring to different aspects of the totality of what is

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<sup>50</sup> According to Louis Menand the pragmatist philosophers had no patience with esoteric and perennially unsolved philosophical questions, and along compatible but ever so pragmatic lines, pragmatism "does not solve the problem of objectivity...it just ignores it" (Menand, 2004, pg 11).

<sup>51</sup> Santa Clause can also exist for *us* if we take the magical-thought perspective of that developmental level, which remains ever-available within our consciousness (some would call it suspension of disbelief).

related to climate change. So far this is similar to Embodied Realism's idea of Metaphorical Pluralism, but from here Integral Pluralism takes a different tack. It proposes that the perspectives that give rise to different perceived "objects" can be located with have a "Kosmic Address" that includes the methodological zones of Integral Methodological Pluralism and the developmental levels of consciousness of Integral Epistemological Pluralism. Ontological Pluralism says that observers will enact different objects if they are using, for example, phenomenological vs. empirical modes of inquiry; or are perceiving reality from a conventional vs. post-conventional developmental level.

**Critical Realism and Strata.** Bhaskar's approach is compatible with Integral Pluralism, but he seems to distance himself a bit from the implications of "enacted" objects and from some tenets of post-metaphysics—perhaps because of the possible implication that the deeper structures we perceive in reality would not be there if we did not perceive or enact them. Critical Realism posits that reality has a set of nested emergent strata such as material (physics), living (biology), and rational (culture) (—others, including Arthur Koestler, have proposed similar models of emergence).

Critical Realism proposes that structures, mechanisms and tendencies (but interestingly, not concrete objects) exist in "layers of nature, and are ordered... [The] more basic layer will have more explanatory power [yet] we are [not] able to predict a higher level mechanism from our knowledge of a more basic one" (Collier, on Bhaskar's work, 1994, pp. 46, 110 ). (Similarly, Wilber (2000) notes that lower layers set the *possibilities* for higher ones, while higher layers set the *probabilities* for lower ones.) We can claim a type of reality (and thus a type of validity) for constructs like language, freedom, values or survival, which exists a particular levels.<sup>52</sup> Rather than having to concede that something like human values *only* exist in our subjective interiors and don't exist "in the world," we can note *that* they exist at a certain emergent level of reality (i.e. the cultural/rational level).

**Comparing Ontological Pluralism, Metaphorical Pluralism, and Critical Realism.** Ontological Pluralism is a very useful model for explaining why there may be a diversity in people's ontologies. However, along with other aspects of Integral Theory it has a positivistic approach and does not address indeterminacy as deeply as Embodied Realism does. Ontological Pluralism highlights how different objects arise from the different defined perspectives of the Kosmic Address model. It does not directly address the question of how individuals operating

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<sup>52</sup> Bhaskar's framework follows in the footsteps of philosophers including John Searle (1995), who argued to establish ontological validity for social constructs like "money" (or "institutional facts") that do not correspond (only) to concrete physical objects (or "brute facts").

from the same Kosmic Address might differ in their conceptualizations. Also it is not yet apparent whether the concept of Kosmic Address itself is sufficiently determinate. In contentious dialogs about the validity of specific claims, will participants be able to agree on the parameters of the Kosmic Address itself? How contentious will the specification of the developmental levels or formal perspective of interlocutors become?<sup>53</sup> (And note the Idea Portability Principles from above.)

Similarly, Bhaskar's emergent strata of reality turn out to be problematic to apply in some situations. The general concept is handy, but attempts to define and use any specific taxonomy of strata have been problematic, revealing annoying indeterminacies in any clear-cut categorization (Colier, 1994, p. 242).

Wilber's and Bhaskar's theories (like Habermas' and Lakoff's) were born in response to deconstructivist and poststructuralist approaches that, after rightly noting how knowledge is constructed and beliefs are strongly influenced by historical and sociocultural contingencies, went too far toward relativism and nihilism, completely dismissing the possibility of objective claims about reality.<sup>54</sup> But in their attempts to counterbalance the postmodern trends they may have swung too far from postmodern insights, eschewing a deep consideration of the fallibility of knowledge and the indeterminacy of core concepts.<sup>55</sup> Wilber and Bhaskar's theories relieve some of the ontological conundrums mentioned above by creating ontological systems that can accommodate many of the previously thorny objects of consideration. But some conundrums remain. Lakoff and Johnson's Embodied Realism, based in cognitive science, addresses indeterminacy and fallibility and thus adds some essential elements to ontological inquiry (it is also well aligned with Habermas' account of knowledge fallibility, and thus more directly incorporates the post-metaphysical approach).

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<sup>53</sup> The strategy of concluding that another person is developmentally not up to snuff and accepting that they don't have the capacity to engage with our beliefs or engage at the level of discourse we hope for is, though sometimes perfectly valid, also problematic. In doing so we (a) risk misdiagnosing the other using a simplistic categorization system; (b) miss an opportunity to connect more deeply with both the person and the ideas in front of us, and (c) miss an opportunity to more seriously reflect on our beliefs and selves in the face of an authentic encounter with another (and see Kögler, 1992). Admitting that I, and all of us, unavoidably constantly make these sorts of calls to judge the "adequatio" of the listener and gauge how deeply we will engage, we want to take seriously the question of how integral beliefs are explained and argued for in rational public discourse.

<sup>54</sup> The approaches also respond to the problems of Scientific Materialism, Logical Empiricism, and Positivism, which tend to marginalize non-concrete objects and non-rational modes of thought.

<sup>55</sup> Critiques of Integral Theory suggest that in countering post-modern theories Integral Theory has overshot and has not fully incorporated the lessons of post-modernism, as suggested by the sub-title of Gary Hampson's paper "The [only] way out [of postmodernism] is through [it]" (Hampson, 2007). See also Mark Edwards (2010, p. 409): "an integral metastudies needs a decentering postmodernism that it cannot integrate, that lies outside of its scientific purview, which continually challenges it and is critical of its generalisations, abstractions and universalisings."

No one theory captures all that is important about the sources of indeterminacy and fallibility in ontological enactment. Social-constructivism highlights sociocultural and historical sources. Ontological Pluralism highlights methodological, perspectival, and developmental sources. And Embodied Realism highlights cognitive sources. All of these theories speak to the multi-perspectival, embodied, and participatory nature of knowledge—but in different ways.

### Epistemic drives and structure of the real vs. ideas

We have been exploring the sources of fallibility in ontological thinking, and offering some tools for working effectively within this territory. Embodied Realism uses the findings of cognitive science to reveal fallibilities in ontological thinking. Post-metaphysics shows how metaphysical ontological thinking is unnecessary. Integral Pluralism and Critical Realism provide models for having more nuanced and differentiated treatments of ontological questions. The notion of Epistemic Drives, introduced in this section, enables a first person phenomenological analysis of the *experience* of ontological thinking. The motivational and emotive elements of ontological thinking are considered. As indicated above, human cognition has innate propensities toward certain modes of ontological thinking, such that changing, counter-balancing, and even reflecting on these modes can be difficult. Knowledge about the fallibilities of ontological thought can be felt and applied to one's own processes, in addition to the less vulnerable process of noting fallibilities in others' ontological thinking. An awareness of such drives supports deeper self-reflective, and thus critical and self-emancipatory treatments of ontological questions.

We return to psychological (and thus epistemological) considerations of ontology. But, while Lakoff and Johnson's claims from Embodied Realism are based in empirical studies in cognitive science, my description of epistemic drives is meant as a rough sketch of a useful concept, awaiting more thorough treatment.<sup>56</sup> Also, in focusing on Embodied Realism above we were limited to particular sources of concept indeterminacy, and in this section I zoom out to include more sources, covered in less depth.

