

Integralist Mental Models of Adult Development: Provisos from a Users Guide

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DRAFT version: 3.25.11 ¹

Introduction

Theories of adult development, heavily used within the community of integral theorists and practitioners (hereafter the "integral community"), have tremendous explanatory power. They help us make sense of so much of the complexity that is the human condition at this moment in history. They shed light on questions like these, and hundreds more: "Why do western countries have such a difficult time establishing democratic governments in Third World countries?" "Why do some employees struggle to accept feedback in performance reviews?" "What are the gifts and hindrances within the New Age belief system?" "What is enlightenment?" The phenomena indicated by each of these questions becomes more explainable through the lens of developmental theories, which wrest a sense of clarity, hope, and purpose from the unfathomable chaos that is our psycho-social reality. As well as helping us gain some *understanding* of many complex human phenomena, the developmental models are indispensable in taking skillful *action* in many practical contexts involving communication, education, and leadership. Their power is a strength but also a weakness. Because the narratives and categories they contain are so compelling it is easy, even "natural," to use them to make questionable inferences and blunt generalizations about individuals and groups. Such generalizations may be the only tools ready-to-hand, but may leave a residual sense that important aspects of a person or group were cut off with the knife of the category.

Trained as a scientist, and being, at times, an enthusiast for models and theories, I also find that the voice of the Skeptic is strong inside me. While the Lover within tends to see the goodness within people and situations, the Skeptic draws my attention to the limitations of, or alternatives to, what people claim as truth.

¹ Segments of this longer paper will appear as an article in *Integral Leadership Review*, and as a chapter in Esbjörn-Hargens (Ed) book *True But Partial: Essential Critiques of Integral Theory*. Publication venue for the full paper is undetermined--your feedback on this draft is welcomed!

Certainly there is a lot of bullshit² out there in conventional society and culture that warrants suspicion, but even for claims made within the integral community, which I strongly associate myself with, I find myself thinking "that's not quite true," "it's not that simple," or "there are other perspectives on that" at least as often as "wow that is a great idea" or "that was well put." I often find myself more inspired by the power of questions than the power of answers. In that vein I have written a number of articles about psychological and philosophical findings that reveal the vulnerability, fallibility, and indeterminacy of human knowledge and the limitations of human cognition, concepts, and claims (Murray 2006, 2008, 2010).

In this article I apply this predilection for questioning the limits and certainty of knowledge to the topic of human developmental theories. I imagine, if only whimsically, a "Handbook for the Practical Use of Integrally-informed Developmental Theories" that contains provisos and other advice, toward which this article would be an initial step.³ Many authors in the integral community do some of this "indeterminacy analysis" naturally. Realistically, it is too much to expect the originators of models and theories to do an adequate job of contextualizing their own work—they are too close to the material. It is up to the community as a whole in its collective knowledge building efforts to enact quality control and build self-reflective knowledge.

Is our shared understanding of development sufficient to the expectations we have of it and the tasks we apply it to? Zachary Stein notes how "complex philosophical approaches and worldviews...reach beyond the boundaries of the academy and into the lifeworld" where they are subject to being watered-down, muddied, and misappropriated (Stein, 2010, p. 177). Such are the unavoidable risks encountered by powerful ideas as they make their way out of ivory towers or sheltered think tanks and into wider use. Cultural knowledge reproduction is a messy process, with root ideas morphing and branching as they spread, even while speakers believe they are talking about the same thing (from Esbjörn-Hargens, 2010, we could say that these are "decentered multiple objects" exhibiting "ontological pluralism"). Though the dynamics are different, the same sorts of issues arise as knowledge spreads *within* an academic community, or, as in the case of the integral community, within a community of "theory and practice."

² A word recently made an acceptable philosophical term thanks to Harry Frankfurt's 2005 philosophical treatise "On Bullshit."

³ In Murray (2006) I have argued that all models and theories should come wrapped in a package that includes pragmatic suggestions and notes about the theory's known weaknesses, limitations in applicability, undeveloped components, and alternative models and theories. I call this an "indeterminacy analysis" of the theory or model.

The possibilities for interpretational drift, divergence, and diaspora are particularly acute in the integral community because of (1) its transdisciplinary nature and (2) its incorporation of philosophical and social science ideas which are highly speculative. We are a community bent on finding the deeper patterns and connections among traditional academic "silos" and doing so in a way that is grounded in pragmatic application across domains. Yet we can not, as individuals or even as a community, know everything about everything (or even anything about everything, or everything about anything), and, as trans-disciplinarians, are continuously confronted by two types of tradeoffs: between sacrificing depth vs. sacrificing breadth; and between the simplicity and clarity needed for application vs. the complexity and nuance called for in rigorous understanding. We can't have it all but we can be aware of the tradeoffs we make.

I am a studier and user of developmental theories but not a research scientist in that area. My approach here is that of the philosopher or critical theorist who is interested in the hermeneutic and socio-psychological questions of how we interpret and use our primary concepts and models. The issues I discuss are not, for the most part, matters of empirical justification, but matters of interpretation. Empirical validation is extremely important, and our models should be and naturally are argued for in terms of how well they reflect empirical "reality." But research and theory-making in human development is plagued by the problems inherent to the social and human sciences in general, and a rigorous and confident understanding of the human phenomena involved are sure to allude us for generations.⁴

My inquiry here is not directed at those doing empirical research in adult development (an extremely small fraction of integralists), but at the rest of us who interpret, build upon, apply, and disseminate existing theories. When ideas jump from theory into common acceptance and spread from research into application they lose much of their speculative character, accruing greater degrees of factual certainty and normative rightness. The developmental theories and models we share are dynamic and alive within and among us, not as well-defined formal models, but as complex and vibrant "*mental models*" of how human behavior, thought, and culture works, built up through an interpretive process of assimilating many theoretical parts. Without denying the significant usefulness and partial validity of our theories and mental models, I will argue in this

⁴ According to Oberschall (2000) ninety percent of social theories rise rapidly only to fall into oblivion (From Wallis, 2008). In general, social and human science theories are difficult to test (validate or falsify; see Popper, 2002; Wallis, 2008). Bent 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).

essay that we should hold them more speculatively, by pointing out alternative explanatory models of development and by reflecting more generally on the indeterminacies of models and concepts. The caveats and considerations I discuss are not meant as replacements of existing models, but to serve a corrective function to some overly simplistic or limited ideas that seem popular in the integral community as a whole.⁵

The prevalent tropes of classification and interpretation that I critique are handy and automatic for those, like myself, who are fond of the integral developmental narrative (I find myself using them often). I write in the spirit that together we can help each other not overuse or misappropriate the threads of truth that these theories and mental models contain. In addition to making our self understanding of our mental models more transparent, I hope that the critical elements of the discussion will open up a middle ground of inquiry and dialog between integralists and those who would typically reject integral ideas (and in particular to soften the ideological tensions between green and integral world-views).⁶

Overview of the paper. In what follows I look at several aspects of the common integral interpretation of human development, and in each case point to its limitations and suggest an alternative that, while not a problem-free, points to some limits of the original model. I suggest that current interpretations don't sufficiently differentiate between the development of skills and the development of beliefs. I question whether the set of developmental lines referred to in psychograph models are comparable constructs. I discuss how the valorization of certain lines affects our interpretation of development. I suggest greater clarity in differentiating cultural vs. individual forms of knowledge in classifying developmental levels. I argue that context and emotional factors should have a larger role in how we interpret and apply developmental scorings. I suggest a more robust onion-layers model of developmental levels. I note some problems in how we interpret the general constructs of lines and tiers. And I discuss the general epistemic issues of the indeterminacy of the constructs we use in developmental theories. Some of these sections build upon each other, but in general each deals with a separate issue.

⁵ My impression of the normative assumptions implied within the community come not only from reading articles and from face to face conversations and events, but also from listening to hundreds of audio lectures and interviews in the last three years, including most of the ITC-2008 and ITC-2010 conference presentations, and many dozens of conversations among thought leaders in the field hosted by projects such as Integral Life (integrallife.com), EnlightenNext (enlightennext.org), Integral Enlightenment (integralenlightenment.com), and Beyond Awakening (beyondawakeningseries.com).

⁶ Though obvious to those attending integral academic events such as the ITC Conferences, I should note that my voice is just one of *many* who take a critical appreciative perspective on integrally-informed theories and practices, and that many of the ideas here are echos of concerns voiced in many dialogs and texts.

Preliminaries

Tacit vs. explicit knowledge. In our discussions of human capacity and development we do not sufficiently differentiate tacit from explicit knowledge. For example, in assessing the developmental level of individuals or cultures we often confound the tacit vs. the explicit. As I will make use of this distinction in several sections below, I will take this space to highlight it. Tacit (enacted, also called "procedural") knowledge is usually non-conscious, and represents what we can do (or actually do); while explicit (or "verbal" or "declarative") knowledge is about what we believe or *say* that we know. (Chris Argyris similarly differentiates "theories in use" from "espoused theories" (Argyris et al. 1985).)⁷ The award winning professional golfer has deep tacit knowledge of golf, yet he may not be able to explain what he does. The coach, teacher, or theorist of golf may be able to explain the skills of golf (explicit knowledge), but may not be able to golf well herself.

This difference between tacit and explicit is important for several reasons. First, almost all of the tests we use to measure adult development depend on verbal (textual) productions. We have some ability to tease apart actual ability (in perspective taking, for example) from these productions, but it is also possible for a person who (explicitly, theoretically) knows what it means to be, for example, morally or spiritually developed, to score higher on developmental tests than their day-to-day actions would imply. As another example, one can display a strong capability to communicate differentially to people at different cultural meme levels, yet not have any formal understanding of developmental theory (which begs the question of which is more important, the tacit or explicit knowledge). And vice versa: those who have strong actual abilities but poor verbal skills may score low on such tests.⁸ This tacit vs. explicit distinction is especially important to the integral community because our community places a high value on balancing and grounding theory with practice/enactment.

Mental Models. That "the map is not the territory" is a common useful adage for integralists. In addition to cautioning about what maps are *not*, it is useful to investigate what they *are*—to have a reflective understanding of the nature of our cognitive tools or apparatus. For this article I will use the term "mental

⁷ Habermas (2000, p. 133) speaks of Wittgenstein's "insights that the practical [, habitual,] and non-propositional know-how is prior to explicitly thematized knowledge [—knowing-that]."

⁸ One can show a very sophisticated level of perspective taking, ego-awareness, or construct-awareness by responding with very simple words, or choosing not to respond at all, in certain complex social situations, but the usual tests would not measure such skill.

model" rather than "map," for several reasons. Mental model more clearly points to the enacted or tacit aspect of knowledge, whereas map does not clearly differentiate between explicit models (such as AQAL and Spiral Dynamics) and tacit world-views or theoretical/enactive perspectives (e.g. the integral view). Map is a static metaphor while "mental model" suggests more dynamics. Mental models contain not only relational and structural but also causal assumptions about how things work. We internally "run" our mental models to simulate an aspect of the world as we assess or plan (Johnson-Laird, 1983; Gentner & Stevens, 1983). "Map" brings to mind a purely cognitive or conceptual representation, whereas mental models are understood to contain emotion- or value-laden norms, preferences, and identity markers.

Mental models are complex processes (also called internal images, paradigms, or representations) that affect attention, perception, reason, memory, and action—they are powerful interpretive filters of experience. A primary reason that mental models have gained widespread attention in scholarly and applied fields is that they are incomplete and fallible, and that in a fluid and rapidly changing world they can represent the habitual "comfort zones" that need to be reflectively exposed and adapted. For example, Peter Senge's and Robert Kegan's work in organizational learning and transformation aim to help individuals and groups uncover the assumptions hidden within their mental models (Senge 1990; Kegan & Lahey 2009).

Even though the models (explicit and mental) adopted within the integral community may be thought of as leading edge and highly reflective, this does not resolve us from the necessity to continuously reflect on the hidden components and fallible assumptions within our mental models.

