

Integrating Adult Developmental and Metacognitive Theory with Indo-Tibetan Contemplative Essence Psychology

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Abstract. In a world that (according to the World Health Organization) has approximately 450 million people suffering from some form of mental disease, there is a deep need to re-envision mental health care. Indo-Tibetan contemplative psychology is a practice-based evidence lineage tradition of between two-and-a half to nine millennia dedicated to the reduction of suffering and the full flowering of human potential. Whilst mindfulness meditation is becoming increasingly popular and effective in the reduction of mental suffering in contemporary culture and psychotherapy, the full contemplative psychology, of which mindfulness is but a foundational skill, is still relatively unknown. Therefore, there is an increasing need to understand and translate the theoretical foundations of such a psychology into a language that psychologists and educated laypersons can understand. In addition, we can explore how modern science can deepen the wisdom and adoption of such traditions. Using the theoretical perspectives of adult developmental psychology and metacognition, this project reveals the psychology of the Indo-Tibetan tradition as a sophisticated developmental psychology that, when practiced, facilitates a fundamental transformation in identity, or the basis of psychological operations, from which an individual experiences the world. Such a developmental process has the potential to eradicate the fundamental suffering caused from cognitive fusion with the basic structures of experience (body, self, thought, emotion, time, dualistic perception, and the attentional-intentional system), allowing for a transition to a fundamentally open boundless experience of identity, within which arises the experience of interconnectedness and the ensuing altruistic motivation to benefit the social good. Among contemporary adult developmental theories we believe that the STAGES model is most compatible with the principles of Indo-Tibetan Contemplative Essence Psychology. We use the STAGES model to show how eastern and western methods can inter-inform each other. This study is one brick in building the bridge between East and West, a bridge that honors the psychology of the East as being a rigorous, technical, and socially relevant psychological framework that, yet, can still evolve.

Keywords: Adult ego developmental, contemplative psychology, Indo-Tibetan Mahamudra and rDzogchen, STAGES, states and stages.

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Preface

From the first author John. The development of a planetary trans-lineage wisdom tradition has been a longtime passion of mine. To participate with others, such as Tom and Terri O'Fallon, in the integration of the Buddhist wisdom tradition with modern cognitive and developmental theory is an essential facet of building our planetary human tradition, and I am deeply grateful to be able to work with such scholar-practitioners. May this work be of benefit to the alleviation of human suffering and the flowering of positive human culture.

For the last thirty years I have been a student and then a teacher of Indo-Tibetan Buddhist contemplative psychology and practice. Fifteen of those years were spent working under the direction of the psychologist and meditation teacher Dr. Daniel P. Brown for whom I give deep appreciation and thanks. Due to his generosity, I was able to learn the deep structure of Buddhist contemplative psychology and gain invaluable teaching experience. My dharma teaching also draws on knowledge of and experience with theories of adult development, which I first became familiar with through studying the work of Ken Wilber in the early 90's. I initially followed the adult developmental theories of Robert Kegan and Susanne Cook-Greuter, which offer great insight into the human condition. When Terri O'Fallon released her new STAGES model, which follows in this tradition and adds some additional elements, I was particularly struck by how well it interfaced with the ancient wisdom traditions I had been studying and teaching. This paper is a recasting of segments my dissertation text, "Contemplative Psychology, Metacognition and Ego Development," completed in 2018, which utilized the STAGES model, in addition to other theories in cognitive psychology, to build a bridge between the eastern wisdom traditions and western scientific traditions in a way that can further the aims and depth of both.

I would like to specifically acknowledge my wife and life partner, Nicole, who has been a source of support and love during a very challenging few years. Without her selfless sacrifice and belief in my work I would not be where I am today. And also, deep thanks to all the members of the planet's spiritual hierarchy who have given so generously and selflessly for centuries. May their aspirations be fruitful in this generation and those to come.

From the second author Tom. It has been quite an honor and privilege to work with John to transform his 200 page dissertation into an article for this special issue that is 60 pages plus a 30 page appendix. My expertise is in developmental theory, and though I have studied with and taken retreats with Dr. Daniel P. Brown, I am in no sense at all an expert in Buddhist scholarship or Indo-Tibetan practices. This paper describes some later-stage phenomena that I have not personally experienced (i.e. "ask John about that"). Both John and Terri O'Fallon have been finding natural yet often surprising direct links between the STAGES model and the style of contemplative essence practice taught by John and Dan. I have watched on the side-lines as they have both iteratively made delightful efforts to knit these disparate yet kindred fields together – John through his dissertation scholarship and Terri through her intuitive insights and persistent study of human nature (Terri has also studied with Dan Brown). John has been gracious in supporting me including my own insights in several sections, drawing from my particular areas of expertise, making the document more of a full collaboration. When two theoretical models developed separately from different corners of the historical noosphere are found to have so

much in common, it is indeed fascinating and worth delighting in and exploring with enthusiasm and diligence.

Transliteration. To assist the reader in referencing Tibetan terms we have used the Tibetan transliteration method refined in 1959 by Turrell Wylie. This method has subsequently become a standard transliteration scheme in Tibetan studies, especially in the Western world. Wylie does not try to give pronunciation hints and serves only to accurately reproduce written Tibetan. As such diacritical marks used to mark sounds are not in this text for either Tibetan (Tbt) or Sanskrit (Skt).

1. Introduction

Contemplative traditions have been cited as providing a storehouse of essential wisdom about the human condition – some of which was once known but has been lost or forgotten in the Western march through modernity, and some of which represents knowledge, revealed through centuries of contemplative practice, that emerged on a path the western lineage did not explore.

In particular, Buddhist-inspired mindfulness practices have achieved a prominence, being adopted in many segments of society (e.g. Batchelor, 1997; Christopher, 1999), influencing practice in psychology and psychotherapy (e.g. Kabat-Zinn, 1990; De Wit & Baird, 1991), and inspiring an exponentially increasing number of scientific studies of their efficacy (e.g. Ainsworth et al, 2013; Brewer et al., 2013; Schoenberg, et. al., 2018; Dorjee, 2013).

Yet this trend represents only a slice of what Buddhism has to offer. In its 2600 years Buddhism has undergone a number of evolutionary transformations, sometimes called the "three turnings" of Buddhism (or of the dharmic wheel, see Appendix 3). These three main developments of Buddhist psychological thought are the Hinayana, Mahayana, and Vajrayana traditions (Ray, 2002). These three approaches to contemplative psychology are best seen as three phases or paradigmatic revolutions that sequentially build upon each prior discovery (Brown, 2016). At their deepest level, these are non-sectarian systems of theory and practice aimed at understanding human nature and providing the means for human happiness and psychological flourishing. Most of the contemporary focus on mindfulness (and related practices) draws from the principles of only the first of these three turnings (i.e. Hinayana, closely related to the Theravada school), leaving much of this ancient wisdom yet to be explored and applied in the West.