Epistemic drive is an umbrella term I use for any tendencies of thought that influence what is perceived as real or true. Epistemic drives are analogous to biologically innate "emotional" drives such as the drive to reproduce, the fight/flight/freeze responses, territoriality, maternal/paternal care, and social dominance/submissiveness drives, but would seem to involve higher brain centers. The term epistemic drive substantially overlaps with other

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<sup>56</sup> There seem to be threads in the literature from psychology and brain science that would or could support and expound upon epistemic drives, but such research is still emerging.

classifications of cognitive phenomena, such as cognitive biases and heuristics (see references to Kahneman and others above), but frames such cognitive phenomena in terms of phenomenological and motivational considerations. "Cognitive biases" emphasizes the *results* of fallible cognition and the shape of systematic distortions. "Epistemic drives" emphasizes the *impulse* or motivation that draws us into enacting these distortions.<sup>57</sup>

A plethora of drives or hard-wired urges exist within humans, mostly dormant until conditions trigger them, and often operating in competition (will I fight or run? Eat, work, or play?). Like other drives, epistemic drives are unconscious processes that, on the one hand, can have unseen control over us, and on the other hand, can be managed or controlled to some degree through learned metacognitive (or meta-emotional) skills.

I found it striking that Lakoff and Johnson's 624 page tome on embodied philosophy barely mentions two important embodiment themes: the influence of *emotions* and basic human drives on cognition, and the role of *development* and evolution in explaining cognition.<sup>58</sup> The role of developmental theory in ontological and epistemological issues is covered by others (including Wilber and Esbjörn-Hargens' Methodological Pluralism, mentioned above and, originally, William Perry (1970)) and I focus below on the second theme in terms of epistemic drives. Lakoff and Johnson seem to focus on sensorimotor experience as the basis of their theory of metaphoric thought, but leave out a critical aspect of early pre-linguistic experience that is just as available for the foundation of metaphorical building blocks of later thought. That is: emotional experience and other non-sensorimotor experiences. The feelings of anger, disappointment, longing, or even more physiological states like nausea and itching can also be the origins of primary metaphors. "Epistemic drives" includes the drive to interpret concepts as simple, the analysis of which is central to PITF, and also includes other drives mentioned below.

There are a set of epistemic drives that impact our ontological beliefs about what is real and what categories things fall within (and how certain we are about those beliefs). The symbolic impulse (tendency to perceive the world in terms of simple categories) is an epistemic drive, as is the desire for certainty (and the avoidance of dissonance-incurring uncertainty, doubt, or unknowing).<sup>59</sup> In PME (Table 2) I list about a dozen such epistemic drives, including drives toward oneness, completeness, purity, simplicity, wholeness, generality, and

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<sup>57</sup> The drives are like the other side of the coin, inseparable from the wholistic phenomena. I suspect that not *all* cognitive biases have an aspect that can be felt as a drive, but I have not identified any as of yet. With all of the phenomena enumerated below, one can sense the pleasure or ease of going with the drive, and/or the effort it takes to counteract it.

<sup>58</sup> This is one indication among many of the surprising marginalization or ignorance of developmental theories in academia. Though developmental theory has deep implications for all of the social sciences, even in closely related branches such as cognitive science, developmental theory is unused except for passing references to Piaget's work with young children, missing the critical contributions of Neo-Piagetian theories relevant to adults.

<sup>59</sup> The very general urge to find understanding or meaning in our experience is an epistemic drive that includes many others. Many of the drives I will mention are overlapping—I am not proposing any clear taxonomy of them here.

abstraction. They serve positive functions but can also over-function to create the "violence and folly" of biases, errors; and can cause ethical problems, leading, at the extreme, to phenomena such as grandiosity, hegemony, elitism, delusions of reference, and proto-fascism.<sup>60</sup>

Like the more basic biological drives, epistemic drives exist within an ecology of psychological forces—interacting and often competing. For any drive to not over-function it needs one or more balancing drives. In PME (Table 2) I suggest that each epistemic drive has a polar opposite. For example, there is a drive to notice differences as well as one to perceive wholes; a drive toward diving into the concrete as well as one for leaping into the abstract.

An important epistemic drive, related to both conceptual gradedness and the metaphorical nature of thought referenced in Embodied Realism, is "misplaced concreteness" (coined by Whitehead, 1929). Misplaced concreteness is the tendency to imbue abstract concepts with the properties of concrete objects (e.g. to give them definitive boundaries). It is at the core of fallacies of the "myth of the given" and "confusing the map for the territory"—which are often mentioned by Wilber. In PME I discuss how misplaced concreteness manifests differently at different levels of abstract thought (or different developmental levels of reflective abstraction). Though philosophers and intellectuals may not be prone to its more primitive manifestations, as we can see from Lakoff and Johnson's arguments, intellectuals are not immune from the influence of certain forms of misplaced concreteness (PME, p. 108).

One property of drives is that one can *experience* their pull if one observes closely. In this section I focus on the drives that seem to most afflict intellectual, philosophical, or ontological threads of human activity. From PME (p. 110):

We can become aware of that in the human mind which wants to pull the disparate, the many, the diverse into a unifying whole; achieve the simplicity and power of a general concept or rule; determine and rest in what is at the center of, or underneath things. We can identify these drives or urges working within us at the level of felt experience. There is a sense of ease, certainty, and mastery when we can ignore details and differences and trust a sturdy generality. There is a sense of elegance and wholeness when we can embrace many things into a circle of unity. We get a certain satisfaction from ordering things or collecting them into tidy groups. The inquisitive and meaning-hungry mind wants to know the causal root, foundation, source, or origin of things.

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<sup>60</sup> "The Seduction of Madness" by Ed Podvoll contains some illuminating descriptions of psychotic "extreme states" and obsessions explained as extreme versions of mental processes that the average person can identify, at a smaller scale, within their own thought processes (Podvoll, 1990). These cognitive phenomena include many that are related to epistemic drives: Ideas become "treasured possessions;" There is a "disturbance of the normal and intelligent function of doubt" and a self-absorbed conviction to one's insights which can lead to a "spiral of megalomania"; Perverse constant contrariness, in which each idea is menacingly coupled with its opposite; Surges of sublime insight and power, magical synchronicities are seen everywhere, and perceptions are overwhelmingly pregnant with meaning and significance (p 29); A desire for perfection can become a compulsion; A perversion of the normal re-orientation or error checking impulse. Also mentioned are "delusions of reference," the strongly held belief that irrelevant, unrelated or innocuous phenomena in the world have a particular and unusual personal significance.

In this article I am not interested in trying to identify *which* type of epistemic drive might be active in any situation, or in proposing ameliorations to specific epistemic drives. Rather, I introduce epistemic drives as a whole as another important perspective on how the embodied nature of reason creates fallibilities in ontological thought. The first step in ameliorating or compensating for these fallibilities and indeterminacies, and moving toward more flexible and nuanced post-metaphysical forms of knowledge-building, is to become aware of them—as cognitive phenomena present in people, but just as importantly as felt impulses within oneself.

**The structure of nature vs. the structure of concepts.** There are a number of repercussions of the incongruity between the symbolic impulse's drive toward simple dichotomous categorical perceptions and the nature of real phenomena. Fundamental differences between the way any epistemic drive "wants" us to perceive the structure of things in the world and the actual structure of things in the world lead to systematic distortions of perception and rationality. A consensus is emerging among contemporary thinkers as to the principles and properties of naturally occurring (or organically emerging) objects, processes, and structures—what Koestler and Wilber call holons.<sup>61</sup> Jeanette Winterson (1997) captures some of this with "reality is continuous, multiple, simultaneous, complex, abundant, and partly invisible." Each (apparent) object is many-layered, massively complex, and multi-perspectival (Barnes (2006) used the term "repleteness"). The objects in nature, when inspected, reveal ever finer layers of detail and nuance. They often possess the "order within chaos" of fractal patterns.