Thinking about thinking. We can think of mental models (and much of knowledge) as being composed of concepts (or objects, or constructs) and an organized set of propositions that are essentially relationships between those concepts (see Murray 2010 for a fuller treatment). Critical investigation into a model can therefore happen at the level of *claims*, judging whether they are true (or in what way they are true) and at the level of *constructs*, deconstructing their meaning (fallibilities we find at the construct level will have an impact on the claims level). I look at both parts of developmental models in this article but it is much more rare in the integral community to see critiques at the level of constructs (or mental models) than to see inquiries at the level of truth claims. For example, a model may make certain claims about developmental levels, and one can inquire into the validity of those claims. But we can also inquire about the

concept of level itself and how it is interpreted. Such questions bring a "construct aware" inquiry to our knowledge building process.⁹

Conceptual categories split the world (for example: state vs. stage; gross vs. subtle vs. causal) even as they also join things (the concept of subtle joins a set of phenomena under one symbol). 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). When we employ the knife of the concept important truths or nuance can get left on the cutting room floor, so to speak, so that troublesome grey areas can be ignored.

The mind (or, we could say, the nature of symbolic language) has a tendency to treat conceptual boundaries as black-and-white. 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.¹⁰ But real phenomena don't tend to exist in the neat categorical boxes that correspond to the constructs we create (Lakoff & Johnson 1999). We know this and are not completely susceptible to the symbolic impulse—we know that things are not black and white—but thought operates under the constant pressure of the symbolic impulse. This impulse to strongly categorize is exacerbated in contexts that involve emotional charge, importance, or ego attachment.

The phenomenon of "misplaced concreteness" (Whitehead, 1929; and see Murray 2010) describes the tendency to treat abstract concepts in particular (such as lines and levels) like concrete objects with definitive boundaries. Without a construct-aware attitude, when faced with real phenomena that don't easily fit a model or conceptual category, one tends to force-fit to the model or category rather than learn about the construct's limitations.

⁹ "Construct aware" is used by Cook-Greuter and others to name a particularly advanced developmental level and skill set. But the ability to think critically about the constructs we use begins much earlier than this level, and anyone involved in scholarly work can be reasonably invited to employ construct awareness (this skill reaches an advanced stage of stability and in-the-moment application at the "construct aware" developmental level).

¹⁰ 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.

In reflecting on our mental models we must look not only at the surface ideas and categories, but on their deeper embodied and metaphorical nature (see Lakoff & Johnson, 1999). For example, if we have a model that differentiates developmental levels, do we see them as distinct or overlapping? Do we treat their conceptual interface more like clouds touching or like colors in a crayon box? Are we more attentive to certain levels over others? Do we see them as static or fluid? How do we interpret phenomena that does not fit easily into the scheme? Mental models embody both spatial-temporal metaphors and proto-emotional valances (how we value or pay attention to some elements more than others).

In Murray (2010) I discuss how models and principles can have *meaning-generative validity* aside from the question of whether they have factual (or normative or aesthetic) validity. That is, for many good ideas there is no practical way to "prove" their validity using data or logic (we can only speculate), and we can argue for them by appealing to their value in helping us explain or make sense of the world (Elster, 1999).¹¹

We can do a number of things to acknowledge the complexity, nuance, and inscrutability of reality in the face of quasi-totalizing conceptual categories. We can qualify and hedge our claims: we say it is likely to be true; partly true; true in this context or from this perspective—we might note instances where it is not true or is contended. We can also, as I will do in this article, engage non-definitive (non black-and-white) metaphors and mental models for our categories, such as grey-area or spectrum-like models, bell-curve-like models, Venn-diagram-like models, fractal-like models, wave-like models, co-definitional loops. (Our current models *do* use such metaphors and are not excessively definitive—I will be adding perspective or nuance to some aspects that seem too definitive).

What is development? Before getting into my own caveats and alternatives to common mental models of development, I will say something about these models and theories in general, as understood within the integral community. The Appendix contains a short overview of the primary "orienting generalizations" or principles, describing levels (stages), lines, and the basic dynamics of developmental/evolutionary growth. Next I will summarize the work of a few others in the community who offer corrective critiques to how developmental theory is interpreted and applied.

¹¹ Elster says "law-like explanation [in] the social sciences [is] implausible and fragile...[yet the social sciences] have been very useful in providing explanations of phenomena" (pg. 1). As described in the Conclusion, he suggests "explanatory mechanisms" as a term for claims that are not as provable as scientific laws, yet have more explanatory power than mere descriptions. Developmental theory is rife with such principles which help us explain but not predict.

Stein notes the tendency to conflate fact and value (is and ought) claims within developmental narratives, and cautions against "growth to goodness" assumptions (Stein, 2008a). He suggests that we make efforts to differentiate the (descriptive) scientific study of development from normative and prescriptive notions that higher levels are in some way better or that individuals or groups "should" be supported to achieve higher levels.¹² A person with higher development or complexity is not necessarily more moral or ethical either (for example a person can have high cognitive development and low social/ethical development; and in general we should be cautious of giving blanket level categorizations in favor of line-specific ones). Cook-Greuter and O'Fallon also note, from their experience with thousands of developmental assessments, that developmental advancement does not necessarily correlate with increased happiness (or satisfaction, ease, etc.), as new forms of suffering (for example existential angst) are available at each succeeding level (also, achieving a level does not guarantee that one is free of pathologies in prior levels). Similarly, there is a fairly common understanding in the community that we have some tendencies to over-privilege vertical over horizontal development (that it, this over-privileging is commonly critiqued but is also thought to be (a) widespread, and (b) a natural epistemic temptation to be ever-aware of).

I will also mention that many critiques of Wilber's theory of human development (and Beck and Cowan's Spiral Dynamics model) have been written (for example, many of the articles on integralworld.net contain such critiques). These tend to challenge the factual accuracy and predictive validity of these models, citing prominent scientific scholars in the fields of development or evolution, or offer models thought to improve upon AQAL. My purpose here is to support a within-community reflection on the hermeneutics and mental models shared within the community, rather than critique the scientific claims of a specific theory of development, or offer replacement models.

Is development about skills or beliefs? The mean green meme as an example

In this first exploration I will summarize an argument from Murray (2010) in which I propose that developmental narratives within the integral community often conflate the development of *skills* (or capacities) with the development of *beliefs* (or values or worldviews), and that this conflation leads to several

¹² Note that clearly differentiating the prescriptive from the descriptive does not mean rejecting the prescriptive. We may have good reasons to promote or valorize higher development in many contexts.

problems. I suggested that (a) we get clearer in our discussions about whether we are speaking about skills or beliefs, and (b) that there is an over-preponderance of focus on belief formation and that we should focus more on skill development.

Skills vs. beliefs. In that article I give examples to support the claim that many thought-leaders within the integral community (including Andrew Cohen, Don Beck, and Steve McIntosh) see human development in terms of promoting certain beliefs or worldviews. For example, Cohen and many others promote a grand "evolutionary context" in which "who and what God is can no longer be taken as fixed—that from a developmental perspective, God is *also* evolving, just as we are [...and through us]" (Cohen & Wilber, 2006, p. 69). McIntosh describes an emerging "integral worldview [that is...] a new perspective on the world that expands our perception of reality [and...] arises from an enlarged set of values framed by an expanded understanding of cultural evolution" (McIntosh, 2007, p. 12).

While not arguing with the content of their claims, I contrast their work with other integral thought-leaders (including Robert Kegan, Bill Torbert, Suzanne Cook-Greuter, and Zachary Stein) who focus on research into the development of well-defined skills (especially capacities called "higher order" skills in the cognitive literature).¹³ Skills focus on what one can do as opposed to what one believes and are in response to specific tasks or life contexts. Examples of skill types include communication skills, leadership skills, self-reflection skills, "context awareness" skills, and systems thinking skills.^{14 15}

I use the example of the "mean green meme" (I will use the more common "meme" for what are also referred to as "vMememes") to illustrate the usefulness of differentiating skill-based vs. belief-based interpretations of development. We associate certain worldviews, values, and beliefs with the green meme, including those that go along with environmentalism, human rights, egalitarianism, radical equality and freedom, inclusive forms of decision making and dialog, and new-age orientations to spirituality and human potential. These *beliefs* established themselves culturally in the mid-20th century as a result of emerging

¹³ On Wilber, I note that his "substantial corpus of work refers to both beliefs, in the form of models, frameworks, and orienting generalizations; *and* to skills as he heavily references developmental theorists in some detail. Thus as a whole his approach does not have the same imbalance toward belief-promotion as those mentioned above." I also note that "...to the extent that integral or second tier capacity is described in terms of facility with the AQAL *model* (Wilber, 2006) as opposed to a set of *capacities*, as is the case in many applications of integral theory, such an approach may be over-emphasizing belief systems at the expense of underlying skills."

¹⁴ One would be more specific in defining measurable skills. Following Fisher's Skill theory (Fischer 1980), the precise definition of a skill requires a precise definition of the context and demands of a particular task.

¹⁵ This categorization into beliefs vs. skills is a simplistic first cut, and, as discussed in the paper, there are interesting grey areas between these two categories in what we would call "knowledge."

cognitive and social/emotional *skills* that expanded *thought-leaders'* capacities to see complex patterns (such as ecosystems and family/group dynamics), reflect critically and objectively on self and society, and have an empathic understanding and connection to ever wider circles of others. Although having a critical mass of people at this developmental level is required for it to *emerge* as a stable self-replicating cultural phenomena, once that cultural meme establishes itself, *individuals from any developmental level*, and in particular developmentally prior levels, might be attracted to its worldview.

And this is what we find. Many people who ascribe to green meme worldview assumptions and values and move within new age, political activist, or progressive circles do not seem to have the cognitive, self-reflective, or emotional intelligence capacities that are associated with the green level of development.¹⁶ Some are drawn in for pre-conventional, narcissistic, authority-rebellion, or pleasure-seeking reasons, and some others because new age culture accepts magical thinking about non-conventional topics. Some members of this post-conventional worldview hold onto their beliefs with a rigidity implying a conventional (blue meme) mindset.

Wilber, in *Boomeritis* (2002) and elsewhere, was one of the first to clearly articulate this phenomenon (which he calls the mean green meme), but he attributes it to a pathological manifestation of green level consciousness. My claim (I am not the first to make it) is that it is more accurate to describe it as *pre-green* (pre-conventional or conventional) level of consciousness or development (skill) being attracted to the surface features of a post-conventional cultural belief system. There *are* certain pathologies that arise specifically with the advent of green level consciousness, but I think that most of the critique or irritation leveled upon the mean green meme has to do with pre-green skill levels (either because of the attractiveness of surface level beliefs, as mentioned, or because of regression triggered by the cognitive or emotional dissonance experienced as an emerging green level consciousness opens to new orders of perspective and complexity).

This analysis is made possible by differentiating skill-based from belief-based developmental narratives. In Murray (2010) I describe a number of differences in how beliefs vs. skills operate, such that it is beneficial to differentiate them when we talk about development. For example, it is common to note how the

¹⁶ The discussion would be more precise if I brought in Kegan's Orders of Consciousness terminology or Cook-Greuter's Action Logics terminology in describing skill levels, as opposed to keeping with the Spiral Dynamics memes, but I think the point can still be made accurately without adding the confusion of multiple framework terminologies.

green meme rejects orange and blue meme. Beliefs can be rejected and reversed, but skills cannot—they build upon each other. One can reject a belief, for example "abortion is wrong" or "the cognitive line leads other lines," but one can't reject a skill such as arithmetic, golf, leadership, or construct awareness. You can't "go backwards" and forget or reverse a skill, though one can find oneself in contexts where complexity, emotional stress, or social context make it difficult or undesirable to use that skill.

Our plans for enacting integral views and affecting change depend on our assumptions and models. In Murray (2010) I ask whether it is better for integrally informed transformative change projects to aim toward changing beliefs and worldviews or skills and capacities. It should probably be both, but we need clarity on when we aim for each of these, why, and how. Also, though not all useful ideas need to be (or can be) grounded in rigorous research, it is good to differentiate those that are from those that are not. Research on the development of skills (various "lines") is well established, but the common assumption (as in Spiral Dynamics) that skill-development tracks cultural or belief development has little or no empirical support.¹⁷

The Psychograph model

Ken Wilber has offered a simplifying mnemonic for understanding the wide variety of developmental theories. He says that each theory focuses on a particular line, with line being a construct borrowed from Howard Gardner's idea of multiple intelligences (Gardner, 1983). In *Integral Spirituality* Wilber says that developmental lines are, in a sense, answers to the different types of "questions that life poses" (Wilber 2006, p. 59). On page 60 he lists 10 (of perhaps a couple dozen identified) developmental lines, with the Life Question and main developmental theorist associated with each. Examples include:

Cognitive line: What am I aware of?
 Self: Who am I?
 Values: What is significant to me?
 Moral: What should I do?
 Interpersonal: How should we interact?
 Spiritual: What is of ultimate concern?
 Needs: What do I need?
 Emotional: How do I feel about this?¹⁸

¹⁷ Graves' research, which is cited as the foundation of Spiral Dynamics, looked at the beliefs of individuals and was entirely speculative on matters of cultural evolution.