This text explores teachings from the Indo-Tibetan Mahamudra and rDzogchen traditions, thought by many to represent the pinnacle understanding of Buddhist contemplative psychology, and which integrate the three turnings into a single progressive system of psychological development and practice (Guenther, 1989; Brown, 2006; Chagmé, 1997; Klonchen-pa, 1993). We call this approach the "contemplative essence psychology" of mahamudra and dzogchen (Dali Lama, 2000; Chagmé, 1997; Ponlop, 2003).

The meeting of eastern and western theories of human nature represents an unprecedented accomplishment and opportunity in the history of our species. Esoteric theories and practices related to the deepest interior essence of our human nature are being tested, interpreted, and

updated by the scientific paradigm, and disseminated through modern technologies. Meanwhile modern man on the precipice, with its familiar list of "crises" – psychological, medical, economic, environmental, etc., that combine to create a "meta-crisis" in an unprecedented milieu of malaise, anxiety, cultural polarity, social paralysis, and existential threat – just might find the critical insights for its salvation in these Eastern traditions.

Of particular interest to use here is the integration of science-based adult developmental psychology (and cognitive theories of metacognition) with contemplative essence psychology. The empirical study of mature post-formal adult development might provide the best conceptual bridge to the stages of cognition and metacognition described in Buddhist contemplative practice (Brown, 2016). Our studies have incorporated the post-formal research on cognitive development by Koplowitz (1984) and Commons and Richards (1984), both of which build upon the pioneering work of the Swiss developmental psychologist Jean Piaget (1951); and work on ego development by Suzanne Cook-Greuter (2005) and Terri O' Fallon (2013) that builds upon Loevinger (Loevinger, 1976). It has also included the integrative work done by the theorists Washburn (2000) and Wilber (2000), and additional research into metacognitive functioning.

In this paper we will make extensive use of the STAGES model developed by Terri O'Fallon (2010, 2012, 2013, 2020). STAGES, the most recent innovation in the Loevinger lineage, has a wealth of features that match closely to concepts and principles in contemplative essence psychology. This is probably due to the fact that O'Fallon drew upon her familiarity with eastern and mystical traditions (including the writings of Sri Aurobindo and Ken Wilber, and John Kessler's esoteric Integral Polarity Practice) in ways that none of the other developmental theorists had done.

For the moment we will assume that readers of this journal are at least partly familiar with trends in contemplative practices, integral theory, and developmental models, as we briefly foreshadow the substance of this paper by summarizing the elements that distinguish O'Fallon's STAGES model to make it ideal for elaborating and enriching contemplative essence psychology.

- In the model the entire developmental sequence is based on *non-conceptual modes of perception and awareness* as they generate ever-new distinctions (categories) in the mind. This maps well to the essence tradition's focus on phenomenology and the non-conceptual "basis of operation" that defines one's "view." STAGES contains a sophisticated model of the relationship between *stages* of cognitive complexity, *states* of consciousness, and stable-stage orders of perceptions (views); that latter of which maps well to modes of operation (existential views, or basis of identity) described in contemplative essence psychology.
- STAGES specifies a repeating nested pattern of developmental unfolding that involves moving from *exterior to interior* objects, from *individual to collective* objects, and from *passive to active* orientations to perceiving each type of object. These patterns map well to principles in contemplative essence psychology. For example, STAGES' treatment of the exterior/interior dimension (or internal vs. external facing) maps to the *"event perspective vs. mind perspective"* used in the essence tradition.

- STAGES fleshes out *territory in the higher tiers* to a greater degree than other models, and in a way directly analogous to contemplative essence psychology. It explicitly mentions awareness of awareness, the apperception of timeless awareness, spacious freedom, emptiness (of different forms), and fullness.
- STAGES includes a *shadow-work* model articulated according to developmental level, which coordinates well with the deconstructive and emptiness elements of the essence traditions.

This theoretical study explores Buddhist contemplative psychology as presented within the non-sectarian presentation of the Indo-Tibetan Mahamudra and rDzogchen tradition (Brown, 2006; Chagmé, 1997; Klonchen-pa, 1993) in an attempt to realize a conceptual integration of this tradition with western developmental models. It aims to help fill in this gap in the literature and to support building a better conceptual bridge that integrates Buddhist and Western understandings of psychological development. This will allow psychologists and interested meditators a deeper understanding of practice, provide a more complete theoretical understanding of the psychological transformative process that a meditator might undergo, and support therapists' and their clients' contemplative exploration beyond introductory mindfulness practices towards greater freedom from psychological suffering and the flowering of human potential.

2. Background

In this section we elaborate on several areas of knowledge that we will draw on in the central section "Integrating Contemplative Essence Psychology and Adult Development." This section includes: (1) motivating context including the current global state of psychological health, an analysis of our current moment in the east-meets-west cultural exchange, (2) an overview of cognitive developmental and metacognitive theories including an overview of the STAGES model; and (3) and an overview of the Buddhist essence psychology of the Indo-Tibetan lineages.

2.1 Motivations

Global prevalence of psychological disease. It has been estimated by the World Health organization that 25% of people worldwide will suffer from a mental disorder. This means at this moment in time approximately 450 million people are suffering from a psychological disease. To make matters worse, due to stigma, fear of discrimination, and lack of access to mental health providers, it is believed that two-thirds of those with a psychological disorder will suffer in silence and never seek help (World Health Organization, 2001).

Starting near the beginning of the 20th century with Sigmund Freud and the development of psychoanalysis, the field of clinical psychology has creatively evolved in its attempt to reduce and eliminate mental and emotional suffering (Freud, 1990; Weston, 1998). Its successful evolution has expanded to include hundreds of different theoretical and therapeutic orientations grouped under such broad categories as psychodynamic, cognitive, behavioral, systemic, and humanistic psychology. Research has shown that many of these approaches are successful in treating disorders such as anxiety, depression and others (Seligman, 1995).

As biological science also evolved, major developments in psychotropic medications began to address psychological disorders at a biological level. With the introduction of Lithium in the 1950's, followed by the developments of a series of anti-psychotics, Valium in the 1960's, Prozac in the late 1980's, and the popularization of Ritalin in the 1990's there has been a continued development of drug treatments for a wide range of disorders (Ingersoll & Rak, 2015). By 2010, in the United States more than one in five adults was on at least one psychotropic medication (Medco, 2011).