Wilber and Bhaskar, among others, argue that human ideas (and all subjective phenomena) are part of reality with equal status to concrete objects. Yet these objects called ideas (which Bhaskar calls transitive objects) have unique properties compared to other types of objects (intransitive objects). Bhaskar explores this in several ways in his work (for instance by defining a strata of reality that contains them). He coins the term "demi-real" for ideas that do not correspond well to reality (i.e. cognitive errors, falsities, illusions, etc.). Replacing the demi-real with more accurate ideas is a central aim of critical theories, and thus a prime motivation for Bhaskar's work: "the task of social science is to penetrate that demi-reality through to the underlying reality and situate the conditions of possibility of the removal of illusion, of systematically false being" (Bhaskar, 2002, p. 55). As I have said, there are many sources for these illusions or fallibilities. There are also many ways to counter or ameliorate them, including pointing out errors and inconsistencies and offering more accurate ideas as replacements; and identifying the

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<sup>61</sup> Wilber's "20 Tenets" (2000) provides one summary of this consensus. Gregory Bateson, David Bohm, Irvin Lazlo, and Christopher Anderson have also helped articulate how wholes emerge from parts.

sociocultural structural and communicative systems that reproduce them. What I have been after here is the leverage obtainable from understanding the sources and cognitive causes of certain types of illusions—those related to ontological thinking.

Compare the organic structure of most natural objects with the "simple" categorical boundaries that language and the symbolic impulse bias the mind toward. The mind cannot comprehend the full depth, buzzing confusion, and multi-dimensionality of any slice of reality, and quite rightly (from an evolutionary perspective) tends to perceive things in manageable static categories.<sup>62</sup> Categorical thinking is thought to have originated evolutionarily in the organism's need to make quick decisive decisions (is it friend or foe, food or poison, etc.). But it is ever-active, even in deliberation that does not require decisive action. We are, of course, not stuck with or bound to simple categorization, but also can not ignore its pull. The mind devises strategies to compensate for the mismatch between the organic, disorderly, fuzzy-boundaried, or intricate structures of reality and simplistic dichotomies that symbols (words) impose (and which the pre-symbolic or unconscious mind needs for quick decisions).

We compensate for this difference between these two realms (the realm of symbolically structured ideas and the realm of external realities) in many ways. One way is to hedge and qualify—something is almost hot, more or less democratic, nearly psychotic. We also explain in brief or lengthy language how something lies between or in multiple categories (e.g. bluish-brown). Recalling the deeply metaphorical nature of thought we can see that in moving from simple linear or container metaphors to more sophisticated ways to describe categories we are constrained to use yet *other* concrete sensory-motor (or primary) mental models. There are many but the cognitive toolbox is still limited by our embodied nature. Aspects of reality may be structured in ways that are beyond human sensorimotor experience and beyond any of the basic metaphors available to thought. Lets look a little closer at this embodied toolbox.

**Epistemic forms—cognitive tools for dealing with indeterminacy and complexity.** To acknowledge the indeterminacy of abstract concepts we can use spectral, proportional, or graded metaphors (something lies along some line between two points), or fuzzy boundary metaphors (as in clouds or fur or the fading away of sound). These still have a fairly linear and elementary nature. At higher levels of sophistication we might use tabular, hierarchical/branching, spiraling, or network-like metaphors. And at still higher levels of complexity we can make

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<sup>62</sup> To be clear, I am referring to that part of the mind that has the tendency to perceive reality in this way; meanwhile, at another level a person might "know" full well (at the espoused level) that reality is not so simple.

use of recursive models (self-referentials, nested hierarchies, fractal structures), gestalts, and reciprocal or dialectical models (yin/yang type polarities, Möbius strips, ecosystems in which, as Wilber puts it "the parts can't be grasped until the whole is grasped, but the whole can't be grasped until the parts are" (2006, p. 269)).<sup>63</sup> Wilber also uses phrases such as tetramesh and tetraenact to point to the dynamic interpenetrating aspects of reality. While Lakoff and Johnson describe these in terms of primary metaphors, Collins and Ferguson describe them as "*epistemic forms*"—recurring mental structures seen in inquiry, explanation, and the construction of new knowledge (1993).

We are not constrained to think in terms of simple or linearly structured epistemic forms, and have a variety of cognitive tools at our disposal to counteract the symbolic tendency and other epistemic drives—to be able to understand and explain ever more complicated and nuanced (non-"simple") aspects and patterns of reality. But, like the drives to eat sweet foods, exercise power and control, or take notice of attractive people, epistemic drives are ever present, and demand a certain vigilance from scholars or practitioners wishing to operate from a post-metaphysical stance. It should be pointed out that epistemic drives, like all urges, are more likely to control us (as opposed to us controlling them) under conditions of stress, heightened emotions, or personal/ego investment/attachment. This is not even to mention the developmental questions of whether one has the capacity to think using the epistemic tools that become available at higher levels of complexity (as implied by Integral Epistemological Pluralism).<sup>64</sup>

**False dichotomies and faux-paradoxes.** Esbjörn-Hargens (2010) uses the terms "ontological complexity" and "epistemological complexity" to differentiate the actual complexity of phenomena from complexity that is due to how an object is perceived or interpreted. To use Bhaskars term, demi-reality is present when these two do not match; when ideas misrepresent reality. Most of the phenomena we have discussed so far involve cognitive processes that produce representations of reality that are simpler (less complex or nuanced) than the phenomena they refer to. In a sense, given the bind-boggling depth of detail and layered patterns of any actual object or process, language will always portray a simpler view of reality. But it is also true that ideas can add un-called-for complexity or nuance, and that epistemological complexity can (in one sense) overshoot ontological complexity. Again, though there are many branches of this phenomenon at the level of statements, I will focus on the level of concepts and

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<sup>63</sup> The integrally informed reader will note a definite developmental progression here with hints of the movement from pre-conventional/concrete operational to conventional/formal operational to post-conventional/post-rational levels.

<sup>64</sup> Darwin's idea that "the difference in mind between man and the higher animals, great as it is, is certainly one of degree and not of kind" triggered a lasting firestorm of controversy (Darwin, 1871, Chapter 4). Central to this controversy is the strong drive among some to perceive in terms of strict categories, especially in topic domains with emotional overtones.

ontological thinking. I will note three types of cognitive predicaments arising from flawed categorization (*all* abstract categories being flawed from indeterminacy): false dichotomies, faux-paradoxes, and illusory recursions.

One who yields to a simple metaphor of supposedly opposite concepts, love vs. hate to give a mundane example, becomes stuck in uncomfortable paradox in trying to explain real situations that don't fall into either category. How is it possible that I both love her and hate her? Many are the philosophers who have tried to untie the knots and paradoxes that, one could argue, are merely epiphenomena or illusions of the operation of categorization. Zeno's paradoxes and Kant's Antinomies are among them. Philosophers who ascribe to a mind vs. matter dichotomy puzzle about how these non-overlapping realms can effect each other—not seeing that the puzzle is a creation of their conceptualization. Embodied Realism says that such paradoxes are more indicative of how the mind works than they are indicative of fundamental paradoxes *in* reality.

A related predicament involves the *dialectical response* to the creation of any category: the binary opposite or negation of that category tends to become its own category (though not always a named one), and the polar opposites mentioned above are thus constructed or enacted. This is an element of the "thesis/antithesis/synthesis" or "dialectical" structure, which, from an Embodied Realism perspective, can be seen as describing a useful consequence of the symbolic impulse rather than a property of reality. Polar opposites can also be hidden and resist synthesis. The structuralists and postmodern philosophers described the play of dichotomies in language, and pointed out how, within any culture or group, a dominant narrative can emerge which privileges one side of a dialectic and marginalizes its opposite.