¹⁸ And following Gardner we can note that there are many other lines for development of such things as musical talent, artistic talent, kinesthetic skill, etc.

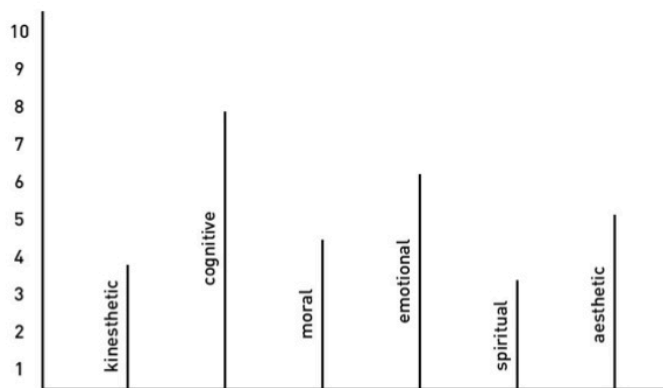


Figure 1: A simple psychograph

Figure 1 illustrates the psychograph, a visualization showing how developmental lines can exist at different levels for any individual. Understanding human development as occurring along many fully or partially independent lines of growth is an important first step beyond seeing human development as a monolithic construct (in which one's "development" or "intelligence" is at some single level). This model, as Mark Forman puts it, "[has] explanatory value for developmental unevenness [and protects against] the halo effect [i.e.] tendency to evaluate a person...based on some single...positive attribute" (Forman 2010, p. 89). But one of the significant unanswered questions in developmental theory is how development along these different lines is related.¹⁹ Though Wilber's model helps us avoid the mistake of conflating different lines, it does not sufficiently address the experimental evidence and our deep intuitions that there is *significant* interrelationship and/or overlap among many of these lines, and that speaking of them as separate brings its own problems.

The association of developmental lines with such "life questions" does well to reduce a complex domain into understandable knowledge-bites, but I believe that this simplicity has also inhibited a more nuanced understanding of developmental lines.²⁰ Lining up these lines next to each other as they are in Wilber's psychographs encourages one to see them as both separate and comparable (which is useful for some analysis) and obfuscates apples-to-oranges differences. But there are important ontological category differences (comparing apples to orchards), as noted in several sections below.

¹⁹ Another is whether the "altitude" of one line is comparable to that of another, as is implied by the psychograph (see Stein 2008b).

²⁰ In his usual rhetorical style that has made his work so accessible to many readers, Wilber favors crisp categorization in the main theory and saves any mention of category-blurring nuance or indeterminacy for the footnotes, or he whisks such indeterminacy into general claims that "the map is not the territory."

The psychograph model, which serves well as a graphical portrayal of the common mental model of developmental lines, has a tentative status in the literature. Forman (2010) says that

Although the psychograph is an interesting concept in some ways, it may be difficult to employ in actual practice...clients rarely present themselves in psychotherapy in the highly differentiated way that the model would suggest. A client's moral, values, needs, emotional, and interpersonal lines are deeply intertwined and overlapping [and] different lines emerge in their most distinct forms when pushed by context or environment...what [usually] emerges is the complex entanglement of lines... (p. 86)

In a section titled "There Is No Psychograph," Elliott Ingersoll and David Zeitler note that among integrally informed psychotherapists "one of the top interests was the psychograph," yet "until we can establish that there are such things as lines of development and then measure them, we'll have to wait for a valid and reliable psychograph" (2010, p. 121). Dawson and Stein (Stein, 2008b; Dawson-Tunik 2005) have done the most advanced work (arguably the only empirical work—see Ingersoll and Zeitler²¹) in trying to measure and define separate developmental lines in a manner similar to the psychograph. Their work may be limited by its focus on "cognitively -regulated levels and the linguistically related lines" (ibid p. 139).²²

How thick is a developmental line?

One of the most significant ways that various developmental theories differ is on the "width" of the developmental line. For example, Kegan's Orders of Consciousness model (Kegan 1994) covers a wide variety of human capacities and situations, while King Kitchener's (1994) "reflective judgment" or Fowler's faith development (Fowler 1991) seem narrower; and narrower still are the development of clarinet playing and differential calculus skill. We can categorize developmental theories according to width, with Orders of Consciousness (Kegan), Action Logics (Cook-Greuter; Loevinger; Torbert), and Spiral Dynamics (Beck & Cowan; Graves) being "wide line" theories. Contrary to what is implied in the psychograph model of individual lines, each of these theories addresses, in its own way, a wide range of concerns about meaning making, self-understanding, social/emotional capacity, and the ability to hold multiple perspectives and coordinate the elements of complex systems. Each of these theories scores people in ways that have direct

²¹ On page 149 Ingersoll and Zeitler list 22 lines, 9 with empirical evidence and 13 with anecdotal or no empirical evidence.

²² In the Appendix sub-section "Altitude and Concordances" I discuss attempts to compare various lines and developmental theories.

relevance to one's skillfulness in complex life contexts such as parenting, leadership, self-directed learning, and conflict resolution; and each claims to be essentially about human "meaning making."

We often speak of Spiral Dynamics as being simply about "values," but Beck and Cowan intend a much wider scope: each meme "reflects a worldview, a valuing system...a belief structure, an organizing principle, a way of thinking or mode of adjustment [and is a] structure for thinking, not just a set of ideas" (1996, p. 4). Cook-Greuter's Action Logics theory is simplistically said to be about ego (or self) development, yet it is also used as if it was measuring a "leadership" line (the assessment instrument is called the Leadership Maturity Framework). It is described as covering behavioral, affective, and cognitive dimensions (being, doing, and thinking). It describes human capacity in terms of "impulse control," "character development," "interpersonal style," "cognitive style," "problem solving," language style, and psychopathologies (including "preoccupations," "defenses," and anxieties) (Cook-Greuter, 2000, 2007). Kegan's theory covers a territory that substantially overlaps with Spiral Dynamics and Action Logics, though each theory uses its own unique lens.

These developmental "lines" are very wide indeed, and each could be said to be trying to capture human "wisdom" (as opposed to "intelligence"), which in some way must include cognitive, emotional, and social intelligence.²³ Though we are rightly cautious (and politically correct) to note that there is not just one type of development —we do not mean to assign overarching evaluative categories to people—there certainly does *seem* to be some overarching human capacity that we are pointing to. That would explain why in casual (and scholarly) dialog we so often speak *as if* development in general, or the parts of development that we are centrally interested in, was one gestalt.²⁴ All cultural groups have some shared intuition of what constitutes wisdom as a central and powerful construct, even though different groups will have different interpretations (based partially on developmental factors). So wide-lined theories, though more unwieldy, will always have enough value to be used.

Returning to the categorization of developmental theories along a spectrum of wide to narrow line constructs, near the narrow-line end of the spectrum is research and theory being developed by neo-

²³ I have described a general set of "wisdom skills" in Murray 2008, 2010.

²⁴ The concept of "altitude" has been used to describe both this wide-lined encompassing sense of a person's development, and the more abstracted quality of "higher-ness" that we bring to any particular domain of human capacity (Stein 2008b; Wilber 2006). The question remains though: for this common intuition, how much of its character is colored by the worldviews and cognitive styles of those draw to the integral community?

Piagetian scholars including Fischer, Commons, Dawson, and Stein. These theorists (following Piaget) define developmental constructs more specifically. This enhances their ability to measure the constructs and draw pointed conclusions. Both wide and narrow theories have their benefits, and my goal here is to clarify the difference rather than endorse one or the other type. Much more could be said about types of validity and reliability, but it seems that the most overarching difference is one of "ecological" validity vs. reliability, in which wider lines can be used to offer more general and life-ranging guidance to subjects, at the expense of being less precise and more error-prone, in comparison to narrow-lined constructs.²⁵

In order to better compare developmental lines we need a more adequate mental model that includes line width or scope. Later, in discussing Fischer's Skill Theory we will be in a better place to define the width of a line in terms of the breadth of the tasks it responds to.

Asymmetrical line development

As noted by many others, the evaluative question of whether one person, group, or culture is "more developed" (or more evolved) than another is ontologically muddled and ethically precarious. It calls for more nuanced and accurate ways of expressing our intuitions (or the findings of some measurement) that *in a certain sense* a person or group is more highly developed, but not in an overall sense. Increased clarity on this issue will not only improve theory and practice, but also remove some barriers to conveying integrally informed models to those who seem resistant to them.

Those who admire certain ancient worldviews as being more highly developed or wiser note that modern society is rife with shadows and disasters, catastrophes and evils at ever larger scales, and that humanity in general might seem to be experiencing *more* suffering, isolation, and existential angst than was the case in certain esteemed cultures of old. Though counterarguments to this view abound (for example we can point to factual changes in life expectancy over time) let us momentarily, for this section on asymmetric development and the next section on cultural vs. individual development, suspend them and consider the

²⁵ See Ingersoll and Zeitler (2010) Chapter 4 for a deeper discussion of the history of our understanding of developmental lines and levels, and an indication of the advances and limitations of research in that area.

grains of truth to the intuition that ancient or traditional cultures seemed to hold *some* type of wisdom that has been lost.^{26 27}

First, we can ask whether we may be valorizing certain developmental lines and minimizing others (the extreme being called “line absolutism”). Consider the two hypothetical cultural psychographs shown in Figure 2. The figure shows one culture which has very high development along some lines and very low development along others lines, and another culture that has moderate development along many lines. The suggestion is that this may represent how modern western culture compares with some “less developed” cultures. The example is constructed such that one could make an argument that in some overall sense, when averaged over many lines, the “less developed” culture is actually more developed (and certainly more whole-istically developed). It is entirely possible that people within modern cultures, *and* those within the integral community, place high value on lines that they excel at and are in a kind of denial or ignorance about some lines that are important to overall human wellbeing but which have weak or pathological growth in modern (or integral) communities.

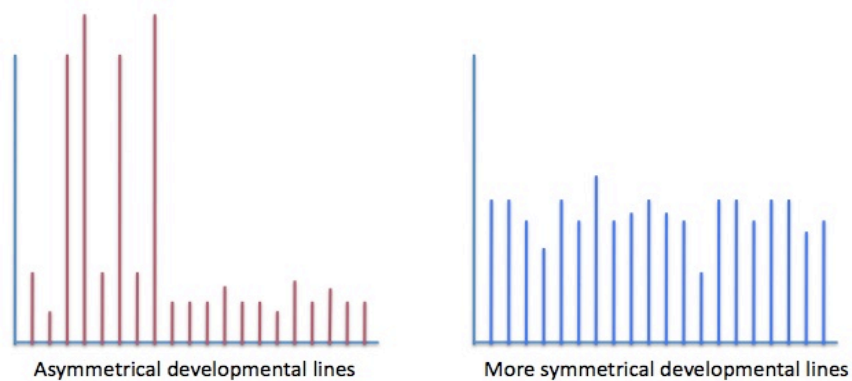


Figure 2: Asymmetrical Line Development

²⁶ An important thing we are ignoring for now is how the complexification of modern life conditions, including its multiculturalism and cosmopolitanism, set up challenges that less developed worldviews were (are) in no position to handle. Conveying a deep systemic understanding of the intricate co-arising of worldviews, developmental skills, technological artifacts, and social systems to others is not practical or possible in many contexts. For example, green level consciousness can have a difficult time seeing these interactions, and has an overly simplistic belief that we could somehow just “change the system” to go back to simpler ways which *seem* more sustainable and socially bountiful.

²⁷ Those who have become awake to the ways in which worldview frames and abstract theories can insidiously disempower and marginalize people may be hyper-sensitive to theories that hierarchically rate people—especially theories that end up rating those in positions of power at higher levels. To be in dialog with such people we must take seriously questions about hidden psycho-social forces that may bias our models.