Despite all the developments in psychotherapy and psychopharmacology in the United States, there has been no reduction in the prevalence of mental disease, and at present 43.8 million adults, or 18.5% of the population, experiences a mental illness in a given year (National Institute of Mental Health, 2015). According to the New Economics Foundation, the United States, despite all its wealth and the psychological services at the disposal of its population, is unable to offer sustainable wellness for its population and only ranks 108/140 in happiness (see the Happy Planet Index, <http://happyplanetindex.org>). Aside from improving access to treatment and training many more professionals, there is reason to wonder what else might reduce the extent of mental disease and the lack of human flourishing.

Biases in Western Psychology. Clinical psychology as practiced in North America has been criticized as a product of “WEIRD” (Western, educated, industrialized, rich, and democratic) societies (Christopher, Wendt, Marecek, & Goodman 2014). It has been argued that, to a large degree, modern psychological theory and practice fails to recognize the extent that they embed western cultural constructs. As a product of WEIRD, western psychology can be seen as folk psychology, situated squarely in a paradigm of scientific modernity (Brunner, 1990). Post-modern psychologists have argued that the science of psychology is not as objective as it is often believed to be (Gergen, 2001; Pickering, 2006). Its training and practices transmit a set of cultural beliefs concerning a moral vision that defines what constitutes emotional and cognitive health, and the good life (Christopher, 1996, 1999).

One avenue to begin addressing the vast unmet need for psychological intervention is to adopt an attitude of cultural humility and re-envision psychotherapy as a global human science (Tervalon & Murray-Garcia 1998). This means recognizing and studying those dismissed non-Western psychologies that offer important perspectives on the human condition (Segall, Lonner & Berry, 1998). These under-utilized resources can help in the development of useful clinical and behavioral applications to reduce suffering and support the growth of happiness.

One such psychological framework is contemplative psychology, the distillation of the psychological understanding of the world religious traditions (De Witt & Baird, 1991). Underneath the cultural packaging of mysticism, myth, religion, and ritual is a psychological science, a body of knowledge that can be (1) actualized in the laboratory of each person's mind (Wilber, 2007), and (2) explored rigorously in modern experimental settings. The deeper structure of these contemplative practices, as is found in Buddhist and Hindu traditions, appears to follow a universal stage-by-stage progression, while the interpretations and manifestations of each stage are themselves influenced by the theological, cultural, and philosophical particularities of each tradition (Brown 1986; DiPerna, 2014).

Science and contemplative practice. Beginning with the 1902 publication of William James's *Varieties of Religious Experience*, the study of contemplative psychology as a legitimate field of study in Western Psychology has unfolded slowly over the last century, the most well-known studies being those of practices from Zen Buddhism, Transcendental Meditation (TM), and Mindfulness Based Stress Reduction (MBSR) (Jung, 1939; Fromm, Suzuki, & De Martino, 1960; Desmarais, 2008; Benson et al., 1974; Kabat-Zinn 2009). At present the majority of contemplative interventions originate from the Buddhist tradition (Shonin, Van Gordon & Griffiths, 2013, 2014). This is likely due to a number of factors. Buddhism is a non-theistic tradition (Wallace, 2007). It does not necessarily rely upon a metaphysical understanding of human experience and is built upon the humanistic concern of reducing and extinguishing human suffering (Young-Eisendrath, 2008), and can be understood pragmatically without the need for metaphysics (Batchelor, 1998). As a meditation discipline it values objective truth and is more aligned with the values of science than those of pure belief (Dalai Lama, 2005). The Dalai Lama, arguably the most influential Buddhist teacher in the world, has been in dialogue with neuroscientists, psychologists, and quantum physicists for decades.

The foundation of Buddhist thought is psychological – as found for example in the *Abidharma*, the phenomenological study of cognition and perception of early Buddhism (Govinda, 1961). *Abidharma* was developed through the use of meditative stability to investigate the first-person experience of psychological processes (Markic, & Kordes, 2016). These models evolved over centuries through cultural processes that included rigorous debate, analysis, and cross-disciplinary engagement. The maps and models, developed by generations of meditators and contemplative scholars, have a precision similar to those developed in cognitive psychology (Lancaster, 1997), and are likewise similar in their understanding of the complex relationship between thoughts, feelings and behavior (Segal, 2003).

The tradition of Buddhist contemplative psychology has become popular in the West in the form of secular mindfulness meditation. Today, over 20 million Americans (6.5% of the population) practice some form of meditation (Elias, 2009), and in the United Kingdom 25% of the population (Mental Health Foundation, 2010). This interest in meditation is now influencing a growing research effort in academia. Early and ongoing studies in MBSR (Kabat-Zinn 2009; McMahan, 2008) paved the way for the contemporary explosion of interest. Research science has shown that the contemplative practices of concentration, mindfulness, compassion, and loving kindness have a profound impact on the brain (Hölzel, Lazar, Gard, Schuman-Olivier, Vago, & Ott, 2011). So much so, that a wholly new multi-disciplinary field of contemplative neuroscience is developing (Davidson, 2012). Buddhist derived clinical interventions (BDIs) are used to treat a range of psychological disorders including schizophrenia-spectrum disorders, personality disorders, substance abuse disorders, mood disorders, anxiety disorders, and depression (see "Clinical Implications" in section 3.1 below).

Beyond McMindfulness. As the interest in contemplative practices has developed over the last 20 years and moved into mainstream culture there is concern among pioneers in the field that consumer culture is unjustly and unwisely appropriating mindfulness. What has been termed "McMindfulness," an oversimplified version and appropriation of contemplative practice, could just become another commodity for sale and dispensed in a weekend workshop (Hyland, 2015). Such offerings often focus on enhancing cognitive and emotional skills with an end goal of achieving more within status-quo cultural norms, furthering the modernist, individualistic,

Cartesian worldview and ignoring the focus on human suffering, compassion, ethics, deep self-understanding, radical transformation, and "emptiness" that are central to the ancient wisdom traditions (Harrington & Dunne, 2015). Psychology directs its understanding of the normal by drawing upon knowledge of the abnormal and pathological. However, Buddhist contemplative psychology is soteriological, a path of liberation; it is directed to the supernormal human potential (Buddhahood) and draws upon the understanding of normal functioning to enhance the path towards the fruition of human potential (Lancaster, 2007).

2.2 Theories of Adult Development and Metacognition

As mentioned our overall intention is to integrate adult developmental theories with the Indo-Tibetan mahamudra and rdzogchen contemplative essence practices to provide insights that allow for cross fertilization of the Eastern and Western perspectives. We will start with a survey of developmental theories, focusing on constructive developmental theories, including the STAGES model.