A third predicament resulting from the symbolic drive is superfluous or *illusionary recursive structures*. This is seen in many systems that represent complex phenomena as a set of mutually exclusive categories—personality typing systems for example. Consider systems such as the Myers's Briggs typing system, the Chinese Five Elements system, or astrology. People are of course more complex than the categories provided, and in order for the system to account for inaccuracies they include recursive structures in which the entire set of categories repeats inside each main category. For example, each earth, air, fire, and water, elements contains a secondary aspect of earth, air, fire, and water. Schemes that rely on dichotomies such as Yin and Yang (or Masculine and feminine) principles often note how there is an aspect of Yang within Yin (or masculine within feminine) and vice versa (in a never ending recursion). In astrology one has a rising sign that is one of the zodiac categories, plus sun and moon signs that allow for other aspects of the zodiac categories to come into play.

These recursion illusions are comparable to the epicycles that were needed to explain the motion of heavenly bodies in Ptolemy's earth-centric model. The complex cycles within cycles were more an artifact of the epistemic form used than a characteristic of nature. When one employs a categorical scheme to describe actual phenomena (Wilber's quadrants being another example—I discuss it in a later section), one ends up with boxes inside boxes inside boxes, metaphorically speaking. Aspects of (intransitive) reality may be self-similar across scales (fractal), but naturally occurring fractals have complex organic structure, not the hall-of-mirrors structure of precise nested containers. Natural organic structure can be shown to originate from simpler laws or tendencies. Illusory recursions seem to be generated by successive workings of the mind's need for order, simplicity, and meaning.

Developmental psychologist Susanne Cook-Greuter, in talking about construct-aware thinking, says "the linguistic process of splitting into polar opposites and the attending value judgments can become conscious. [One sees] through the filter of the symbolic construction and mapping of reality [and] the invention-construction of ever more complex theories which are based on the segmentation and reification of the underlying flux of phenomena.... Good and evil, life and death, beauty and ugliness may now appear as two sides of the same coin, as mutually necessitating and defining each other" (Cook-Greuter, 2000, p. 29-30).

This is not to say that the categories used are empty or false—they may be capturing and highlighting an important aspect of reality. The point is that when one uses language categories to slice the complexity of the natural world, if one wants to capture more of the true complexity or nuance of real phenomena then one may be forced to invent recursive structures (or some other epistemic form) to compensate for the errors introduced by the slicing. Assuming that the base categories are valid (while approximate) representations of reality, the recursive structure that follows may not be a particularly valid (or may be an ever-more faulty) representation.

The post-metaphysical (and pragmatist) point is that Yin and Yang, masculine and feminine, subjectivity and objectivity, good and evil, Eros and Agape, and all such abstract dichotomies, should not be thought to exist *in* nature or the external world—this is misplaced concreteness. If we believe that they exist externally then we are more likely to distort our perceptions and conceptions to fit the constructs, rather than modify or choose our constructs according to experience and intelligence. Bhaskar, wanting to avoid the relativist or nihilist traps that jeopardize rational or ethical progress, emphasizes that we must allow some such constructs full ontological status.

This is possible if done with a properly fallibilistic attitude.<sup>65</sup> The concepts and categories we create (enact) are (presumably) the best we can do to move toward an accurate and useful representation of reality. Like, scientific theories, they can at the same time be treated as serious attempts, stable enough to be build upon, and yet fallible. It is prudent and natural to spend more time and cognitive effort working with the positive capabilities offered by sturdy concepts—assimilating reality to the known and building new ideas upon the old; and less time and effort employing the negative capabilities of noticing fallibilities and opening to the ambiguous and the unknown. But clearly, the latter, the self-reflective and critical moment, has a very important role.

## Recap

Before the section on Application I will recap the main points thus far. We started with an overview of embodied philosophical approaches. Each argues in its own way that knowledge and truth cannot be divorced from the constraints of embodied human cognition. As argued by Lakoff and Johnson, when one addresses fundamental questions about the nature of reality one can no longer avoid considering the nature of embodied human thinking.

Epistemic drives and various cognitive biases can lead to distorted or demi-real interpretations of reality. Some of this distortion is a result of the (transitive) world of ideas having different structural and transformational properties vs. the (intransitive) world anchored at concrete reality. We have focused on such phenomena at the level of perceiving concepts, categories, and objects (and the certainty associated with such perceptions). Most of these phenomena can be explained in terms of the brain/mind's tendencies to (1) interpret abstract concepts (ideas) as if they had the same properties as concrete objects (unquestioned solid existence; simple definitive boundaries; etc.); and (2) use simple categorizations to make quick efficient decisions. Cognitive processes that served our evolutionary ancestors well can lead to problems as they coordinate with the higher level thought processes of symbolic and abstract thinking. The resulting reality-distorting tendencies of thought include:

1. Concepts and categories are interpreted as having definitive boundaries. In this error one misses the gray and graded territory that does not fall neatly into the category. One also misses phenomena that fall outside of the conceptual scheme. Things that don't fit are ignored or denied. (Principle: prototype theory of concepts.)
2. Various uses of a concept (or word) are assumed to point to the same object in reality, when in fact such speech acts are cognitively associated with different exemplar fields, or different deep metaphors. (Principles: Metaphorical Pluralism and Ontological Pluralism.)

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<sup>65</sup> Different constructs may have different types or sources of fallibility however, and schemes such as Integral Pluralism and Critical Realism can provide vocabularies for distinguishing the differences.

3. Abstract concepts are assumed to refer accurately to something that exists independently of ideation. If one takes the Platonic stance that abstract terms (e.g. democracy, ecology, beauty) exist as absolutes beyond the worlds of both thought and physical reality, then (1) one may make great efforts to force-fit interpretations about the world into an ideal; (2) it is impossible to make grounded arguments about such objects. (Principle: misplaced concreteness.)
4. The conceptual/categorical "knife" creates dichotomies, paradoxes, and recursive structures that are interpreted as properties of reality, but can be properties of the thought process.
5. Judgments about categories and the objective realness of abstract ideas can assume unwarranted degrees of certainty or permanence (properties of concrete objects and our perceptions of them).
6. Greater importance and meaning can be assigned to the *most* abstract or deeply fundamental constructs and claims.

This article has explained some of the sources or reasons for these types of distortions. Concepts and ideas can be located along several spectra such as abstraction, "ladder of inference," or emergent levels of reality. The further a concept is from concrete reality and observations (the further the epistemological distance), along any of these spectra, the more indeterminacy is involved and the greater the risk that there will be a mismatch in the structural properties of the idea vs. the structural properties of reality.

There are a number of methods for ameliorating the above reality-distorting tendencies (and the paradoxes, mazes, and pink elephants they create). These include:

- Integral Pluralism and Critical Realism provide concepts and models for more differentiation, integration, and nuance in ontological thinking. Integral Pluralism allows ontological questions about whether something exists (or is true) to take on the more nuanced perspectival form of *how* something exists (or is true) for *whom*. Critical Realism offers a stratified model of reality that gives a home to non-concrete objects.
- When appropriate, one can employ more sophisticated epistemic forms to better approximate the complexity of phenomena.
- The indeterminacy of concepts (and the fact that claims using them are valid *to the extent that* phenomena under consideration are similar to the prototypical exemplars a speaker assumes for the constituent concepts) emphasizes the need to continuously (re)ground conversations about abstract concepts in examples, and to explore boundary cases.
- In PME I use the term "indeterminacy analysis" to refer to an analysis of how the indeterminacy of a model or theory's core concepts (their fuzziness or metaphorical pluralism) affects its claims or applications.

- Simply understanding various types of epistemic drives and systematic distortions of thought enables vigilant awareness of them, which may be as much as half the work of ameliorating them.
- Knowledge building communities can work to establish norms for some of the above approaches, and also norms for the negative capabilities of humility and tolerance for uncertainty, ambiguity, paradox, and unknowing, especially with increasing epistemological distance from concrete observations.