I propose that it is no mere coincidence that (1) integralists highly value certain developmental skills such as perspective taking and theory-making; (2) the integral community tends to attract those with these particular skills, and (3) our favored theories of human development feature these skills prominently, supporting the inference that those strong in these skills are in some general way "more developed" than those who are strong in other skills (and weaker in these skills). I find *myself* placing high value on these skills, and find myself believing that the integral (and "evolutionary") community is somehow involved in the leading edge of human development. I have drunk the Kool Aid and it tastes and feels good! But I'm also trying to decipher the label on the Kool Aid bottle and wondering about how the stuff might have affected me. For example, I notice how, with my strong ability to take perspectives, self-reflect, and take construct-aware positions, I can feel in some sense more mature or sophisticated among some groups of friends. Yet I also note how some of those friends far excel me in skills such as inspiring others to work hard, creating joyful moments in mundane situations, striking up connective conversations with anyone "off the street," figuring out what children need, attending to the aesthetic nuances and textures of lived experience, and constructing complex fictional narratives—there may be other frameworks that validate these other skills as being at the leading edge of human evolution (not to mention frameworks that avoid such hierarchical notions). The philosopher's or academic's perspective can feel like a type of high perch from which I survey the scenery. Yet it is a limited set of values that builds such a perch.²⁸

Psychologist Jonathan Haidt, in describing his Moral Foundations Theory, mentions an example of such line-preference (Haidt et. al, 2009). Haidt describes research that compares how conservatives and progressives compare in their valuing of the five moral thought subsystems. His research (validated now over several studies) shows that liberals on average value two of the five moral foundations strongly (care/harm and fairness/reciprocity), and disregard or undervalue the others (purity/sanctity, loyalty/in-group, and hierarchy/authority); while conservatives on average have a moderate valuing of all five (and are not particularly deficient in any). "Political liberals have moral intuitions primarily based upon the first two foundations, and therefore misunderstand the moral motivations of political conservatives, who generally rely upon all five foundations" (pg. 1). Integral theories put progressives ahead of conservatives in moral

²⁸ This is not meant to be a relativist or "flat-land" argument against hierarchical development. Rather, it calls into question which lines or capacities we focus on when we consider people's overall or average development.

development (on average). Haidt's data offers a more nuanced view, as well as illustrating how focusing on certain lines (or sub-lines) can bias interpretation.²⁹

Cultural vs. individual wisdom

I noted how the implications that modern and Western cultures are more advanced, mature, or wise than ancient and admired cultures is one of the barriers to disseminating integral developmental theory (especially to progressives and New Age-ers). I offered one idea, line-asymmetry, for nuancing and opening up the dialog. Next I offer another such idea, which is to take a closer look at how cultures vs. individuals hold "wisdom."

Cultural vs. individual wisdom. The difference between tacit and explicit knowledge is relevant to the [above](#) discussion about development narratives that focus on beliefs (explicit) vs. skills (tacit or enacted). The difference is also relevant to the following discussion of cultural vs. individual wisdom.

Intelligence and wisdom can be created and stored at three levels: genes (nature), culture (nurture), and individual (learning). The genome of each species carries its instinctive intelligence. For example, migratory behaviors, the ability to hunt in packs, and the ability to create and use sophisticated mental maps of a region. For many species each individual, through the experiences, trials, and tribulations of life, learns things above and beyond nature's genetic programming. Humans are unique in having a third means of accumulating intelligence—by passing it from one generation to another through cultural artifacts (including language).

When we compare the development, maturity, intelligence, or capacity of cultures we often conflate individual vs. cultural learning. Differentiating these can in part clarify the type of intelligence or development held by admired native adepts such as traditional shamans and healers, and also explains how modern cultures may have lost some types of intelligence their ancestors once had.³⁰ Consider a person who has vast expertise in a traditional spiritual or healing art. This expertise was developed, through trial and error, over many generations and passed down. The individual in question did not invent it (if they were

²⁹ Haidt's work suffers from insufficient reference to developmental theories. The integralists will note that those foundations used more by progressives come into play at later stages of cultural development. But this is not an argument to value those and reject others, which would be to transcend and deny rather than to transcend and include.

³⁰ Some of these differences are about the relative development of different lines, as described in the prior section. For example, a shaman may have a high development on some "healing" skill line. But this section takes a different tact, suggesting an additional lens through which to investigate such differences.

creatively questioning and improving it in a major way, that would be a rare sign of post-conventional thinking). Their understanding of how and why it works has been handed down also.³¹ Many aspects of the wisdom are tacit, "compiled" into concrete-level rules and decisions. Compare this with the more modern scientific approach in which the learning procedure (method) itself, and the results of trials, are considered important and are recorded. In the traditional cultural learning model the history of trial and error (the experimental data) is not as explicitly stored, and the investigation procedure is not very important.³² Knowledge is valid because it comes from authoritative and traditional sources. The modern scientific standard is empirical proof and reasoned argumentation.³³

It takes a certain amount and level of development to innovate new knowledge. Innovating and extending knowledge requires reflexive and formal operations (such as those described in creative brainstorming) that are at a higher developmental level than simply memorizing and using knowledge. The shaman or healer may hold knowledge that, due to a massive amount of historical trial and error, is more accurate and more valid than any contemporary theory on a specific topic (e.g. healing a particular ailment). By separating culture from individual, we can say that the traditional *culture* is more evolved, more developed, or more intelligent than our modern culture (in this particular task or sub-line); while noting that as an *individual*, the exceptional shaman may not be as developed as the average person in a modern culture.

In addition to the example of the esteemed *individual* (shaman) we can use the same differentiation of individual vs. cultural learning to explain how an entire native *culture* may be "more intelligent" than our modern culture on some theme such as sustainable agriculture, while still holding that the individuals, who are simply following the conventions of the culture, don't understand the sustainability principles behind what they are doing.³⁴

³¹ Assuming the expertise is valid in that it reliably produces the desired effects, the theories or reasons given for how and why it all works are often not up to modern scientific standards.

³² In cultural knowledge transmission some of the trails and errors are stored in the branched decisions or discernments made (e.g. use a dark bean in the summer and a light bean in the winter). But any evidence that does *not* confirm the knowledge or lead to a new strand of knowledge tends to be lost. Whereas, in the scientific method, trial and error not only lead to differentiations and new rules (knowledge), but also are used for knowledge (meta-knowledge) about the degree of certainty or accuracy of the rule.

³³ These are broad-brush generalizations of course. Traditional thinkers use *some* degree of empirical validity and trial-and-error improvement; and the modern scientific community bases much on the authority of sources, often at the expense of evidence and rationally argument.

³⁴ The complexity of thinking ecologically about dynamic systems and complex interactions is usually associated with the green developmental level.

Of course it is possible that a shaman or healer is highly developed as an individual as well.³⁵ My purpose here is to help tease apart or nuance dialog about how it could be that such esteemed conventional or pre-conventional individuals and/or cultures could be seen as in some sense more developed (at a cultural level along a particular line). As discussed above, any suggestion that modern thought is more highly developed (socially, emotionally, morally, etc.) than traditional cultures must be able to respond to the counter-argument that modernity seems to be so "clueless" about some of the basics about human happiness, holistic health, social cohesion, sustainability, etc. compared to some traditional cultures. Various counter-counter-arguments can be made that directly contradict these counter-arguments (e.g. how life span increases and war casualties decrease; how conditions are more complex now than then) but in addition to these "I will prove how you are wrong" responses we can offer a "here is how I can understand how you are partially correct" engagement.

Context specificity and the influence of emotion

Psychologists distinguish between people's *competence* in ideal situations from their *performance* in actual situations. It is common knowledge that people's performance degrades when under emotional stress or when the complexity demands of a situation increase. But this fact is not applied deeply enough in the common integral narrative of developmental levels. I will call this phenomena, in which the psychological state (especially emotional stressors) and task complexity have an effect on the level at which one performs, the "context sensitivity" of developmental levels.

If a person shows an Achiever center of gravity on a developmental instrument such as the LDP, under what range of contexts do we expect that she will behave at an Achiever level? What proportion of her life activity does this account for—those rare peak performance moments or the majority of daily activities?

My main suggestion in this section is that the variability in a person's performance is probably much wider than our typical mental model of development. Figure 3 illustrates this. The common (informal) interpretation is that people have a center of gravity in a particular level, and that there is a certain degree of

³⁵ And even when a highly developed capacity or skill is passed down culturally, the narrative attached to why and how it works is usually understood in a mythical or magical way, so the self-understanding (meta-knowledge) attached to the knowledge may not be particularly highly developed.

overlap, uncertainty, and variability into other levels. The second diagram in the Figure illustrates how the degree of overlap among enacted levels is arguably much greater than the mental models we hold.

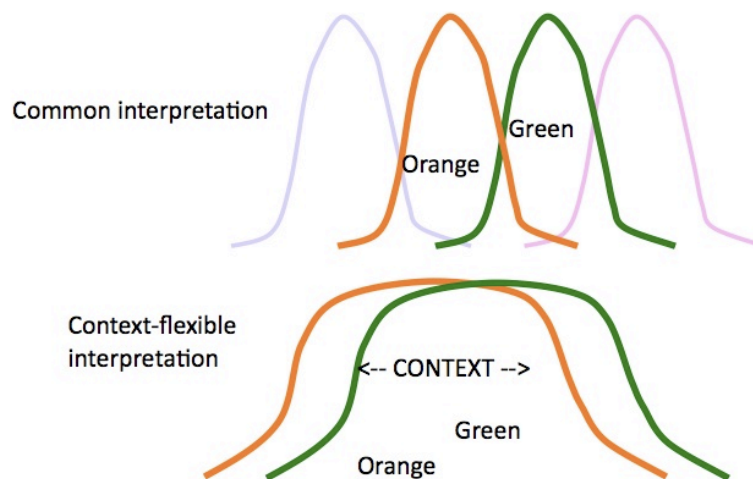


Figure 3: Context Flexibility

It is easy to imagine a person who thinks and acts from an authority based conventional level of reasoning in one context, such as in their church community, and thinks and acts from a more systematic, scientific and post-conventional level of reasoning in another context, such as at work, and thinks and acts from a post-conventional level with certain friends.³⁶ One can also note how a person's intellectual and social/emotional "IQ's" can drop dramatically when the brain is "hijacked" by destructive emotions in stressful situations (Goleman 1999; Damasio 1995), and that, at a more subtle level, emotional state may be affecting most rational thought.

Desires, fears, anger, uncertainty, and all of the "negative emotions" create a regressive pull (an "emotional downshifting") back to more black and white, either/or, and us-vs-them thought patterns; toward more narcissism, group-think, misplaced concreteness, and over-reliance on authorities and other sources of certainty.

Similarly, we observe that for ourselves, certain groups of people tend to bring out the best in us, and in their presence our creativity, awareness, and productivity are supported to reach their full potential; while

³⁶ As Beck and Cowan (1996) describe a person's variability within a meme level, saying one can be at different transition points depending on context: "Since the Spiral is about ways of thinking about things, not types of people, you can stand in several places on the pathway at once. You might be at Alpha in regard to a twenty-year marriage, trapped at desperate Gamma on the job, a lost soul wandering around Beta at church, and be living in a town that is experiencing a Delta of growth and renewed sense of community" (p. 85). In this article I am arguing that the variability can stretch across memes as well as transition levels within a meme.

in other groups we are carried in a pattern of lowest common denominator downward spiraling that brings out the worst in us all. Emotional downshifting happens at collective as well as individual levels.

Even given all of these caveats about how developmental assessments are used, I do not mean to minimize the strong impact that developmental level has on performance (and world view). From third person experimental results and from strong first person intuitions, we know that developmental differences exist and that they determine much. The point here is that how development plays out is much more complicated than simple categories portray (meanwhile epistemic drives seduce us into having simplistic mental models). As Figure 3 illustrates, the stress/support context can have as much or more influence on behavior than developmental level.

This mental model of development, in which developmental state has more context-dependence, supports some conclusions that are already widely acknowledged. First, it is hard to say what the results of a developmental stage assessment (to say nothing about a rough "eyeball" or armchair evaluation) imply for a particular situation without additional information about state and context factors. Given a developmental scoring, we cannot say very much about how a individual or group will respond to a stressful or a supportive situation. Second, a person's predominant "developmental level" or center of gravity must be seen as an average (or perhaps ceiling, depending on how it is measured) capacity pointing to a very wide context-dependant performance range.