Metacognition

Metacognition is a key construct in relating the contemplative essence psychology of Indo-Tibetan Buddhism to western psychology. Contemplative practices focus attention inward toward self-understanding, which allows for de-fusing or deconstructive moves toward self-liberation. Among western scholarly fields of study, the psychological study of metacognition comes the closest to the first of these moves (while the western fields of psychoanalysis and wisdom-studies might come closest to the second). In addition, recent studies in the field of "contemplative psychology" make heavy use of prior metacognition scholarship.

Our primary goal in this article is to relate contemplative essence psychology to developmental psychology. Unfortunately, there is only a weak overlap between the academic "silos" of developmental theories and metacognitive theories. Theories of metacognition tend to not take a developmental perspective and could benefit from doing so (as elaborated below), and developmental theories could benefit from the exploration of the cognitive micro-moves elaborated in metacognitive theories. We do a bit of the work of integrating these two fields here, but mainly acknowledge that there is fertile ground for others to explore in integrating them more deeply.

We can note a narrow and a broader sense of the term metacognition. The narrow one refers to a specific set of skills that develop around the time that formal operational thinking develops – i.e. when abstract and logical thinking mature into normal adult capacities. Educational theories speak to supporting strong metacognition, or thinking about thinking, both as a problem-solving skill, and as a component of self-driven ("self-regulated") learning – usually aimed at what we would call a 3rd-person perspective developmental level. But in a broader sense, metacognition can refer to a basic cognitive function that operates at all levels of cognitive processing, from early childhood (1st PP), into middle childhood (2nd PP), then "rational" thinking (3rd PP), and beyond into post-or trans-rational types of witnessing awareness (4th PP and above). It is this later sense of metacognition that we intend here. Like memory, attention, and perception,

metacognition (in this sense) is a core function that manifests *in different ways* across each phase of a lifelong developmental journey.

Metacognition has various meanings in the literature, including thinking about thinking, knowing about knowing, becoming aware of one's awareness, and cognition about cognition. It includes both the conceptual, reflective perspective-taking skills necessary for constructing knowledge of self, and for improving fallible knowledge; and the direct non-conceptual (closer to perceptual) processes necessary for defusing/deconstructing mind-structures, as is found in contemplative practices. Below we summarize some of the discussion extended in Appendix 2 on Metacognition.

Writings on metacognition in the west date at least as far back as Aristotle. In more recent history metacognition, as introspection or self-reflection; has been explored by William James (1890) and Sigmund Freud (1921). More contemporary theorists of metacognition have studied the role of metacognition in self-regulated learning and problem solving (Flavell, 1979; Brown, 1987), critical thinking (Paul, 2008), epistemic understanding (knowing about knowledge; Kuhn, 2000), and self-understanding (Brown, 1975). Metacognition is often described as thinking about thinking, but it can also include: thinking about feeling, thinking about perception, and thinking about knowledge; and *sensing into* (i.e. feeling/perceiving) the experiential nature of one's thinking, feeling, believing, or perceiving. Metacognition is usually understood as an in-the-moment process, but that process leads to stored memories, i.e. metacognitive knowledge, gleaned from that self-reflection.

Theories of metacognition inevitably decompose the process into steps, phases, and/or levels. There are myriad ways that is has been done, with enough overlap to compose a general outline, but little agreement on a specific model. These components include: the mental *content* being reflected upon; *attentional* processes; *intentional* processes, including goals and motivations; *monitoring* and evaluative processes that compare a current state to a desired state; *anticipating* or planning functions; *executive control* or regulative processes that change what the mind is doing, base on the evaluation; and *strategic* knowledge about how and when to apply all of the other sub-processes.

For our purposes here, we combine models described by Brown, (1987) Flavell (1979), and Jankowski and Holas (2014) to differentiate three aspects of metacognition: *meta-knowing*, *meta-sensing*, and *meta-thinking*. In the contemplative context these corresponding to contemplative knowledge, direct experience, and metacognitive awareness. All three forms of metacognition can operate upon *any* of the types of content mentioned (feelings, memory, thinking, etc.). Meta-thinking and meta-sensing are both *in-the moment* processes, while meta-knowledge is information or strategic skill stored in memory. Meta-thinking involves self-reflection leading to inferences, that are usually translated in to concepts and language; while meta-sensing is more perceptual, non-conceptual, and non-reflective, and is constituted by the felt-sense of being in any moment and context.

The focus in the essence practices is on meta-sensing. In most contemplative practices the specific contents of thought and feeling are unimportant – thought and feeling are seen to arise and pass away.

In Appendix 2 we give an overview of the application of metacognition theories to clinical psychology, in particular: cognitive behavioral therapy, acceptance and commitment therapy, mindfulness based cognitive therapy, and attachment therapy. Some such theories focus on the reflective metacognition *skills* of interpreting past experiences, and revising tacit or explicit beliefs that have been formed through past experiences. Others focus less on the *content* of beliefs and cognition, and focus on awareness of present moment processes, i.e. on the recognition and acceptance of the contents of the mind (beliefs, thoughts, emotions, and sensations) rather than changing them.

All of these clinical methods aim for a form of what Hayes (et al., 2013 p.4) calls *cognitive defusion*: “the creation of nonliteral, non-evaluative contexts that diminish the unnecessary regulatory function of cognitive events.” Other models use terms including disembedding, de-reification, and detachment for this process. This shift in operation happens by making the prior subject of experience an object (Kegan, 1982; 1995).; a shift in psychological operation from *self as content* (i.e. from fusion with a conceptualized narrative of self) to *self as context*.

Though western therapeutic models do well to heal many specific psychological wounds, distortions, and disorders (sometimes called "shadow"), they do not have the means to take the entire self as context, and to make self-as-context a stable trait. This is the goal of Buddhist contemplative psychology.

Metacognition and Meditation

The construct of metacognition (in its various forms) has been used by a number of theorists to explain the mechanisms of contemplative practice. These treatments of metacognition have a very different flavor vs. theories developed in the traditional metacognitive studies on problem solving, self-mastery, and self-regulated learning. There is more overlap between the contemplative and the psychotherapeutic study of metacognition. This is in part because contemplative practices (and psychotherapy) are largely about *deconstructive* or disembedding processes that free the self from prior conditioning to open up new fields of awareness and freedom; while problem solving etc. are more concerned with *building up* capacities to achieve goals.

For example, Yates (2017) notes that following the fundamental practice of attention to breathing etc., as metacognitive decentralized awareness comes online, it can lead to personal insights of phenomena described in Buddhist psychology, including insights into impermanence, no-self, and reactivity (dukkha). Below we will summarize some of the insights from this field, described in more detail in Appendix 2.