## Applications and implications for integral theories and practices

Though Integral Theory is sometimes framed as a "theory of everything," its primary areas of application and focus are on human phenomena, and thus it is subject to most of the methodological predicaments common to the social and human sciences, and is beset with indeterminacy.<sup>66</sup>

Integral Theory is not primarily an experimental/empirical field, it is a trans- or meta-disciplinary, meta-theoretical, and philosophical field. It has aspirations to (a) integrate, frame, and/or mediate between other fields of knowledge and practice, and (b) do so in a way that has direct pragmatic usefulness to scholar/academicians and practitioners. Though as with all fields of study it has its own jargon and world view, its aspirations imply that it must be particularly sensitive to the portability and translatability of its ideas. Integral Theory is also centrally concerned with (1) highly reflective levels of (cognitive, self, and collective) development, and (2) the dynamics of evolution and development in all phenomena. Thus integralists are called to reflect upon knowledge building and theorizing as an embodied (both cognitive and collective) *process* and *phenomena*, as well as focusing on the products of integral thought.

Putting all of this together means that integralists are called to be ever aware of the embodied hermeneutic and epistemic aspects of the knowledge they are developing and disseminating. Of particular interest in this paper are ontological practices of defining fundamental categories and properties of reality. Below I explore what the embodied perspective implies for integral theories.

This section on applications and implication of the embodied approach has six parts: recursive application to the article itself; application to AQAL quadrants; application to other AQAL categories; implications for

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<sup>66</sup> The social and human science theories are difficult to test (validate or falsify; see Popper, 2002; Wallis, 2008). Flyvbjerg claims that "we must drop the fruitless efforts to emulate natural science's success in producing cumulative and predictive theory; this approach simply does not work in social science" (Flyvbjerg, 2001, p. 166).

"meaning generative" claims; implications for ethics; and implications for the definition and support of second tier skills.

### 1. Indeterminacies in this article

Before illustrating some applications of the ideas in this article to integral theories, I should try to apply them recursively to this article and the claims made therein. This analysis will not be particularly illuminating however, because the main purpose of the article was not to propose a sturdy system of categories or an ontological model.

I introduced a number of concepts, including: epistemic wisdom, indeterminacy analysis, epistemic drives, ontological thinking, meaning-generative, negative and positive capability, and epistemic forms. Each of these is a concept meant to point to some real phenomena. Their meaning for me is anchored in key examples and relationships with other constructs. For most of them I give examples. The reader may have in mind boundary phenomena that do not well match my core exemplars, and the meaning or validity of my claims relative to those concepts would be indeterminate in such territory. Further dialogue and dialectic would show whether my concepts and exemplars could be tweaked to be more adequate or whether the boundary objects illustrate territory in which the concepts are just not very useful (or the claims inaccurate).

In addition to introducing the above (to most readers) new quasi-technical terms I used a number of common terms which are certainly metaphorical pluralisms admitting to significant indeterminacy: e.g. reason, knowledge, linguistic, philosophy, modernity, ontology, concept, idea, experience, drive, epistemic, real, abstract, embodied, reflective, metaphysical, construct, cognitive, fallibility, illusion, enact, unconscious, ethics, and claim. One tries as best one can to be clear about the meaning and domain of referred to exemplars in using such terms—and in this text I have not given any of these abstract concepts primordial or metaphysical status, which would be problematic. The closest thing to a model proposed in the article is my framework for differentiating concepts, statements, models, and experience. I am painfully aware of phenomena that fall between the boundaries of these concepts, and it remains to be seen whether this model is useful to others.<sup>67</sup>

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<sup>67</sup> A better example of such "indeterminacy analysis" of core concept is in Murray (2010) in which I differentiate the promotion of integral *beliefs* from integral *skills*. In the first part of the paper I assume this simple two-part model and use examples that are clearly skills or beliefs. Later I deconstruct this conceptual model, to discuss types of "knowledge" that share properties with both beliefs and skills. The original model is used to illustrate an important point, but a more nuanced treatment is shown to be needed in certain terrain.

Though it is my style to hold conclusions as tentatively and concepts as indeterminate, as I noted in PME, we cannot expect the creators of theories and models to be the best articulators of the indeterminacies and fallibilities of those models. Knowledge is constructed and reproduced in communities, and progress in those communities depends on an ecology of roles and functions. Some, like Wilber, are master model builders, and perhaps, as in Wilber's case, are also master model communicators or promoters. This is their strength and contribution. It is good if the designer of a model can articulate some of its indeterminacy, but that is not to be expected in all cases. It is up to the community as a whole to craft knowledge that is both strong and flexible; confident yet humble; internally consistent yet self-aware of how it matches or mismatches with the ideas of those outside the community who might benefit from it.

## 2. AQAL Quadrants, Kosmic Address, and Integral Pluralism

In PME, the section "An indeterminacy analysis of some Integral Theory constructs," I explore the implications of the fact that the foundational categories of Wilber's four quadrant model, "subjective vs. objective" and "singular vs. plural," are graded concepts exhibiting metaphorical pluralism. To quote: "For example, unconscious mental processes are not exactly subjective, but are they objective? It seems to me that the category fails to be useful here...As to the category singular vs. plural, we can find or imagine things that are sort of singular but also sort of plural...We can also apply indeterminacy analysis to the... concept of holon...some objects of interest may fall into a gray area between heaps and holons, or between holons and artifacts..." (p. 106). (The same arguments can be made of the eight Zones of Integral Methodological Pluralism.)

The question of whether boundary objects are common or rare, important or irrelevant, is a *pragmatic* question—the ontological issue remains: that we often treat such categories as (1) mutually exclusive, (2) having no fuzzy boundaries, and (3) properties of reality that valid inferences must abide by. And of course, if one habitually looks at the world through the lens of such a model, then boundary objects will automatically appear rare and irrelevant. Wilber does employ various epistemic forms (as implied in "tetra-enact") to indicate that the concepts and models he uses do not have a simple categorical form. However it can also be noted that (1) in the vast majority of his writing and dialogue, he uses the categories without such qualification; and (2) when he notes the non-simplicity of the constructs, he is claiming that this non-simplicity (intermeshing, etc.) represents nature, which, though it may be true, is not the same as noting the indeterminacies and fallibilities of the constructs themselves.

The quadrant model and related and eight "primordial perspectives" or zones ground Integral Theory's treatment of *perspectives*. In the Introduction I noted that Wilber and his colleagues seem ambiguous about the ontological status of perspectives: are they things that humans have/use, or are they fundamental components of the world? From a post-metaphysical perspective, Wilber's "objects are first and foremost perspectives. NOT 'are seen from perspectives,' but ARE perspectives....," mentioned above, is not to be taken with too much ontological or metaphysical gravity. It is useful to consider this as true for certain interpretations of "perspective" and "object" (two metaphorical pluralisms).

All of the above point to principles of Integral Theory that are not so much True as true *to the extent that* the exemplars considered in any actual situation are prototypical to the commonly accepted prototypes of the core categories.

The related concepts of "The True, the Good, and the Beautiful," often referenced in the Integral Theory, are similarly problematic. Associated with the I, We, and It primordial perspectives, they are given a foundational ontological status. But the True, the Good, and the Beautiful are metaphorical pluralisms that turn out to be difficult to pin down, and their meanings are contentious among philosophers.<sup>68</sup> As a final example, above I suggested that the idea of Kosmic Address, which does have powerful explanatory power, is limited in real life decision making to the extent that stakeholders might disagree upon the developmental level (the Who) associated with a claim.

Integral Pluralism uses the idea of Ontological Pluralism to describe the indeterminacy of some controversial objects, such as climate change. What I am suggesting here is that it is useful to apply the concepts of Ontological Pluralism and metaphorical pluralism to the core abstract categories that comprise the theory itself. This would contribute to making this post-metaphysical theory even more deeply post-metaphysical.

### 3. Other AQAL categories.

Wilber's Integral Theory is quite popular as judged by, among other things, the number of his books sold, the number of languages his works have been translated into, the various groups and Meetups around the world inspired by his work, and the diversity of areas his work has been applied to.<sup>69</sup> Though his work has been appreciated by leading intellectuals, he works outside the boundaries of academia and is mainly a populist author

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<sup>68</sup> Habermas uses a parallel conceptualization of subjective, objective, and intersubjective (which Wilber cites as an influence). But Habermas is not interested in whether these are primordial aspects of nature—he describes them in terms of enacted *human* interests, perspectives, and innate orientations.