Finally, there are relatively unacknowledged implications for change agents. Emotional stress and social context have a large impact on performance. Negative emotions and group-think are likely to be significant factors in situations where change agents try to support transformational growth or learning. Rather than having the goal of increasing development, which has proven to be a difficult and very gradual process, one can have the goal of shifting the context stressors to allow participants' performance to better approach their competence. As a simple example, in conflict resolution much of a mediator's job is to reduce the emotional charge (often from reactivity, blaming, wrong assumptions, etc.) so that participants can think more rationally and have more empathy with others. Creative problem solving skill, critical thinking, and empathetic role-reversal are all developmentally bound and the mediator cannot hope to change these skills much in the given time frame. But if we hold a mental model of development more like the context-flexible

one in the Figure, we are open to participants having the capacity to perform at much higher levels than they are presenting at.

In *Immunity to Change* Kegan and Lahey tell a number of stories of successful uses of their four-column immunity-map method for individual and organizational transformation (2009). This facilitated method guides participants to reflect deeply upon their goals and the competing ("shadow," but Kegan does not use that term) behaviors, commitments, and beliefs that stand in the way of achieving those goals. Achieving this new depth of awareness is a classic subject-to-object transformation, and the method is rooted firmly in Kegan's prior work in the developmental theory (Kegan 1994). What is notable about these success stories, for our purposes, is the seeming developmental diversity in the types of groups that have benefitted from the process. Among the groups mentioned are the following, which integralists might classify as having blue, orange, and green cultures, respectively:

- A branch of the U.S. Forest Services, staffed by conventionally masculine "outdoorsy" men who would presumably not take to personal growth work;
- A group of rather stodgy seeming faculty in an elite college; and a group of executives from a financial services company;
- A highly caring and devoted group of inner city school teachers; and a group of Social Service providers working with children.

At least for the success stories reported in the book, it seems that groups with diverse developmental worldviews had transformative experiences that "put tears in their eyes and a lump in their throats." The authors claim that "we have never had a group that was ultimately unwilling to take a deep dive into the work" (p. 93). The point here is not to champion this method—the authors have understandably highlighted success cases over less successful ones—but to note that they do not give any direct indication that this level of deep self reflection is more or less attainable in groups that are predominantly composed of Socialized minds, Self-authoring minds, or Self-transforming minds (the three relevant developmental levels in Kegan's theory). One might surmise that, indeed, there were important differences in the facilitated process depending on each group's developmental center of gravity. But the point here is that this developmental diversity did not matter enough for the authors to focus on it; and it did not prevent groups we would characterize as blue and orange meme from engaging productively in a green/turquoise level activity. That is, though developmental level is certainly a factor, the amount of "stretch" available to participants is much wider than one developmental level, and approaches that focus on creating safe and supportive contexts

might yield much more vertical transformation than approaches that tailor methods to developmental level with the explicit intention of raising those levels.³⁷

Center of gravity and layers of the developmental onion

We have already critiqued or nuanced the "center of gravity" construct in terms of trying not to make too many assumptions about (a) how many lines are glommed together into it; and (b) how narrow (vs. wide or indeterminate or overlapping) developmental lines are. I will add an additional level of complexity to our mental model of developmental lines that further problematizes the notion of center of gravity. In doing we can note that models are tools that are chosen to fit the needs of the situation. Each additional level of complexity adds more nuance and differentiation, but increases the cognitive load. I am not suggesting that each mental (sub-) model will be practical in every context. I quote Theo Dawson from a post on the Integral-Scholars discussion forum:³⁸

...researchers have found that people are not "at" levels (although individual performances can be placed at levels). Individuals function within a developmental range and perform at different levels on different lines and in different knowledge areas. Moreover, the level definitions that emerged from research done in the 60's, 70's, and 80's have been shown to be little more than stereotypes. Variation within levels is much greater than researchers once thought.

We tend to think of development along a particular line as being "at" a particular place, like a dot on a line in its simplest conceptualization, or like a bell curve or fuzzy category in its more sophisticated interpretation. But development along each line is built up from experiences and insights, layer upon layer. Prior layers tend to remain active, not be replaced by new layers (this is one aspect of the "transcend and include" concept). For example, we don't forget, and don't necessarily significantly transform, our skills in arithmetic as we move up to differential calculus. Problems we never overcame in arithmetic skill will continue to haunt us if not dealt with (and they may or may not affect our performance in differential calculus), even though calculus "transcends and includes" arithmetic.

³⁷ Research my Kathy Metz gives a further example of how problematic it is to make quick assumptions about skill levels. There is a generally accepted research belief that epistemic reasoning, which involves some understanding of how knowledge is produced, used, and evaluated, does not appear until college age, and does not develop at all in many adults. Yet Metz (2011) found evidence that, in a collaborative discovery learning environment, about 40 percent of first-graders exhibited such epistemic knowledge as attribution of uncertainty in their findings, reasoning about relationships between factors, and a tacit understanding that correlation does not mean causation. These findings of "surprisingly robust epistemic reasoning...suggest that epistemic reasoning is plastic, sensitive to instructional opportunities" (p. 50). It is reasonable to expect that many if not all developmental skills have a similar context dependence. I.E. whether an individual demonstrates them depends strongly on many contextual factors.

³⁸ April 20, 2009 posting by Theo Dawson at http://groups.google.com/group/integral-scholars/browse_thread/thread/70e59cb33adc0a93?hl=en, quoted with permission.

Some phases of a developmental line's progression may be incomplete or pathologically distorted, as illustrated in Figure 4. From this figure we can conceptualize each developmental line as layers of an onion, where some layers may be thick (well developed) while others may be thin and weak. The ego and cognitive lines in the figure illustrate the typical mental model, showing a center of gravity with some performance at prior levels and some performances at our leading edge. But more complex layering's are also possible. Each layer is free to have a strength according to the healthiness, depth, and breadth of the learning experience when that layer was formed (and later modified through additional learning).

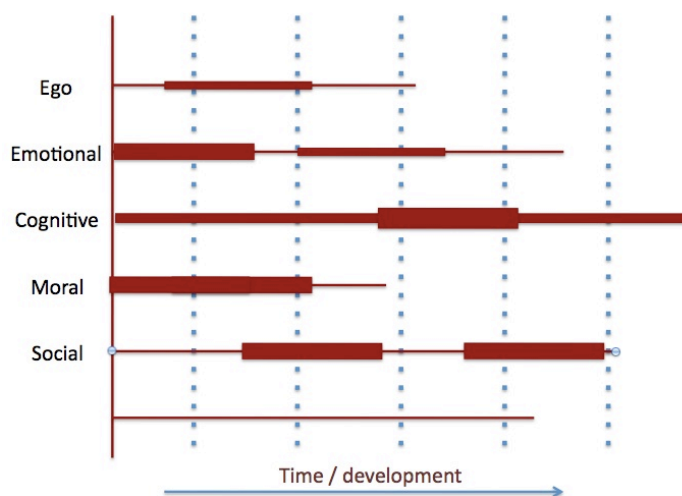


Figure 4: Uneven Layers of the Developmental Onion

The Figure shows a "time" axis to illustrate the effect of the leaning context as we develop each layer. The figure can also be seen as an illustration of a snap shot of current development, showing the strength of each level of a line. The actual situation is more complicated than this because we can "go back" to deepen, widen, or heal any layer of the onion that is weak. Forman (2010, p. 87) discusses the "intrapsychic wound or block that prevents higher cognitive or egoic capacities from generalizing into sensitive areas [and can] make growth in that line difficult."³⁹ The implication is that further growth can be stunted but, as these "lines" cover a range of sub-skills, it can also happen that a particular aspect, context, or micro-slice of a line is arrested or distorted, leading to the uneven layering suggested in the figure.

³⁹ Similarly, Ingersoll and Zeitler ask "is the 'asymmetrical development' of lines the result of natural disparity (line independence) or is it rather of everyday Neurosis (normal regressions?" (2010, p 144).

The shape of the spiral

Next we will consider the predominant mental model of the developmental "spiral" as a whole. In particular, I we will look into the concept of "tiers", the notion of alternating "express-self" and "sacrifice-self" (or agentic and communal) levels, and our mental model of "third tier."

Alternating Levels. The idea that developmental levels alternate between agency-driven and communion-driven modalities is a good example of the seductive properties of a good idea, and the symbolic impulse toward black-and-white conceptual boundaries. The idea that a bias toward either agency or communion at any level would create a corrective swing to the other polarity, as a dialectic progression, is compelling.⁴⁰ Then again the evidence for this alternation is weak if it exists at all, and this aspect of the model has all the marks of the human mind finding patterns in the Rorschach ink blots of human behavior. The alternation idea may indeed have some grains of truth, but its great explanatory and meaning-generative power cause us to go beyond that. Perhaps the "agentic" levels are 60%/40% in favor of agentic behavior, and vice versa for the communal levels, but the model suggests that green and blue *are* (100%) communal (though the Action Logic model calls green Individualistic) and that orange and teal *are* agentic. Meanwhile, we also have a competing notion that both agency and communion should deepen as we go up the spiral at *every* level.

Other developmental schemes roughly parallel the Spiral Dynamics and AQAL progression, but do not have a one-to one level correspondence. Since agency and communion are primordial constructs in AQAL theory, one would expect to see a similar dialectic in other models, but for the most part we do not, and if we did that would create additional problems because the various models would be out of sync. The well-researched Action Logic model inserts an additional level between blue and orange, which messes up the whole alternating pattern from there on up (the two models are out of synch from Expert level up in terms of this alternation pattern).

Here again, the conclusion is not so much that the standard interpretation is wrong, but that it is not as definitive or true as it is usually understood. We are invited to consider the extent to which our ideas are

⁴⁰ A transformational dynamic involving alternating visits to opposing sides of a polarity is a common explanatory mechanism in systems and evolutionary theories. That such an alternation would happen in exact synchrony with all of the other factors occurring as one level transitions to another, and maintain this correspondence through the entire spiral is more speculative.

constructed more to generate meaning than to accurately reflect objective reality. Doing so leads to different types of conversations about what is true.

Tiers. Developmental "tiers" provide a good example of the constructed nature of categories and the normative or evaluative pull that often accompanies categorization and adheres to mental models. We create categories for particular purposes, and those purposes often involve value orientations. Above it was noted that there is some controversy as to whether the boundaries that separate developmental levels exist in nature or whether they are more arbitrarily constructed (the answer may be that phenomena occurs in discrete categories only for certain narrow lines). Tiers are more clearly human-created categories. Any model that has a system of more than seven categories (in *Integral Spirituality* Wilber proposes 12 levels) cries out for a chunking of those categories into a smaller number of more manageable sets. The terms pre-conventional, conventional, and post-conventional provide one such partitioning. O'Fallon uses a slightly different gross/subtle/causal tier categorization (O'Fallon, 2010). The two-tiered notion of scarcity-oriented vs. abundance-oriented stages comes from Maslow. Fischer's Skill Theory has four tiers, for reflex, sensorimotor, representational, and abstract skills (with four levels in each tier for: single, mappings, systems, and systems of systems; Fischer & Farrar, 1987). The notion of first and second tier was introduced in the Spiral Dynamics work, and Wilber recently added a third tier.

At each developmental level, important novel phenomena emerge creating transitions in human forms of life that differentiate all that came before from all that comes after. Any of these transitions could be valorized as the key pivot point for humankind, and thus serve as a tier marker for a theory particularly interested in that transition. The ability to see and appreciate the "spiral" as a whole, and appreciate the benefits and liabilities ("dignities and disasters") of each level is a key characteristic of the transition to teal, and thus into second tier. But another theorist might say that the transition into post-conventional was the key pivot point for humanity (and tier marker). Wilber starts second tier at teal, but Cook-Greuter thinks the key transformation comes at green, with increased perspective taking.⁴¹

The reader will easily agree that tiers are arbitrary categorizations. But, looking then to how we interpret and enact them in discourse, we can note many discussions and debates about "what is second tier?" and "what counts as second tier?" In a type of misplaced concreteness, we treat second tier as if it exists

⁴¹ Personal communication in a workshop.