The highest (meta-meta) level of Jankowski and Holas' (2014) model includes the meta-awareness of decentration and experiential acceptance. This model differentiates *controlling* vs. *inhibiting* processes, where mid-level metacognition controls perception, thought, emotion, etc., while higher level metacognition inhibits beliefs and thought-habits that impede the process-level goals. According to Jankowski and Holas (2014), the person who achieves this higher level of meditation then starts to become aware of clarity (fundamental awareness), the most fundamental and basic form of reflexive non-conceptual cognition that makes all other types of cognition feasible and forms the core process of consciousness itself (Jankowski and Holas, 2014).

Grossenbacher and Quaglia's (2017) model of Contemplative Cognition includes "Awareness of Transient Information", similar to our meta-sensing, which refers to the basic cognitive process of being aware of the transient objects of experience such as sensory information, affect, memory, imagery, and thought. ATI is the central feature of those meditations designed to cultivate moment-by-moment choiceless awareness of the ongoing stream of consciousness such as the choiceless awareness of Zen shikantaza (just sitting) meditation.

Grossenbacher and Quaglia's model also includes "intended attention" and "attention to intention." The former are processes and practices designed to develop *attentional stability*; while the latter involves monitoring and adapting the higher-level goals (intentions) of the contemplative process. Their theory shows how these two processes inter-inform each other.

None of the models described above contains an elaborated explanation of the system of "views" described in mahamudra practice, the levels of the non-conceptual awareness or "modes of operation." Thus, the Indo-Tibetan tradition speaks more clearly to the process of transcending identification through de-reification with structures of the self, leading to a transformation in the fundamental identity of an individual whilst maintaining the optimal functioning of the self-structure.

As we close our discussion on metacognition we will mention one of the primary limitations of this field, from the perspective of our inquiry. Such models articulate the details of the sub-processes involved in cognition about cognition, whether it be in the context of learning, problem solving, or psycho-therapy – but focus on the local context, without considering how, over time, cognition builds layer upon layer upon layer (and thus can also deconstruct layer upon layer). These models of metacognition acknowledge that the *meta-content* of one phase of learning can become the *content* of a future phase of (meta-meta) learning, but they tend to stall out there. For example, many would say that "problem solving" or "critical thinking" requires metacognition, and thus thinking about one's problem solving or critical thinking would be meta-meta-cognition. We can see that terms meta-meta, meta-meta-meta, etc. quickly become untenable and confusing designators.

Developmental theories allow for greater precision in this regard. The 12-16 levels defined by theories of hierarchical complexity begin with the lowest levels of sensorimotor processing (some start even lower at logical operations executed at the information processing level of neurons – see Commons and Chen (2014)). Each level "operates upon" the prior level, where "operating upon" is a "meta" move that takes any form – e.g. to observe or monitor, to assess, to compare or differentiate, to coordinate or synthesize, to manipulate or control, etc. We will continue below with an introduction to developmental theory, keeping in mind that the literature on metacognition is useful in focusing in on the micro-structure of each developmental transition.

Developmental Psychology

Theories of how humans differ psychologically and cognitively can be classified as either developmental theories or trait theories. The former defines invariant sequences of increasing maturity, while the latter define characteristics that do not necessarily mature or change. Trait theories include personality and character taxonomies, for example: Myers-Briggs, Enneagram, Five Factor Model, and Attachment models, that can classify individuals differentially at any

level of maturity. We are of course interested in developmental theories here (though Indo-Tibetan schools also include their own trait taxonomies (Rockwell, 2002). Though some developmental theories, called phasic or life-span theories, divide adulthood into segments based on age, changing roles, pivotal events, cultural patterns, or life crises, we focus on those that key off of increasing *complexity* in cognition and/or meaning-making.

We can differentiate two subsets of developmental theories, those that focus primarily on cognitive development (also called structural theories; see Baldwin, 1913; Case, 1992; Fischer, 1980; Kohlberg, 1990; Selman, 1974) and those that focus on the development of meaning-making, or the closely related concept of ego development (so-called Constructive Developmental theories, see Loevinger, 1998; Kegan, 1982; Torbert, 2004; Cook-Greuter, 1999). The latter include considerations of cognitive complexity, but focus particularly on how this complexity capacity is applied to the personal/egoic (I, me) and interpersonal / social / psychodynamic (you, we, them) domains.

Structural theories of cognitive development were first introduced by Baldwin (1913) and Piaget (1951). Piaget outlined a pattern of growth leading from infancy to adulthood through four main phases: sensorimotor, preoperational, concrete-operational, and formal operational (Piaget, 1971). Each stage is a qualitatively distinct self-organizing systemic whole, organized by an underlying pattern of cognitive operations. In the developmental process humans integrate and reorganize each prior developmental level to form a more complex hierarchically superior level. Each qualitative shift represents a new level of hierarchical complexity or stage of developmental growth. By *making the subject an object* (Kegan, 1995), the individual is able to *transcend and include* (Wilber, 2007) the prior level of development.

Many research projects and models followed Piaget's work, including those of Arlin (1984), Armon (1984), Basseches (1984), Riegel (1973), Benack (1984), Commons and Richards (2002), Selman (1980), Demetriou (1990), Fischer, Hand, and Russell (1984), Kohlberg (1990), Koplowitz (1984), Labouvie-Vief (1980), Pascual-Leone (1984) and Case (1991). These projects studied the development of varying capacities including morality, self-understanding, epistemological understanding, logical/critical thinking, and concepts of the good life.

Though Piaget's model ended at the formal operational stage achievable by young adults, succeeding theorists extended models into later "post-formal" capacities. One of the most articulated models of adult cognitive development, one including post-formal stages, is the Model of Hierarchal Complexity (MHC) of Michael Commons and his associates. MHC (and also Fisher's Skill theory (1994), a very similar theory published at the same time) is distinct from most of the other theories in that it proposes a domain-independent model of development – i.e. one that can be applied to any type of learning or growth (and it has been showed to apply to many of the specific skills previously studied, and to replicate earlier results, see Commons and Chen, 2014; Dawson et al., 2005).

In Commons' stage conception of cognitive development, there are five post-formal cognitive stages beyond formal operations (Commons & Chen, 2014; Commons & Ross, 2008):

- *systemic* cognition (ability to operate on formal operations, and construct multivariate systems coordinating multiple inputs within a given context, best exemplified by the scientific method);
- *metasystemic* cognition (including the ability to compare, transform, and synthesize systems);
- *paradigmatic* cognition (synthesizing multiple meta-systems to form paradigms; as needed to synthesize whole fields of knowledge that are seemingly unrelated);
- *cross-paradigmatic* cognition (including a capacity to develop whole new field of knowledge, as was done by the likes of Charles Darwin, Albert Einstein, and Max Planck); and finally,
- *meta-cross-paradigmatic* cognition (able to analyze the dynamics and recognize the limitations of cross-paradigmatic thought). Note again that, as a domain-independent model, these terms (actually all of the levels in the model) can be applied in the analysis of any particular skill being developed.³

Constructive Developmental Theories. The Constructive Developmental line of research progressed mostly in isolated parallel to the Structuralist line, though publications in both research communities sometimes referred to each other. In fact, the two research lines are only recently being deeply compared, contrasted, and integrated. The STAGES model described later begins to bridge the gap between these research communities (and see Murray 2017 for another preliminary attempt to integrate them). Next we focus our narrative on the Constructive Developmental theories.