<sup>69</sup> See <http://www.integralworld.net/translations.html>, <http://kenwilber.meetup.com>, [http://en.wikipedia.org/wiki/Integral\\_Theory](http://en.wikipedia.org/wiki/Integral_Theory).

writing about philosophical, interdisciplinary, cultural, and spiritual issues for the general (if sophisticated) reader in an effort to affect positive cultural change or evolution. The core of his offering is the AQAL model (or metatheory). It proposes "five irreducible categories of...manifest existence": quadrants, levels, lines, states, and types. There are said to be "the five most basic elements that need to be included in any truly integral or comprehensive approach..." to understand the cosmos as a whole or any aspect of it (Wilber, 2006, p. 31). AQAL includes not only these five dimensions as distinct categories but within each category Wilber defines a classification of elements—the four quadrants (8 zones), 4-6 states, 3-17 stages, 3-12 lines, etc.

In "Integralist Mental Models of Adult Development: Provisos from a Users Guide" (Murray, to be published), I explore the indeterminacies in the constructs central to AQAL's theory of development: the Lines and Levels of the AQAL psychograph, and the concept of developmental tiers. I show how certain commonly held beliefs about development within the integral community are more fallible than is assumed because of the graded nature of and metaphorical pluralism of the core constructs.

Though Wilber clearly notes that his system is an evolving one open to improvement, the confidence and directness of his rhetoric and the steadfast adherence of many of his colleagues to the model *implies* that AQAL contains deep and stable truths. Most contemporary philosophers are careful to avoid this degree of confidence in foundational ontological systems and instead focus on principles and methods, and use categories more provisionally. Though much of Wilber's writings, and especially recent "Wilber-5" texts (most associated with post-metaphysics) and the work of his most prominent academic colleagues, are more based on principles and methodologies, and are thus less susceptible to the problems of indeterminacy, the AQAL model is still the foundation of Integral Theory as it is presented to the masses.

The primary thrust of this article is to describe fundamental fallibilities of categorical or ontological schemes (and concepts in general), and this clearly implicates a model like AQAL as problematic in many ways. The model seems designed to be understandable in terms of simple categories, taxonomies, and charts that appeal to the more linear and less complex of the "epistemic forms" mentioned above (though a deeper reading of Integral Theory invokes higher stage forms such as ecologies and dialecticals). I personally believe that AQAL (and all of Wilber's framework) contains extremely useful ideas worth disseminating widely. But the "positivism" (vs. negative capability) of its presentation predisposes the misplaced concreteness of thinking that reality can be represented so simply.

The rub is, that if the model did not contain these easily digestible categories then it surely would not be so popular, and fewer would benefit from what it has to offer. Its surface-simplicity and digestibility has contributed to it being applied to over 50 disciplines and understandable and available (in different ways) to users at a variety of developmental levels. My suggestion here and elsewhere is that Integral Theory could be packaged with an "indeterminacy analysis" and other self-critical and self-reflective ideas that would make it easier for intermediate and advanced learners and practitioners to avoid the pitfalls of simple categorizations (PME, p. 106). (And that indeterminacy analysis is the job of a knowledge building community, not the originating theorist.)

#### 4. The ontological status of spiritual concepts

Wilber's spiritual and esoteric themes are a primary draw for many of his readers. His Integral Spirituality is in part an attempt to provide a post-metaphysical treatment of spiritual realities, transpersonal phenomena, and perennial principles from religions and "wisdom traditions." Spiritual themes in integral discourse include the three faces of God; the non-dual, the primordial, the Ground of Being, and the Absolute; higher/authentic self and higher states of consciousness and stages of development equated with enlightenment; Eros and Agape; Being and Becoming.<sup>70</sup> In Integral Spirituality Wilber defines the spiritual line of development as that addressing the question "What is it that is of ultimate concern?" We could say that this includes questions about the ultimate source, destination, and purpose of life, mankind, consciousness, and Kosmos. Though Integral Theory is explicitly post-metaphysical (especially in the "Wilber-5" phase), some of Wilber's concepts veer uncomfortably close to the metaphysical—e.g. Primordial Perspectives, Eros and Agape, involution, Kosmos, Omega Point, and nonduality. Because such concepts are important themes in integral theory, it is important to inquire into their ontological status, and reflect on the types of ontological thinking involved in reasoning about them. How does one argue for or reason about such concepts (and the claims made around them)? What forms of justification are appropriate, especially in a post-metaphysical milieu?

Post-metaphysical (and post-post-modern) rationality is more concerned with how one thinks than what one thinks; more concerned with methodology than content. According to Cooke, it "call[s] into question the substantive conceptions of rationality (e.g., 'a rational person thinks this') and put[s] forward procedural or formal conceptions instead (e.g., 'a rational person thinks like this')" (Cooke, 1994, p. 38). Habermas and others (e.g. Anderson, 2006)

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<sup>70</sup> Bhaskar's most recent work on meta-reality touches on overlapping themes. However Bhaskar's audience is primarily philosophers, while Wilber's addresses a more general audience, so their styles of argument are quite different.

compare various modes of justification used in discourse (also see PME p. 113). Modern (rational and scientific) thought prioritizes justifications based on experience/observation, logical inference, and consensus reached through deliberation unconstrained by coercion and oppression. This parallels Wilber's Three Strands model (which also specifies that the experience/observation results from a specific injunction or replicable method). Modern thought de-values justifications based upon authority (figures or texts), cultural norms, emotional gut impulses, and metaphysical ideals. One reason Wilber (and Habermas) avoid metaphysical entities is because, by definition, such entities are not part of the physical world of concrete objects, sensory experience, and causal mechanism. Metaphysical entities are also outside the world of (human) subjective/intersubjective ideas (Bhaskar's intransigent objects). (They may be part of some universal or cosmic "Mind," but this is metaphysical territory.) It seems impossible to validate such claims using modern rationality; they are not beholden to principles of experience, logic, nor deliberative consensus. It seems they can only be justified in terms of authority or intuition. (And such claims are usually non-falsifiable in the Popperian sense.)

Though Wilber's spiritual themes are important and his analysis is insightful, he faces a conundrum in justifying them. To meet the modern criteria they must anchor in experiences that his audience has access to (given certain injunctions). But, based on his own description of developmental levels, the vast majority of his audience will have at most fleeting glimpses or frequent but vague tastes of the deeper realities the concepts point to. For example, highly spiritually developed ("awake") individuals purport to have a stable experience described by phrases such as "all is one," "I am connected intimately with everything," and "I am of the same stuff as the source of being." In the mundane sense I am not literally one with, or the same as, the chair I am sitting on—I am distinct from it. Yet such phrases are the metaphors used in the imperfect attempt to use language to describe such experiences (see Embodied Realism above). The truth of them is plain as day to those awake to these experiences. But for many, their truth becomes a matter of trust in the authority of a spiritual adept, adopting an idea espoused by new age peers, and/or a belief in a *metaphysical* truth.<sup>71</sup> The opinions of trusted experts and adepts *is* a valid and

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<sup>71</sup> Here the modern and post-modern rejection of knowledge needing "privileged access" clashes with the idea of *adequatio*, which shows how developmental level (and expertise in general) does provide access to specific knowledge. An acknowledgement of developmental or other considerations that grant access to truths differentially among people may be one of the characteristics of the general movement from modern and post-modern to "post-post-modern" and post-metaphysical modes of knowledge validation.

important source of justification, but this mode of validation is problematic for Wilber who explicitly avoids the role of spiritual teacher or guru.<sup>72</sup>

How to justify concepts related to "what is it that is of ultimate concern" is problematic for Wilber, but more importantly, it is problematic for the rest of us who find value in these concepts. How do we hold them in discourse, especially with those who do not share our belief-frame (the integral world-view)? They are among the most abstract of ideas, vulnerable to substantial indeterminacy (fuzzy boundaries and metaphorical pluralism). A danger of trafficking in quasi-metaphysical claims is that even if they are presented through post-metaphysical or post-rational frames, they are likely to be assimilated by many in more magical and pre-rational ways (through misplaced concreteness).