"out there" as something we can measure against—as if it has a definition beyond the way we choose to use it. But who or what could arbitrate such questions? We could say that Wilber or Beck (or whoever created the construct) is the definitive authority. But such questions are clearly not an appeal to authority figures. Yet they are also not an appeal to empirical evidence, nor an appeal to first person experience or intuition. "Second tier" is an evolving concept being co-created by the community. It is whatever we create it to be, nothing more. Its validity is in its *meaning-generative capacity* (until we define it in some other way, for example anchoring it more strongly to particular experiences or data). The most valid questions seem to be—not *What is its definition?* or *What is it?*, for who could answer definitively, but—*What do we mean by second tier?* or *What is the most useful definition of second tier?*

Finally, I will admit to a degree of cynicism when I first heard the Wilber had invented a "third tier" starting after turquoise in his developmental model (see the figure in Wilber 2006, pg. 69). At second tier we are already in an area where we have so little empirical evidence that our definitions are tentative and emerging.⁴² It took humanity six levels to get to this major tier transition. Why do we need to mark another major transition after only two more levels—in an area we know so little about? I am not arguing against continuing to name and try to characterize levels up the spiral, but questioning why the tier construct was re-used here. My cynical answer is the following: many of us in the integral community are operating at teal and turquoise, so, though these levels are statistically rare (.5 to 2 percent depending on how you look at it), we needed a special name for the people who are just off-the-charts, to whom we must look for guidance and with spiritual admiration and awe. There are such people, but they probably do not need the title of Third Tier as much as we may need to confer it.

Mental models of higher stages. There are certain ambiguities in the integral community's model of development that stem, I think, from that fact that we (and originally Wilber) source two main lineages of ideas on human development. On the one hand are models from researchers who follow and extend Piaget's core intuition about the nature of development (Kegan, Fischer, Commons, Perry, Kohlberg, etc.). These theories make strong use of concepts like reflective abstraction, subject-object transformations, and hierarchical complexity to describe developmental processes. They describe development in terms of

⁴² Terri O'Fallon is currently engaged in a project collecting data to better describe higher levels.

successive waves of horizontal learning followed by gestalt or integrative transitions to qualitatively new levels of understanding (a simplicity that follows the complexity).

Different but not necessarily incompatible with this scientific lineage is the spiritualist lineage that portrays development in terms of increasing wisdom, enlightenment, sanctity, compassion, selflessness, emptiness, or transcendence (Aurobindo, de Chardin, Steiner, etc.). These two lineages tie into two different core intuitions or mental models of what development is. The transpersonal psychology and human potential movements, including Wilber's work, worked to synthesize these two lineages, but we are far from having a suitable image of how the two relate. My goal here is not to propose an integrative solution (any solution would have to explain the validity of both lineages and properly relate them), rather, I will shed light on the landscape needing to be resolved by illustrating some open questions about the developmental spiral.

First, though neo-Piagetian theories describe development in ever-accruing phases of learning, there is something about the spiritualist intuition of development of human growth that points to letting go, simplifying, and unlearning. In Murray (2009) I question whether compassion or heart-skills develop according to a different rule or structural geometry than more cognitively oriented skills. Whether this is plausible or not, most would agree that achieving the type of wisdom that we associate with second tier capacity involves, for most of us, a lot of psychological (or spiritual) healing (shadow work) and letting go of past learning and habits. Stein (2010) suggests that it may be better to focus our energies on becoming more integrated at whatever level one is at, rather than pushing to higher levels.

This relates to the discussion in a prior section on "asymmetrical line development." Here it was suggested that our mental model of higher development might be biased toward certain lines, such that what we imagine to be higher development is partial and biased. In a similar way, the transcend-and-include mental model we bring to development makes it easier to ignore the specter of pathologies at prior levels (and see the onion-layer argument above). But what if the vast majority of us have so much "baggage" to overcome, that, in a pragmatic sense, the journey into and beyond second tier is proportionally *more* about releasing and healing than it is about increases in hierarchical complexity? One of the laudable and rare things about Integral Theory is that it *does* strongly acknowledge the importance of shadow work. Again, I am not trying to add to Integral Theory or its formal models, but looking at the adequacy of our mental models—the common ways of interpreting how development works and what is emphasized to support development.

This leads to a further discussion of our mental model of "third tier" development. Because we know so little about development at these high levels, the constructs serve as blank screens upon which to project our ("golden shadow") hopes and desires. Cook-Greuter says that most models for the development of the self (and I would add soul/spirit) "describe second-tier stages as some sort of idealized place of self-actualization and life competence [and that the] data...do not seem to confirm this notion" (Cook-Greuter 2010, p 303). Referring back to the discussion on differentiating skills from beliefs, one thing we can say with some certainty is that there has never been a third tier (or perhaps even a second tier) community. Any empirically-based description of third tier must be based on the *skill* sets of individuals. Regardless of the *beliefs* that those individuals have, without a their tier culture there is no third tier belief system (according to the lower-left process of belief systems emergence).

In our current images of second and third tier development the developmental lines seems to merge, as if they either become one or one can't progress along one line without progression holistically only many. Is this merging into undifferentiated capacities a valid supposition based on evidence, or is it an artifact of our current ignorance?⁴³ Stein and Heikkinen (2009) argue that people have natural and strong intuitions about developmental "altitude." Referencing my earlier discussion about line widths, it seems as though we are applying this intuition to a wide-lined or merged-line mental model for higher developmental levels, but it is not clear that this is a valid intuition (the empirical work Stein & Heikkinen reference is on narrow lines).

In the upper levels we shift from drawing on the psychological traditions to drawing on the spiritualist traditions, and reference concepts such as "unity of consciousness" and "ground of being" near the top (Cook-Greuter, 2000, p. 6). Our notions of transcendent stages and transcended *states* also get more muddled for higher stages. The integral community's exploration of these realms is both exciting and of potential great value to humanity. But we should be even more wary of projection and misplaced concreteness with these highly speculative levels, and keep a keen self-reflective eye on the mental models we construct as we use and promote these ideas. The meaning-generative tug from the research-based lineage may target an entirely different audience (or produce very different reactions) than that of the spiritualist lineage.

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Is the "green meme" a transition or a level?

What is a level? What characteristics signal a level-to-level shift—i.e., what makes a "level?" In particular I want to question whether the green meme is actually a level, vs. a transition between levels. Does development happen in jumps from one discernable level to the next, or in a continuous way, in which case the delineation of "levels" is arbitrary (purposeful but man-made)? Dawson has found evidence that some very specific developmental lines grow in a growth-followed-by-leveling-off mode (similar to the notion of punctuated equilibrium in species evolution) (Dawson-Tunik et al. 2005). This is copacetic with Chaos Theory idea of attractors, in which dynamic systems settle into certain "desired" states, after which perturbations in the environment create chaotic periods until the system finds the next semi-stable state. However, the "wider" (see above) our conception of a developmental line, the more it contains a mishmash of more specific lines and phenomena, and the less likely it will be that we will see clear-cut patterns and delineations. For some research studies the tasks or concepts are defined in such a precise way that, by definition, performance is seen as organized into discrete layers. For example, in studying the development of mathematics skills, subtraction is a very specific skill that, with other skills at its horizontal level, are combined to create skills at a next higher level. But with most of the developmental theories integralists refer to, this is not the case. We must wonder to what extent the specific categories used are more interpretive than residing in the phenomena under study.

Is green a level or a transition? The green cultural meme is conceptualized as a discrete level, and while not proving the case definitively, I will offer a tentative argument to support the idea that it is a transition between Orange and Second Tier, rather than a discrete a level. I make this argument for green as a cultural *belief* system. In the realm of *skills*, research has more rigorously identified discrete levels above orange, but the correlation between beliefs and skills becomes ever more speculative above green. My argument relies on the previous subsection, in which I tried to show that exactly how we partition the space for this complex domain is more a matter of its usefulness in meaning-making activities than an accurate reflection of solid categories in the phenomena being studied.

The argument is simple. Most of the defining characteristics of the green meme point to phenomena, including contradictions, that would not create a stable cultural/social state. Rather, they point to difficulties in moving from healthy stable Orange culture or Modernist thinking to a healthy post-modern (what we

would call post-post-modern) phase. For example, consider the following common characterizations of the green meme value system (these are true of the common interpretation of the construct, aside from the question of whether they are true of any individuals):

- Greens want to be radically inclusive but in practice are not inclusive enough to accept many other worldviews;
- Greens want to do decision making via a purely consensual process, but doing so makes idealistic assumptions of psycho-social processes, and pure consensus often gets too bogged down to be effective;
- Greens value egalitarianism and love, yet display a good deal of narcissism and enmity toward orange and blue;
- Greens distrust power invested in people and systems, but little can get done in a purely anarchistic or flat organizational structure;
- Greens value sustainable solutions, but often have views of reality that are too idealistic to account for pragmatic necessities of sustainability;
- Post-modern deconstructivist theories lead to nihilism, paralysis, and despair (in their extreme or caricatured form), which is not a sustainable state;
- The post-modern rejection of ultimate truth leads to "performative contradictions."

Extant cultural meme levels are described by Beck, Wilber, McIntosh, and others, as being closely tied to the historical cultural development processes. The designation of the meme levels that we see in extant cultures is related to discrete periods of cultural evolution (agricultural, tribal, nation-state, etc.). One can make an argument for the stability of most of the meme levels in terms of the efficient tetra-enaction of how each quadrant manifests there. Purple, red, blue, and orange cultures are constituted by relatively stable self-reproducing social-cultural sub-systems. But green seems to be defined in such a way that a culture with a majority of its members (or even a majority of its power-wielding members) in this stage would not be able to function well for very long. It is full of contradictions and instabilities that would not create a sociocultural "attractor." It has all the signs of a period of dissonance that follows one stage before another stable stage is reached.

I tentatively propose that a stable second tier cultural system is not a qualitatively new stage beyond green, but is characterized by our ability to successfully deal with all of the unsettling challenges raised by the expansion of consciousness and values (heart and mind) that the green "level" initiates, and move beyond idealistic conceptions to practical solutions that have a chance for stability. At second tier we are able to break the unhealthy patterns of dominator social hierarchies, using tools such a consensus-like processes and egalitarianism, when and as they are practical. We become aware of the indeterminacies inherent in theories and the paradoxes inherent in foundational or essentialist principles, but we are not paralyzed and can get on

with knowledge building and action. We value openness, love, and acceptance, while acknowledging the human limitations and shadow that render these ideals out of reach in their pure form.

I propose that green *looks* like a full state due to our distorted fish-eye perspective on history. The upheaval of the sixties, the millennial transition, and all that is vivid about our recent history, appear larger-than-life, so that what is, in the bigger picture, a stage transition, might look like a full stage. I don't necessarily disagree with the idea that "we are in a special time in history," "a critical time for humanity and the planet," etc. But these things are not relevant to the stage-vs-transition question about the green meme. It is likely that our mental model of this transition is biased by the added salience of the New and the Now.

This argument is speculative, and more to raise questions than provide answers. The issues it raises about the current model are important because the integral movement in history is largely about the movement from green to second tier. Our mental models of green vs. yellow, our attitude toward green, and our hopes and plans for supporting more second tier wisdom, may differ if our mental model of green is as a transition state vs. a full level. We might expect a transition state to be awkward, incomplete, and unstable, and give it our unqualified blessings as we support or simply compassionately witness its stage-specific phenomena. On the other hand, seeing green as a stable level facilitates its interpretation as an entrenched worldview that must be dislodged forcefully.

Do developmental lines exist at all?

Though I have gone along with the common interpretation of developmental lines in the above discussions, I will now suggest that the types of lines listed by Wilber and others are fundamentally overlapping and interdependent at a *conceptual* level (though also in an empirical sense)—that the idea of such lines as separate streams of development is overly simplistic and largely artificial. Ingersoll and Zeitler say that they "agree with Wilber that there is evidence for the existence of multiple lines of development [but] there is of yet almost *no* robust evidence that the lines of development are 'quasi-independent'" (2010 pg 146, emphasis in original).

Kurt Fischer, a leading developmental theorist, claims that skills develop (both genetically/phylogenetically and developmentally/ontogenetically) in response to the demands of real life

task situations. He claims "the skill level that a person displays...cannot be considered independently of the context in which that skill is assessed" [and also the context in which it was learned and the task the skill is meant to address] (Fischer & Farrar 1987, pg. 647). Some primitive human skills such as those dealing with reproduction, eating, navigating terrain, and territory defense, seem to operate fairly independently of each other because the task situations or life-needs they address are relatively independent as well. The evolutionary demands of very specific and independent tasks give rise to very specific and independent skills (and perhaps more partitioned brain structures). But complex human social tasks/contexts such as communication, parenting, and leadership have massively overlapping characteristics and purposes such that the skills developed to meet these needs should be expected to be equally interdependent and difficult to separate.