Though Robert Kegan's theory of meaning-making complexity (or "orders of consciousness") has substantial overlap with it, we will focus on Loevinger's "ego development" model, and those that extended it (i.e. Cook-Greuter, Torbert, and O'Fallon). All of these models use the sentence completion test (SCT) to assess development (a method that is less time-consuming than the subject-object interview used to assess in Kegan's framework). Because these models, especially O'Fallon's STAGES model, are described in detail in other papers in this journal issue, we will give only a brief summary here. We also include additional descriptions of the ego development levels in Appendix 1 (see Murray, 2017 for description of the history and validity of the SCT).

Jane Loevinger (1918-2008) defined an ego level as an organizing synthetic function or filter that the individual uses to interpret life experiences and to generate meaning. It implies a level of character development, cognitive complexity, interpersonal style, and set of conscious preoccupations (Westenberg et al, 2013). Loevinger developed and refined the Washington University Sentence Completion Test (WUSCT), a semi-projective assessment, for measuring ego development (1998; Loevinger et al. 1970) that has been used extensively by researchers in the field. Using a novel method of analyzing 36 sentence completions that "triangulate" the ego development construct using a variety of sentence starters (stems) addressing personal

³ The question of how one defines "a skill" as separate to related skills is an important issue but beyond our scope here, but see Murray (2017).

relationships, authority, frustration, family life, work life, and society, and self-image, Loevinger and her team were able to reveal nine different stages of ego development.

Studies of the WUSCT include at least 400 studies and half a dozen meta-analyses (Cohn & Westenberg, 2004; Gilmore & Durkin, 2001; Novy & Fancis, 1992; Westenberg et al., 2013) making it “arguably the most extensively validated projective technique” (Lilienfeld, 2000, p.56). Murray & O’Fallon (2020, this issue) summarizes prior research on the SCT for inter-rater reliability, internal consistency, test-retest reliability, face validity, construct validity, incremental validity, clinical utility, and predictive validity, all supporting Westenberg’s conclusion that “findings of over 350 empirical studies generally support critical assumptions underlying the ego development construct” (p. 485).

Clinical research with the WUSCT has indicated that certain diagnoses are more connected with pathology at certain developmental stages (Noam and Houlihan, 1990) and that there is a clear decrease in symptom severity in those with higher levels of identity development (Noam and Dill 1991). Research is only beginning to support the hypothesis that adult development leads to increasing levels of happiness – this is a topic worthy of further investigation. Bill Torbert and his associates working in the field of leadership development have researched the predictive validity of the SCT most outside of clinical psychology. Torbert (2014; Torbert & Livne-Tarandach, 2009) found powerful correlations in higher action-logics (ego development as it pertains to business and organizational functioning), with only CEO’s and consultants measuring the two highest levels reliably generating organizational transformation leading to larger market share. Braks’ (2020) paper in this issue gives further evidence of the relationship between ego development and leadership maturity and effectiveness.

Susanne Cook-Greuter, a student of Jane Loevinger, continued the work of ego development by expanding upon the post conventional levels that Loevinger had researched. Her research supported differentiating Loevinger’s Integrated stage into the Construct Aware and Unitive stages. This differentiation was corroborated by research done in leadership by Torbert (2004) and Joiner (Joiner & Joseph, 2007). Cook-Greuter also introduced the use of a sequence of “person-perspectives” to describe the developmental sequence.

The STAGES model

Terry O’Fallon modified Cook-Greuter’s model and scoring system, in part by incorporating elements of the AQAL Integral Theory developed by philosopher and transpersonal psychology theorist, Ken Wilber. O’Fallon recognized that the ego development stages explored by Loevinger and Cook-Greuter could be explained by an underlying stage-by-stage unfolding of a small set of foundational factors that underlie the deep structure of human physiology and psychology intrinsic to human growth.

The Loevinger’s WUSCT and Cook-Greuter’s SCT are both theories empirically driven by data, with a minimal theoretical influence of top-down models or bottom-up cognitive processes; and their scoring method is largely based on matching to specific examples (or exemplar categories). The STAGES model, whilst built on the empirical data-driven discoveries of the Loevinger/Cook-Greuter lineage, departs from its forbearers in that it is theory-driven, describing

an invariant 12 stage, 3-tier model of development, driven by a theoretically understood deep structure.

The STAGES model is composed of three dual cognitive orientations: Individual/Collective, Passive/Active, and Exterior/Interior, inspired by Wilber's AQAL model (O'Fallon, 2010a-b, 2012, 2013, 2020). These three dimensions move through three tiers of concrete, subtle and metaware experience (the fourth parameter) in a nested order of unfoldment. The theory suggests that human psychology unfolds through a 4-part process through each tier: passive-individual (Receptive), active-individual (Active), passive-collective (Reciprocal), active-collective (Interpenetrative). These might be referred to as the "four complexity" levels within each tier (Murray, 2017, p. 17). Figure A1 in Appendix 1 shows how each of these dimensions (or drivers) further refines the resolution of the model. The dimensions are:

- **Tiers:** O'Fallon conceptualizes three tiers of development, each apprehending an increasingly subtle category of objects, with each tier containing four stages of maturation (some versions of the model include a 4th Unitary tier). The first level, concrete, refers to a concrete level of cognitive development where the mind and senses apprehend concrete individual objects both within the exterior world and later the interior. This level of development is the realm of Piaget's concrete operational thinking. The second tier, subtle, refers to a tier of formal operational development that apprehends subtle objects. At the next tier, the metaware tier, individuals have developed the capacity to differentiate awareness from the contents of awareness and are able to be aware of awareness itself.
- **Individuals/collectives:** Within each tier individuals are, generally speaking, aware of individual things and entities prior to collectives, groups, and systems, since the latter depend upon the former for their meaning. For instance, to have an awareness of complex family dynamics one must first understand individual psychology. Using only the 3 tiers and the Individual/Collective dimensions, one can define the 6 "person perspectives" of the model (see Figure A1).
- **Passive (Inside, 1st person)/Active (Outside, 3rd person).** Each Person-perspective can be further differentiated into a passive and active half, yielding the 12 stages of the model. When one first learns something one begins by just being aware of it. One is receptive to its expression as one learns about it, it happens *to you*. With learning and practice there is the active repeated attempt to recreate the experience. Through repetition the state becomes more easily accessible. In a sense you have it rather it having you.
- **Exterior/Interior:** STAGES uses a fourth driver to specify sub-levels (half levels) within each of the 12 stages, which build up using first an exterior orientation then an interior orientation. Cognitively, exterior activity is understood prior to interior because one first applies a specific kind of cognition to the external environment before applying to oneself. Mark Forman (p.80, 2010) explains: "All the stages of identity development, therefore rely on different forms of outer-directed cognition eventually being used in the inner world of the self" Thus, an adolescent first applies formal operations to analyze and solve external challenges before applying formal operational thinking to the self. In doing so this transforms the organization of the self.