Another thing that makes spiritual concepts problematic is that, because they are about what is of "ultimate," deepest, most far-reaching concern, they activate a number of epistemic drives that threaten to bias cognition. They trigger the pleasurable and ego-fulfilling senses of purity/tidiness, universality/comprehensiveness, totality/power, and fundamentalism. They point to the infinite, the primordial, ever-omni-present that is said to be so vast it is beyond space and time. Such metaphysical ideas can engender states of certainty, conviction, and zealotry that, in the worst cases, are associated with oppression and totalitarianism. In the less extreme case, the reader can surely sense at least a tiny stirring of fervor in the breast when one considers insights of deep meaning and ultimate concern. As argued in my paper on integral beliefs vs integral skills (Murray, 2010), while spiritual *skills* are universally useful, spiritual *beliefs* have the potential of creating barriers between in-group and out-group.

I will give two suggestions for navigating this territory—the issue of how one can make use of important spiritual concepts yet remain non- (or post-) metaphysical.

(a) The first is simply to approach such ideas with humility and agnosticism befitting their degree of indeterminacy. Even though they concern what is of ultimate concern and deepest meaning, we should approach them with *less* confidence and urgency for reasons cited above. I suggest that the aspects of spirituality that are grounded in the mundane ethics of care, empathy, critical self-reflection, and hopeful collective vision should be approached with a sense of priority and commitment. While those aspects of spirituality that relate to belief systems and the ultimate nature of man and Kosmos should be held lightly, in the playful dance of idea exchange.

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<sup>72</sup> Wilber (1997) proposed an "eye of spirit" available to a select few (at least in our culture) as a way to account for sources of knowledge beyond the "eye of the flesh" and the "eye of the mind." This idea has not gained much traction because the "eye of spirit" is difficult to define without resorting to metaphysics. Note that so-called post-rational approaches include (and transcend) rationality; they don't dismiss or override it.

(b) In PME I suggest that "meaning generativity" can be used as a type of validity mode where scientific/evidential modes of validation do not apply. Some claims are not so much arguably "true" as highly meaning-generative for an individual or group. I.E. they have significant explanatory force or ability to generate meaning. I refer the reader to that paper for a deeper explanation.

**One definition of Integral.** Our engagement with the embodied and ontological themes in this chapter allows for one possible definition or description of "integral" frameworks based on the concept of meaning-generativity. There are many perspectives on the question of what is, or is at the core of, integral theories—i.e. what makes a theory integral. ("Integral" is of course a metaphorical pluralism or multiple object.) Addressing this question in part helps the community of integralists reflect on the goals and boundaries of their work. In presentations at recent integral theory conferences Marcus Moltz and Mark Edwards have traced the scholarly history of the term "integral" and illuminated its many roots and branches (Moltz, 2010; Edwards, 2008). Moltz describes how integral approaches strive for wholeness, completeness, and/or communion. These clearly relate to epistemic drives. This need might come from two sources, one more cognitive and the other more spiritual or emotional.

For the first, even though the real world is already (we will assume) whole and complete, the mind perceives and creates categories and differences as described above (what David Bohm called "the problem of fragmentation in human consciousness" (Bohm 1980)). The divisions created are of course useful in their way, but, often lead to problems as described throughout this chapter. Conceptual dichotomies can create a dissonance—an ache for a "return" to wholeness. At one level integral approaches are those that attempt to integrate ("transcend and include" to use Wilber's phrase), not just a few, but a significant set of dichotomies or faux-paradoxes that plague the disciplinary silos of scholarship, and culture at large, and call out to be integrated.

Thus an "integral" framework would look different from age to age and culture to culture (and among different developmental levels). Each integral theory is created in response to some perceived problem or need—an excess or lack.<sup>73</sup> Highly popular or useful integral theories, such as Wilber's, can be said to attempt to *integrate the polarities that are most salient for any given time and culture*, or the polarities that are most central to the way the human psyche constructs its reality (a theory is integral *to the extent that* it does this for a given group and time).

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<sup>73</sup> In pushing back forcefully against a problem (as may be needed to gain attention and implementation) a theory is likely to overreach or overcorrect, producing its own type of excess or lack, and creating an ongoing dialectical processes. I borrow here from the postmodern philosophers analysis of the play of linguistic opposites mentioned above, and from Barry Johnson's (1996) model of Polarity Management.

In this way they have very high meaning-generative capacity. Interiors vs. exteriors; singulars vs. plurals; body vs. mind or spirit; theory vs. praxis; the manifest vs. the un-manifest; the timeless vs. the evolving—the popularity and meaning-generativity of Wilber's Integral Theory comes from its systematic coverage of such dichotomies that are central to certain individuals at this time of human evolution.

## 5. Integral Ethics and Knowledge Building

Taking an embodied perspective on philosophical matters can be a strictly intellectual exercise. But embodiment has another common meaning that we have not touched upon yet: to embody a principle or idea is to act in accordance with it, to make it part of oneself (i.e. to care about whether one's "espoused theories" are also "theories in use"). Jürgen Habermas (1971; 1999) and others have shown how *ethical* considerations (and "human interests" and values) are interwoven with knowledge creation (including "facts" and ontological inquiry). Knowledge creation in modern society is fundamentally a social process involving peers sharing observations and arguments. Habermas shows how ethical considerations such as inclusivity, fairness, equality, and self-reflective capacity affect the quality of the resulting knowledge.<sup>74</sup> Also, naming certain phenomena epistemic *drives* intentionally reflects an analogy to more basic types of human drives and underscores the ethical theme of keeping one's drives in check because many of them are centrally involved in the struggle between self-centered and other-centered action. The more we understand such drives the more we can manage them as opposed to them managing us.

Because of integral theories' focus on embodiment and enaction, and because the "all-quadrant" model entails consideration of the cultural, social, and interpersonal aspects of any situation or idea, integralists are called into moral/ethical considerations more than in most fields. Integral *practitioners* are called to sensitivity and accountability around (1) how their actions (their applications of integral theory) might affect the wellbeing of others, and (2) whether they are sufficiently "embodying" their espoused principles and values. Integral *theorists* are called to do these two things and also consider the possible impacts that their theories and ideas might have *if* they were implemented.

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<sup>74</sup> Modern thinkers are increasingly acknowledging the intermeshing of ontology, epistemology, and ethics. Embodied Realism and other theories mentioned above make it clear how epistemological concerns about the nature of thought and knowledge interact with ontological concerns. Habermas shows deep connections between these areas of philosophy and ethical concerns. Metaphoric Pluralism reminds us that "ontology," "ethics," and "epistemology" are merely abstract constructs (post-structuralists called them "sliding signifiers") that do not so much point to anything in the world as carve up a massively complex set of phenomena into intelligible categories. Seeing the Ethics and Epistemology inside of Ontology (or either of the vice-versas) is an example of the specious recursive structures that are an outcome of the symbolic function.

In this paper we have focused on the ontological issues. The *ethical* implications of these issues were mentioned or lay just beneath the surface throughout the discussion. Making fallible ontological claims and using fallible ontological categories, without a deeper understanding of the existence and nature of these fallibilities, can create both systematic distortions in inferences and create various types of mismatches between well-intentioned practice and the real needs of others. I also discussed how having an objective or intellectual understanding of phenomena such as misplaced concreteness or the indeterminacy of concepts does not prevent these phenomena from displaying in thought and speech. This implicates two ethical themes: the motivation/care to minimize or counteract such ever-present drives; and the humility to acknowledge that, regardless of effort applied, they may still be influencing thought, perhaps in ever subtler ways.