There are few (no?) human social tasks that require only cognitive skill, or only ego-skill, or emotional, or moral skill, etc. (if these skills actually existed in a pure form, and I am arguing that they do not); authentic contexts inevitably require a complex mixture of such skills. If the tasks that give rise to these skills are massively overlapping, interdependent, and fuzzy-boundaried, then *so must be the skills or lines*. As in all scientific work, we must define some concepts to bootstrap inquiry, and some ways of carving up the conceptual/phenomenological space are certainly a better fit to reality than others (e.g. "emotional intelligence" seems a better core line than "leadership intelligence", which clearly includes the former). The developmental lines given in AQAL may be useful and adequate to further our understanding and life-goals, but are they pointing to something real? Looking at Wilber's list of lines and their key life questions above, can "needs" be that different than "values?" Or spiritual from ego development? We can certainly define them abstractly so as to make them more independent, but then risk losing relevance to lived experience. As an extreme example, we could define spiritual intelligence in terms of the answer to a single question on an evaluation instrument. Research data might clearly show development along this "line," but the task of answering that question would not be very predictive of lived behavior or awareness.

In Integral Spirituality (pg. 58) Wilber says "there are at least a dozen different developmental lines-- cognitive, moral, interpersonal...each of the great developmentalists tended to stumble onto a particular developmental line or stream to explore in great detail." However, I argue that this seemingly serendipitous fact yields an entirely different conclusion. It is not about the dumb luck of stumbling. I propose that the

reality of human behavior is so complex that a theorist can start with any sufficiently adequate construct and find a deep pattern, an empirically "proven" developmental line. Some constructs are certainly more useful and adequate than others, but the number of such possible lenses is probably enormous (as shown by the diversity of constructs measured in the developmental literature). What is special about these "great developmentalists" is that they were intelligent, insightful, and/or lucky enough to invent constructs that turned out to be very useful, and captured something essential about development. Human behavior is so complex that it acts like a theoretical Rorschach test for brilliant and persistent theoreticians.

Researchers continue to define new developmental constructs to measure, such as critical thinking, reflective reasoning, and dialectical thinking. Each is like perspectives on a mountain from different directions, they overlap. A post-metaphysical understanding of such constructs is that each is a useful (man-invented) lens through which to observe the massively complex phenomena that is human behavior. The constructs (when empirically validated) are "real" in that they illuminate *something* actual phenomena, but they are also not *things* in the world as such—they exist, are *enacted*, because we have conjured them up to serve various purposes.

Conclusions

The certainty and power that comes with integrally-informed developmental frameworks, leading to an "epistemic drive" over-generalize that I observe within myself and others, calls for a strong (and loving) balancing dose of skepticism, critique, and humility. Theories and models become more pragmatically useful when their limitations are better mapped out. As we know, theories and models are lenses through which we peer into reality, and they inevitably produce distortions or colorings (Edwards, 2010). Just as specific knowledge about lens distortion can be used to improve images from telescopes and microscopes, so specific knowledge about a theory or model's limitations can be used to partially ameliorate for those distortions. In addition, general knowledge about the nature and fallibility of reason (concepts, claims, and models), i.e. construct awareness (I have also used the term "epistemic wisdom"), is invaluable in putting models to practical use. With such knowledge we can craft our developmental frameworks to be more soft-edged, light, and flexible as ready-to-hand tools.

Why critique? Constructive critique can be steered by explicitly noting the reasons for doing the critique. I give four reasons for engaging in critical self-reflection. First is the pure search for truth, knowledge and deep meaning. Improving our ideas through the dialectic of reflection and critique satisfies the simple cognitive/aesthetic *drive to know* deeply and widely. Second, we have a *moral impulse* to put good knowledge to use toward good ends and a pragmatic need for our models to be accurate representations of real phenomena so that they produce real results. Though our models may sometimes be put to use indirectly or covertly, we at times want to disseminate these models through communication and persuasion. So third, there is the *strategic* goal of understanding how our ideas differ from those of whom we want to persuade, so that we can properly *translate and teach* in a way that connects with where others are at. We want others to take us seriously and in good will. Fourth, there is the moral impulse to simply *understand the ideas and interiors of others* around us, to empathically connect to them in solidarity and care. We want to take others seriously and in good will.⁴⁴ Finally, it behooves the integral community to enact a highly reflective, multi-perspectival, and post-metaphysical attitude toward its own knowledge production, to *practice what integral theories imply* (or "preach"). This is a matter of vitality in identity formation for integralists. Reflecting critically on our mental models serves all five of these goals.

The above goals mean that in reflecting on our theories and models we must do more than critique their scientific accuracy or formal properties (such as logical consistency). We must reflect on how they are enacted, and on how they live dynamically within us as individuals and as a community. As in post-modern critical theory and deconstructive approaches, we must try to uncover specific biases, assumptions, and values that permeate and distort our ideas and actions. But we can also, from a more cognitive and epistemic perspective, reflect on the inevitable fallibility of the constructs and categories we use. This second type of critique has been my focus in this article. We might call the first type of critique "context aware" theory-making, in that we try to objectify the social, cultural, and power relationships that may distort knowledge and action. We can call the second type of critique "construct aware" theory making, in the way that it looks more deeply at the meaning-making process, making concepts and mental models objects of reflection—not

⁴⁴ Based on the above, our explicit models and our mental models can fail us in different ways. In the "is" domain: models can be factually inaccurate or faulty such that they don't predict or lead to the desired results in use or enactment. In the "ought" domain: our interpretation or enactment of our models can happen in ways that reveal ignorance, denial, or repudiation of the values, norms, or important beliefs of others. Errors in either domain of validity can lead to regretful actions or missed opportunities.

only revealing the limitations of specific concepts and models, but in reflecting on the fallible nature of concepts and their coordination in models in general (so that we "have them" as opposed to them "having us"; or as another put it, so that we see the stories we tell ourselves as stories). This characterizes much of my treatment in the article.

Speaking to green. It could be said that the core focus of the integral movement is on the transition from green (post-modern) to second tier (integral) thought. This transition defines the fulcrum of our moment in history (for the developed world), and the integral vision is aimed at boosting those entering second tier, or assisting those operating from second tier who wish to help others thrive. (I will acknowledge but put aside important questions about who, how, and for what reason vertical growth should be sought.) Many of the points in this article relate to our mental models of the green-to-integral transition, or aspects of integral theories that are objectionable to green culture.

There has been widespread comment in the integral community about how difficult it is to convey integral models to others, especially the developmental components of the theory. Though the prudent tack is often to use the integral framework covertly, we still sometimes want to explicitly disseminate elements of integral studies. In some cases an audience may just not be developmentally ready for some of its tenants, and in other cases an audience may actively resist some of its implications. But some of the problems of dissemination arise because we treat highly speculative principles with more certainty than is warranted, or there is some type of distortion, overemphasis, or overconfidence in how we present the ideas, and (green) audiences are rightly wary. My analysis supports a more flexible treatment of developmental principles, which may make the developmental perspective more palatable to others, especially green culture.

Negative capability. Theory-making in human development is plagued by the problems inherent to the social and human sciences in general (see footnote #3). Yet the human drives for meaning, pattern, predictability, and control will not disappear (or even assuage) simply because of mammoth complexity and uncertainty.⁴⁵ The questions raised in social and human sciences are the eternally important questions about *us*, and they are as much normative inquiries as objective inquiries, and are "directed toward decision as well

⁴⁵ One of the problems is that we don't yet have shared metrics or general awareness about *degrees* or types of problem complexity that would guide our expectations about what can be known.

as insight, action as well as knowledge" (Anderson, p. 100).⁴⁶ We can not and should not forsake our drives for knowledge and its virtuous application, even though the burden of fallibility, indeterminacy, and partiality is particularly heavy.

Scholars act in an ecosystem where ideas are the currency of exchange and value, and competition among ideas is the life force. But many question this paradigm (for example see Anderson's *The Way We Argue Now*). A post-metaphysical (Habermas 1992) approach demands more humility and vulnerability as we acknowledge the ubiquitous fallibility in knowledge. We can allow for multiple claims and suspend certainty until it is pragmatically called for. That is, in any debate about divergent ideas (asking "Is it true?" or "Is it right?"), we can pause to ask whether we really need to decide now. Is there a practical need to converge upon a single "truth" (even if hypothetical)?⁴⁷

Releasing or reflecting on the certainty and definitiveness of concepts and ideas is a form of "negative capability" (discussed more in Murray, 2008, 2010). "Positive capability" refers to knowledge or capacity that lets us decide and act with clarity and certainty. Negative capability includes an openness to uncertainty, possible error, or paradox that, at first, may seem effortful and unsettling, but can also produce a kind of freedom and unattached spaciousness. The evolution of knowledge and wisdom involves a dialectical dance of positive capability and negative capability, but it seems that positive capability is more natural and negative capability needs to be intentionally boosted in most cultures. We are more likely to focus on the aspects of models that seem to fit reality than those that don't. This article is offered as a step toward increasing the integral communities' negative capability around the topic of human development.

There are a number of approaches to knowledge that can help with negative capability. I describe several of them next.

Meaning-generativity and explanatory models. How do we approach the preponderance of ideas and principles in integrally informed developmental theory that are not (yet) well-supported scientifically? For example, the basic idea from Spiral Dynamics that cultural evolution parallels individual development is

⁴⁶ Flyvbjerg, in critiquing social and behavioral science, says "we must take up problems that matter to the local, national, and global communities in which we live, and we must do it in ways that matter" (p. 166).

⁴⁷ Developmental theory gives us hope that some communities, perhaps the integral community, will have the developmental capacity to: consider more perspectives; deal with paradoxes and both/and in conceptual polarities; and suspend judgment and certainty about ideas until such time as a decision is needed. This is not a simple matter of ethical transparency or of "ontological humility," but requires an effortful inquiry into our meaning-making process itself.

compelling to integralists but far from accepted among scholars. As noted above, the social and behavioral sciences, which tried to appropriate methodologies and criterion from the hard sciences to address issues in the more complex arena of human behavior, have had to come to terms with the limits of these methods for such domains. Though our understanding has deepened greatly, scholars have little to show in the way of definitive or predictive laws in fields such as economics, leadership, education, group dynamics, and psychotherapy (despite the revolving door of convincing theories-de-jure). To adapt to the challenges we use multiple and qualitative methods, including phenomenological and hermeneutic methods borrowed from the humanities. But we still too often seem at a loss for how to talk about ideas that are less definitive than physical laws and more definitive and law-like than subjective speculations or pure descriptions.

Above I mentioned one approach, that of explicitly accepting meaning-generativity as a type of validity claim. For example, I choose to believe in reincarnation. I have many reasons for this, but in general it is the type of belief that I can use to explain my actions and world view, but it is *not* the type of belief that I expect could be proven or which I would try to convince others of. I can hold to and use this belief with great confidence without needing others to agree with it. The concept of reincarnation, which is not proven but believed by many I admire and trust, helps me make sense (meaning) of many of life's puzzles—i.e. it is highly meaning-generative for me. Theories such as Spiral Dynamics, which are more rationally formed and research-based but still highly speculative, are in a similar category. I can use these ideas to reveal how I think to others, and I can use them to build mutual understanding within a community of like-minded people. But I can not expect to easily traffic in or promote such ideas within communities whose worldview is incompatible with the idea.

Social scientist and philosopher Jon Elster offers another approach. He asks: "are there law-like generalizations in the social sciences? If not, are we thrown back on mere description and narrative?" (1999, pg 1). His response to this rhetorical question is "in my opinion, the answer to both questions is no...law-like explanation [in] the social sciences [is] implausible and fragile...[yet the social sciences] have been very useful in providing explanations of phenomena." He offers a framework for considering *explanatory* mechanisms or principles which are between laws and descriptions, which is very useful for framing research into developmental theories. This legitimates a class of claims about causal patterns or principles that have generative and explanatory power but not predictive power.

For example: a therapist working with an alcoholic patient might be confident that the parents' alcoholism was a primary cause of the patient's alcoholism. For another patient who is a teetotaler, the therapist may be confident that *that* patient's alcoholic parents were a primary cause of the patient strictly avoiding alcohol. Our therapeutic knowledge will not allow us to *predict* what will happen to a child with alcoholic parents—the phenomena is too complex. Rather, our knowledge has ex-post-facto *explanatory* power, and in such domains "it is the job of science to tell us which kinds of explanations are admissible" (Elster, pg. 3). Elster goes on: "the move from [causal] theory to [explanatory] mechanism is from 'if A, then always B' to 'if A, then sometimes [B, C and/or D]' ...they are good only because they enable us to explain when generalizations break down [i.e. when B, C, or D are *not* the result of A]" (Elster, p. 6).⁴⁸ Many of the principles contained in integral developmental theory can be presented as explanatory mechanisms as a way to be explicit about their indeterminacy.