The STAGES model also includes an articulation of phenomenological "states," and the relationship between states and stages, that coordinates quite well with contemplative essence psychology, as described later (see O'Fallon's article in this issue).

Though STAGES is a relatively new model with limited empirical validation, the validation studies to date have shown very strong results. O'Fallon et al. (2020) describe a "replication study" that shows the STAGES scoring method replicates the prior Cook-Greuter/Loevinger SCT scoring method up to stage 4.5/Strategist. That paper also summarizes longitudinal data analysis including the upper levels, which shows evidence for the monotonic developmental sequencing of O'Fallon's newly defined highest stages (Metaware Tier). Murray & O'Fallon (2020, in this issue) used Item Response Theory and Rasch analysis to evaluate additional validity metrics, including: within-test item normality, item standard deviations, Cronbachs-Mesbah analysis of test lengths, factor/component analysis, item correlations, test strata/discrimination analysis, and overall test strength.

In this section an overview has been presented of the territory of adult development and particularly the lineage of constructive developmentalism initiated by Jane Loevinger, continued by Susanne Cook-Greuter, and more recently articulated by Terri O'Fallon. Through investigating adult development these researchers have uncovered stages of mature adult development, and the underlying developmental processes, that we can relate to the stages of contemplative development as articulated by the Indo-Tibetan essence tradition. While there are clearly some differences, what is of particular interest is that the Western research indicates these stages of cognitive and meta-cognitive unfoldment are perhaps not just constructed by the meditative process but are indicative of a more universal transcultural and human process. The developmental process is catalyzed by meditative development but there are other factors that support this growth such as cognitive complexity, relational intelligence, and differentiation from childhood psychological structures.

Below we summarize aspects of the model and reiterate, in a bit more detail than we did in the Introduction, why it is a very good fit for coordinating contemplative essence psychology and adult developmental theory.

- In STAGES the entire developmental sequence is based on *non-conceptual modes of perception and awareness* as they generate ever new distinctions (categories) in the mind. The exploration and development of *what one is aware of* is central to contemplative methods. Though most adult developmental models focus on the linguistic or conceptual aspects of meaning-making, STAGES grounds cognitive and metacognitive thought in their non-conceptual and concrete precursors, as is common in contemplative models. It maps patterns in the growth of mastery, and of transforming implicit knowing (subject) into explicit knowing (object) and meta-knowing (metacognition) – that repeat for each new category of distinctions. This too provides an excellent framework for representing aspects of contemplative essence psychology.
- The STAGES model is based on a progression of "*Tiers*" called Concrete, Subtle, and Metaware, and Unified, each representing increasingly subtle forms of objects of awareness. It coordinates closely with predominant neo-Piagetian models of cognitive

development, as its progression from Concrete to Subtle matches the cognitive progression for concrete to formal operations (abstract and logical thinking). Contemplative essence psychology likewise maps a progression of awareness (metacognitive capacity) of increasingly subtle mind/body phenomena – that can be mapped directly to the four tiers in the STAGES model.

- STAGES specifies a repeating nested pattern of unfolding within each tier, which involves moving from *exterior to interior* objects, from *individual to collective* objects, and from *passive to active* orientations to perceiving each type of object. These patterns in the unfolding of awareness map directly to principles in contemplative essence psychology (as we explain later).
- STAGES' treatment of the exterior/interior dimension maps to the "*event perspective vs. mind perspective*" used in the essence tradition.
- STAGES contains a sophisticated model of the relationship between *stages* of cognitive complexity, *states* of consciousness, and stable -stage orders of perceptions (views); that latter of which maps well to modes of operation (existential views, or basis of identity) described in contemplative essence psychology.
- STAGES describes the progression within each tier as: *receptive, active, reciprocal, and interpenetrative*. It follows contemporary cognitive science in noting that the perception of any object begins with unanticipated fleeting glimpses (*receptive states*), which with practice become stable skills for observing an object at will (*active*), and eventually become the automatic (unconscious, effortless, and "natural") perception of the object (*interpenetrative*). Essence traditions prioritize the attainment of levels of effortless "*view*," a sequence in the development of the "*basis of operation*" of awareness – which is well described by the interpenetrative phase in STAGES.
- STAGES fleshes out *territory in the higher tiers* to a greater degree than other models, and in a way directly analogous to contemplative essence psychology. It explicitly mentions awareness of awareness, the apperception of timeless awareness, spacious freedom, emptiness (of different forms), and fullness, which maps to concepts used in contemplative practice.
- STAGES includes a *shadow-work* model articulated according to developmental level, which coordinates well with the deconstructive and emptiness elements of the essence traditions. I.E. it explicitly includes and coordinates the contrasting elements of *complexity/skillfulness/adaptation* and *freedom/deconstruction/liberation* inherent in the essence traditions.

Next we will explore Buddhist contemplative essence psychology. We will make a few references there to adult development, but for the most part will save our integration of the eastern and western models until the section on "Integrating Contemplative Essence Psychology and adult Development."

2.3 Buddhist Essence Psychology: mahamudra and rdzogchen

In the introduction we mentioned how the Indo-Tibetan schools represented the third turning (paradigm shift) in Buddhism (associated with the term Vajrayana), specifically the mahamudra and rdzogchen schools, constitute a system of "contemplative essence psychology." And we touched on how they differ from earlier phases of Buddhism (the Hinayana and Mahayana traditions). The shape of these three turnings of Buddhism is further articulated in Appendix 3.

Contemplative essence psychology includes the Hinayana-based theories of mindfulness and contemplative psychology that are currently popular but adds theory and practices for the experiential understandings of the constructed nature of sensation, body, thought, self, time/space, dualistic perception, and the individuality of the attentional system which reveals a progression of metacognitive identity, or basis of operation, beyond self, time, and individuality.

Below we describe Buddhist Essence Psychology, which is discussed in more detail in Appendix 4, and in even more depth in Churchill (2018).