Above I mentioned how the over-functioning of epistemic drives can lead to forms of "grandiosity, hegemony, elitism, delusions of reference, and proto-fascism." These can be present in subtle and mundane forms as well as their more easily recognized forms. Maeve Cooke notes the potential of "repressive metaphysical projections" in language and (hyper-) rationality (1994, p. ix; in framing Habermas' post-metaphysics). So there are clear ethical motivations for a self-awareness of metaphysical forms of thinking and for post-metaphysical forms of deliberation.

To care about others and our world is often, given current conditions, to want to change things, and/or convince or inspire others to do so. The first step in affecting change is enlisting an awareness of the existence or absence of phenomena, relationships, perspectives, etc. that were previously hidden or ignored. Following a deeper *awareness* of what is, affecting change requires (often deeper or wider) *understanding* of how things work.<sup>75</sup> Integral theories are powerful tools supporting ethical enaction in the world in both of these respects. The ideas presented in this article have a secondary relationship to such change and a corrective relationship to integral theories. I.E., given the value of integral theories, we want to compensate for certain problems that stem from integral theories' ontological properties or are endemic to its application. Integral theories have potent meaning-generative capacity, in part due to their seemingly simple and elegant categories, and are often promulgated with a certain confidence and conviction. These three aspects, which enable certain positive outcomes, can also exacerbate negative outcomes, as implied throughout this article. The embodied ontological theories described above provide vocabulary and explanations that help with an *awareness* of the problems that stem from indeterminacy and its lack

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<sup>75</sup> There are of course other critical elements of change agency, including motivating and leading.

of acknowledgement, and an *understanding* of ontological and epistemological phenomena that supports a corrective attitude toward integral theories' problematic aspects (and the problematic potential of any powerful theoretical framework).

## 6. Second-tier skills

The final item in this enumeration of applications and implications of embodied ontological theories to integral theory and practice concerns the integralists' interest in higher stages of consciousness or complexity development. Though integralists are careful to note that people are "OK" at whatever developmental level they are at, that horizontal development is usually more important than vertical development, and that vertical development should only be encouraged if the complexity of life conditions demands it—there is still a particular focus on what is variously called second tier capacity; vision logic; construct awareness, and higher stages of development in ego/self, spirituality, leadership, and/or consciousness ( any of a number of developmental "lines").

Our discussion of embodied realisms and ontological themes provides ways to describe some of the developmentally advanced skills implied in enacting an integral vision. In (Murray 2008) I talk about these skills in terms of the umbrella phrase "epistemic wisdom." Using the concepts introduced in this article we can describe epistemic wisdom as having (at least) these components:

1. Facility with advanced *epistemic forms*. I.E. to have within one's cognitive toolbox models of complex epistemic structures mentioned above such as reciprocal relationships and ecosystems.
2. Knowledge of *epistemic principles*. I.E. familiarity with a number of principles and ideas that explain the nature of knowledge creation and belief holding (including its indeterminacy/fallibility; and the relationship between ideas and reality). Metaphorical pluralism and epidemic drives are among the ideas introduced in this article.<sup>76</sup>
3. Productive *epistemic attitudes*. Epistemic forms and epistemic principles can be applied cognitively to understand indeterminacy in *others* (or in general), but to apply these things self-reflectively to one's own beliefs requires certain additional values and attitudes. One needs the capacity and motivation, the negative capability, to monitor and correct for one's attachments, assumptions, biases, and epistemic drives. This is more of an emotional or ethical capacity than a cognitive one. Also related is construct awareness as

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<sup>76</sup> The literature on epistemic beliefs, epistemic cognition, and reflective judgment describes a developmental sequence in one's understanding of how knowledge is created, used, and limited (Kuhn & Pease, in press; Schommer-Aikens & Hutter, 2002; King & Kitchener, 1994; Perry, 1978).

described by Cook-Greuter: "construct-aware persons starts to see through their own attempts at meaning making, and become aware of the profound splits and paradoxes inherent in rational thought... that 'the map is not the territory'" (Cook-Greuter, 2000, p. 29).

## Conclusion: toward more self-critical integral theories

Integral theory has been linked with Critical Theory by several authors (including Matustic, 2007; Meyerhoff, 2010; and Schwartz 2010). Critical theories are those that use rational analysis to shed light on systematic and pervasive moral/ethical injustices. Some Critical approaches expose the influence of power structures—the coercive forces of institutions or historically created cultural worldviews that shape belief and behavior. Other approaches to critical theory, including this one, expose systematic distortions or limitations in how thought and language work (which in turn also shapes belief and behavior). The redemption of our world of course requires the transformation of both external structures and belief systems, and internal (myself or my group) structures and beliefs.

Habermas talks about "emancipatory" knowledge and interests—dealing with self-knowledge and self-reflection (Habermas, 1971).<sup>77</sup> The emancipation or liberation is freedom gained from psychological/cognitive or social/institutional forces that work to distort or compromise rational (and compassionate, caring) thought, and thus frustrate our rational attempts to meet moral/ethical ends. It is a freedom from one's history or enculturation that is brought about through self-reflection. Both individuals and groups can work toward such emancipation through critical self-reflection. (Psychotherapy and Shadow Work are examples of tools for personal emancipatory reflection; and Kegan & Lahey's (2009) four column exercise and Mindell's World Work (2002) are examples of tools for group or organizational emancipatory reflection.)

The moral impulse to improve the life conditions of others creates the will to act to better those conditions. This desire has no legs (or is the bull in the moral China shop) if it has no theory of why things are as they are, and how things work. Critical analysis serves the purposes of exposing or thematizing social plights to incite liberating activism, *and* it provides an explanatory or causal theory of how things work that allows for informed and intelligent action. The ideas about embodied cognition and embodied approaches to ontology presented in this article are meant to support a critical self-reflection upon ontological aspects of beliefs, claims, and theories. (Ontological aspects

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<sup>77</sup> Habermas (1971) defines three types of human knowledge and interests: instrumental (objective), dealing with understanding and control over our environment; practical (intersubjective), dealing with social norms— expectations about social behavior; and Emancipatory (subjective), dealing with self-knowledge and self-reflection.

being those addressing the ultimate nature or components of reality; what can and cannot be considered real; and how best to name and classify abstract objects or phenomena).

The epistemic and ontological principles described, including: graded concepts (and graded propositions), Metaphorical Pluralism, epistemic drives, negative capability, indeterminacy analysis, and meaning-generative claims all contribute to a critical self-reflection upon theoretical frameworks. The Idea Portability Principle (that understanding and dealing with the indeterminacy of ideas is more important the greater the distance between the world views or beliefs of interlocutors) implies that such critical self-reflection helps good ideas avoid stagnancy and isolation, allowing for a more vitally emergent and flourishing flow of ideas from their source in the community of integral theorists and practitioners (or any knowledge building community/learning community).

Martin Matustic (2007, and see his chapter in this Volume), a Habermasian scholar, describes an "integral critical theory" that, following Habermas and Wilber, differentiates human needs into material/it, sociocultural/we, and subjective/I spheres of needs and regulative ideas. Habermas' frame describes the subjective sphere in terms of reflective self-critique and redemptive hope, and Matustic adds to this the possibility of spiritual liberation and existential self-transformation. In an interesting contrast to this article, Matustic's description of critical theory focuses on liberation from the shackles of the *actual* and historically conditioned, into imagining and enacting the *possible*—a life free of conditioning and oppression. I subscribe to this view, though in this chapter I focus on the negative capability that allows one to expose and relinquish beliefs and live within uncertainty and mystery, while Matustic highlights the positive capacity to envision and enact new futures. I believe that doing the former allows for a more robust, altruistic, and authentic enactment of the latter.

## References

PITF refers to Lakoff and Johnson 1999.

PME refers to Murray 2011.

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