What are the odds? Next I offer yet another way to understand knowledge indeterminacy. In a simplistic way we can think of the model-vs-reality fit in terms of percentages. For example, the general principles embodied in something like Spiral Dynamics or the Wilber-Combs Lattice lead one to draw certain causal conclusions about specific situations or questions. How often are these conclusions likely to be valid (relevant and productive in actual contexts)? There is no practical way to answer this quantitatively, but we might have a sense that a model works well 60%, or 85%, or 98% of the time (within some domain of inquiry or practice). Whether a model is more like a 60% or a 95% one is critical in assigning certainty to our claims, promoting the model, and taking action based on it. Thus we can try to be explicit about the degree (percentage) of coverage a speculative law or principle has. This is a primitive preliminary technique, but we need more tools to help us dialog about the degree of interpretive fallibility attached to ideas, to qualify and quantify how each model is "true but partial."

The surprising thing is that the mind is so eager for meaning and understanding that for phenomena that are extremely complex (including almost everything related to the human condition), a 30%, or even a 10% hit rate is welcomed and culturally reproduced. The mind has a "epistemic drive" (Murray, 2010) to lock onto any pattern that it can find that shines some light into the dark confusion. If we feel like we can make

⁴⁸ There is something in Elster's suggestions similar to the way Chaos Theory is used to explain complex phenomena (though he does not make this connection). The concept of strange attractors gives us a way to say that phenomena are likely to move into certain patterns and unlikely or prohibited from yielding other patterns.

sense of only 5% of something, then a new 25%-valid theory will be eagerly taken up (even though it fails much more often than it hits).⁴⁹ To one who had never been able to glimpse the lush garden, peering at it through a tiny chink in the wall, though it may capture a small fraction of the beauty compared to being inside the garden, nevertheless is one's full picture of the garden, and in the jump from 0% to 10% one may feel as though they finally, though admittedly incompletely, "know" the garden.

To single out Wilber's AQAL model for a moment, the most inclusive of those mentioned here, we must marvel and appreciate how much it has added to our ability to grapple with the sorts of life questions listed in the introduction by synthesizing and extending other models—it is truly a meaning-generating tour de force. But it is chocked full of speculative claims that are put to use with inadequate caution. This is not so much a fault of Wilber work, as he is doing the philosopher's and pundits job, but a cautionary note for users of his theory, which, as he notes, is a work in progress. Are the AQAL or Spiral Dynamics developmental frameworks closer to the 20% accurate or the 80% accurate type? They might *feel* like 80-percent-ers, but are the really 20-percent-ers? We should at least wonder.

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⁴⁹ And confirmation bias will take hold to limit the data that we subsequently observe; as in the joke about looking for one's lost keys where the light is good; or that everything looks like a nail if you have a hammer.

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Appendix: A summary of basic integral developmental principles

In the Introduction I envision a "Handbook for the Practical Use of Integrally-informed Developmental Theories" which would contain, among other things, caveats and provisos to limit misapplication or overgeneralizations. A summary of the integral approach to human development could consist of one page or several hundred, depending on the depth. I have not pre-defined the purpose of this hypothetical project enough to determine its scope or depth. In the article I stuck mostly to the key conceptual structures (architectonics) of the theory, without commenting much on the details of particular lines or levels. In this Appendix I summarize, from a very high level and in a simplistic way, the key elements of that architectonic. This may serve to remind or inform the reader, depending on prior familiarity, and it may also serve as a scaffolding from which to attach further comments, caveats, questions, etc. in the hypothetical "Handbook."

Below are some of the core ideas in the integral community's developmental framework. These describe what is in common or fundamental to most if not all of the specific developmental theories referenced by integralists. They are what Wilber calls "orienting generalizations."⁵⁰

Numerous human capacities (lines) are said to develop or evolve. These capacities, which may be behaviors, skills, traits, etc., are called "lines" of development in the integral community. They are compared with Gardener's (1983) notion of multiple intelligences, which highlights how individuals can develop differentially along such lines, giving us a way to speak about how people can be very advanced in some ways, for example intellectually, but quite undeveloped in others, for example socially.

Development can be measured. Most of the developmental frameworks we are discussing were originally constructed by research scientists who defined their constructs based on measureable behaviors, such as performance in interviews or sentence completion tasks. Though some, for example Piaget, based his data on physical behaviors using concrete objects, the studies relevant to adult development considered here all involve the scoring of verbal or textual tasks (including free response, sentence completion, multiple choice, ranking, and sorting tasks).

⁵⁰ Wilber claims that his orienting generalizations accurately represent the general consensus in a scholarly field—but my claim here is simply that they represent what is common among theories used by integralists. For a systems-theory-like perspective on evolution and development, see Wilber's "twenty tenets" (Wilber, 2000).

Development can be described in terms of levels or stages. All of the schemes use a sequence of categories (levels or stages) indicating increasing development. Stages are in invariant sequences and cannot be skipped. Stages build one upon another (they "transcend and include" the prior stages; the process is called hierarchical abstraction, vertical skill development, or reflective abstraction). The stages of a given theory are often grouped into major categories called "tiers."

There is some disagreement among scholars as to whether the levels are artificial categories invented to give an explanatory texture to what is actually a continuous spectrum (or enacted through the design of instrumentation); or whether these categories point to real differentiated phases in development.⁵¹ Research by Dawson provides some empirical evidence that hierarchical development occurs in a series of wave-like spurts and plateaus (Dawson-Tunik 2005). Others posit more generally that human development and cultural evolution in general occur through periods of growth spurts preceded and followed by periods of integration, horizontal growth, and/or re-orientation (this has been called "punctuated equilibrium" by evolutionary biologists and "wave-like" development by Beck & Cowan).⁵²

Horizontal and vertical growth. We grow horizontally before we grow vertically. We learn and experience many things at any given level, and use knowledge in varying contexts, before we develop a stable ability to coordinate, reflect upon, generalize, or abstract these multiple instances of knowledge or experience into higher level ideas or capacities. Despite a tendency for integralists to focus on human potential and growth to ever higher developmental levels, in practice it is often more important to focus on health and mastery at current and prior levels than to attempt to develop vertically to the next level.

Each level builds structurally upon prior levels. One does not forget or outgrow the *structures* at one level. This type of structural abstraction is built into the *definition* of the levels for many of the models (i.e. that is what they are, not what they turn out to be). Lower levels form the foundation of later ones. Incomplete or pathological development at one level can negatively affect emerging capacities at higher levels.

⁵¹ Ingersoll & Zeitler note that "levels...is a thorny issue in academic psychology because it requires enormous rigor to support the hypothesis of a stage theory...there are many stage theories in existence but only a few with rigorous support" (Ingersoll & Zeitler 2010, p. 13).

⁵² This is consistent with dynamic systems theories that show how complex systems develop. They exist in relatively stable "attractor" states until internal or external conditions create a perturbation large enough to knock the system out of one attractor and (assuming the system survives) into another stable attractor state. The transitions are marked by conditions of chaos or instability.

Developmental drivers. Development or evolution requires stress or challenge. As indicated above, individuals and cultures (systems in general) do not automatically develop along some given path. They do however tend to *inevitably* develop along an emergent path (if they survive). As mentioned above, systems are forced to evolve or perish in response to a sufficiently large change in their environment (this is the case for groups or species evolving over generations, and for individuals developing their interiors over a lifetime). If there is no change, stress or challenge, then a system maintains in its current state.

But evolution begets more evolution. Beings interact with and have a reciprocal relationship with their environments. A significant change in environment forces the being to evolve; but also significant changes in beings can alter the environment. For example, the birth of oxygen-producing microorganisms altered the earth's atmosphere, and life in turn had to evolve to compensate for this. After beavers arrived on the scene they started to radically change their environments, which had secondary effects on other species of animals and plants, which evolved to compensate, and which in turn must have created new stresses for beavers to have to evolve to compensate for.

Beck and Cowan's Spiral Dynamics says that each v-meme level emerges to meet the unmet needs and challenges of the prior level; and that the solutions or innovations created at each level in turn create a new set of problems that never existed. This provides a forcing function for further development. For example, at some point humans invented shelters to meet important needs for protection from the elements. The invention of shelters created new problems (and new levels of complexity) having to do with privacy, ownership of spaces, and the psychological challenges of cohabitation that did not exist prior to this invention.

Micro-levels and transitions. Beck and Cowan say that rather than thinking of developmental levels as categories that one is either in or not in, that it is useful to think of them as overlapping waves. At any point we may be defined predominantly by the characteristics of one level, but characteristics of the prior level linger and characteristics of the next level are emerging.

Beck and Cowan also note the psychological dynamics that arise from the human tendency to resist change and become identified with current habits and beliefs. Old ways of being try to pull us back when new ways emerge. (Also, significantly stressful conditions can cause a regression to earlier levels.) They describe a set of transition phases traversed as one develops from one level to the next. These stages bear a resemblance

to Kubler-Ross's Five Stages of Grief which has been applied to many types of psychological transformations.)

A summary is as follows (following more recent interpretations, I have divided the Alpha stage into mature and immature stages):

1. **Mature Alpha:** A stable balanced condition in which one's needs seem to be adequately met by their capacities ("The Alpha fit"). At a mature alpha-fit one has a sufficient distance from the prior developmental level that the new capacities are well integrated with the positive aspects of the prior level.
2. **Beta:** Due to external life conditions changing or the emergent problems created by the innovations of the current state, some needs are felt as not met; there is uncertainty and questioning. There is an early search for solutions that, one hopes, will not jeopardize current ways. There is a nagging doubt about the truth or usefulness of current ways.
3. **Gamma:** Within-paradigm solutions are not working and the problem/need has exacerbated. There is great dissonance and confusion; frustration and anger; and possibly hopelessness, despair, aggression, or isolation ("The Gamma trap").
4. **Delta:** (Assuming that the person/system does not choose an ongoing pathological, arrested, or regressive way to cope with problems): The stress has been large enough to motivate the reevaluation, breakdown, or release of prior ways, and thus an opening to new ways. Inspiration and enthusiasm pick up and new solutions are experimented with. Eventually successful solutions are found. ("The Delta surge.")
5. **Immature Alpha.** When one first gains the purchase of new capacities or perspectives one may overemphasize the limitations of the prior level and become a "true convert" and proponent of the new ways. The individual may denigrate and distance herself from the prior system of thinking/living.
6. **Mature Alpha (back to the first sub-stage):** A new steady state settles in at the new level. Eventually there is enough distance from the prior level that it is not rejected and its benefits are more fully integrated with the new.

Culture vs. individual development. One of the main contributions of Wilber's Integral Theory is its attempt to synthesize modern theories of individual development with theories of cultural evolution. The ideas that individual development vaguely recapitulates cultural evolution, and that cultural maturation is co-causal with the maturation of individual capacities, had been posited by many prior to Wilber (including those he cites heavily such as Jean Gebser, Teilhard de Chardin, and Sri Aurobindo). But Wilber was one of the first to attempt to synthesize modern research-based theories about the development of human capacities (e.g. Piaget's cognitive development and Kohlberg's moral development) with the much more speculative theories of cultural evolution. (Kegan also related the developmental level of individuals to broad cultural movements such as pre-modern, modern, and post-modern, but did not speculate upon the development of culture itself.)

Altitude and concordances. Within the integral theory literature there are dozens of examples of authors creating concordance figures in which the developmental levels of several models are lined up and

compared (for example, see Wilber 2006; Stein 2010, p. 184; Dawson-Tunik, 2005 p. 38).⁵³ Though the concordances help clarify the differences between models, the larger purpose is usually to show similarities and correlations between them. The *similarities* make the case that our models are, in an imperfect but useful way, capturing something valid about human development. To me the *differences* point to the complexity of the phenomena, and also beg the question of how much of the specifics each theory are human constructions not reflecting real categories in the phenomena.

Wilber and others argue that, though the various developmental lines are distinct (a claim I argue against in this article) that they all include a common idea of developmental "altitude" and that the developmental altitude of different lines are comparable. Stein (2008b) illustrates that humans have a stable core intuition about developmental altitude, and goes on to suggest that they are indeed comparable because the formal concept of hierarchical complexity can be applied to each.

⁵³ The inter-line concordances given are of two types: those empirically derived from data correlations and those reconstructively derived from a (usually quite speculative) rational analysis of the defining constructs.