Mahamudra

Essence mahamudra refers to the approach of direct investigation into the nature of mind and it is comparable to the rdzogchen teachings of the rNing ma and Bon traditions (Ringu, 2007). The Tibetan Bon tradition locates its genesis in the shamanic traditions originating 9,000 years ago, while the Indian Buddhist tradition locates its initiation 2,500 years ago. As such, the tradition is a wealth of knowledge, and practice, that is still alive in the form of the five Tibetan lineages of the Bon, Nyingma, Kagyu, Sakya, and Gelug schools.

In order to understand mahamudra it is necessary to understand the concept of *tawa* (*Tbt.*) or *dristi* (*Skt.*) which literally means, *view*, meaning the view from which one experiences phenomena. Brown (2017) explains that the view is dependent upon the basis of mental operation (*spod yu*), the loci of identity, level of awareness or vantage point from where the mind's metacognition is operating. In essence practice the meditations are less about meditating on something as they are about learning to operate from a new level of awareness, a new basis of operation, and from there to take a new perspective or view on experience.

According to Ras chung, student of Mi la ras pa, there are four main bases of operation: awareness fused with thought and self-structure, awareness beyond self-structure, awareness beyond temporal processing, and awareness beyond the information processing system. Each level is sequentially freer from the subtler and subtler reifications of unconscious psychological and perceptual structures.

Indo-Tibetan psychology is based on an understanding of four levels of mind, four main basis of operation; the coarse, subtle, very subtle and awakened. These are four levels of mental experience are always present in experience, but they are not necessary conscious. Whether a level of mind is made conscious or not is dependent on the level of view, the basis of operation from which identity is operating. The basis of operation shifts during meditation and initially this

will be a brief *state* but as practice continues the state will become a *trait*, and a permanent developmental stage of identity.

Each basis of operation has the capacity to view phenomena (take the *event perspective*) and the capacity of self-recognition (the *mind perspective*). The event perspective refers to the perspective of mental objects perceived at that particular level of awareness i.e. concrete objects such as the thoughts and subtle objects such as abstract patterns. The mind perspective refers to the perspectival capacity to self-reflect and recognize the level of awareness from which the mind is operating i.e. to make awareness (the subject) the object of itself.

In Appendix 4 we describe the four-yoga model of sGam po pa's mahamudra. In it the meditator first calms the mind (shamatha), then by gaining insight (vipashyana) into the constructed nature of the self, time, and individuality recognizes awareness to be already beyond all structures to a basis of operation, buddha nature, without any reference points (Brown, 2006). The four methods described are: One-pointed yoga (calm/staying; shamatha), Non-discriminatory yoga (insight; vipashyana), One taste yoga (union of calm staying & insight), and Non-meditation yoga (mahamudra).

rDzogchen

rDzogchen, or "great completion practice," is the coordination and culmination of contemplative practice in the indigenous Bon tradition and the oldest Buddhist tradition in Tibet, the rNing ma. In the Bon tradition the lower stages focus on shamanic practice while the rNing ma model addresses the foundational Buddhist practices of the Hinayana. Both traditions then progress through Bodhisattva teachings on emptiness and compassion, and then Tantric approaches using visualization and yogic techniques to culminate in rdzogchen.^{[1][2][3][4][5][6][7][8][9][10]}

As the most pertinent example of the rdzogchen tradition we focus on the A Khrid system from Bon rdzogchen. It provides a systemized approach that parallels and expands upon the mahamudra four-yoga model mentioned above. In their translation of the A Khrid pith instructions, Brown & Gurung (2017) reveal how the commentary of the A Khrid divides practice into three main phases: bringing the unripened mind stream to ripening, bringing the ripened mind stream to liberation, and bringing the liberated mind-stream to the completion of Buddhahood.

The first of these prepares the mind for emptiness practices through methods including contemplating impermanence, setting clear intentions, and mentor-bonding. The second phase, of tasting and developing realization, contains the core elements of the contemplative essence psychology discussed in this paper. It includes ten practices leading to the capacity to operate naturally from awakened awareness, the level of lucid, open non-dual awareness, prior to the constructions of the information processing systems of perception, attention, temporal awareness, self-construct, emotion and cognition. The third phase describes esoteric practices that, given the base capacities of the liberated mind, expand that capacity into all aspects of the conscious and unconscious self, and into all daily actions and decisions; ultimately purifying the mind of all negative qualities and perfecting all positive capacities available to the human condition.

Awakening etc.

Though contemplative and religious traditions have a wide variety of meanings for terms like awakening, enlightenment, and realization, within the Indo-Tibetan schools there is fair agreement upon and precision in describing, if not the conceptual map and category boundaries, at least the forms of experience and capacities developed by various contemplative practices. The practice maps and experience maps can be quite detailed up through many stages of contemplative realization, and, though there will eternally be disagreements on the nuances within academic scholarship, the constructs described within the contemplative essence traditions have quite specific meanings.

Prajna: insight into impermanence, reactivity, no-self, and emptiness. In the essence tradition of mahamudra and rdzogchen, concerned as they are with the nature of awareness itself, metacognition is understood through the important concept of prajna (skt: prajna). This term technically refers to the experiential cognitive recognition of impermanence (anicca), reactivity (dukkha), no self (anatta), and in the Mahayana, emptiness (skt: śūnyatā). The term is sometimes translated as wisdom, discriminating knowledge, or insight (Buswell, 2013). Jna translates as consciousness, knowledge or understanding, and the term Pra is an intensifier that translates as higher, greater, or supreme. Training in ethics, concentration practice, and Prajna comprises the fundamental three trainings (sikkha) common to all Buddhist traditions. In terms of this work on Indo-Tibetan essence practice, prajna (Tbt:s hes rad) is synonymous with contemplative metacognitive insight. This metacognitive insight, particularly into the constructed nature of experience (śūnyatā) is what leads to the recognition of primordial awakened awareness known as jnana (Aky: jnana) (Tbt: ye shes). The distinction between prajna and jnana, metacognitive insight and primordial awakened awareness is fundamental to understanding the mechanism of essence practice. Ringu Tulku (2017), a mahamudra teacher in the Kagyu Tradition describes:

The word yeshe yé is short for yé né, which means ‘right from the beginning’ or ‘primordially’. Some people translate it as ‘pristine’ or ‘pure’, meaning that it is untouched and unstained, and has been there all the time. It is the way it always was. So yeshe is discovered with sherab. Yeshe is understood by sherab, or approached by sherab. Ringu (2017).

In other words, primordial awakened awareness is discovered and understood by metacognitive insight. He continues:

The difference between sherab and yeshe is very subtle and slight. But I think we can say that yeshe is the most natural state of our awareness or consciousness, which is unstained, uncontrived and completely ordinary. It is there all the time, but we don’t recognize it. It is sherab that brings about the recognition, but of course they are not two separate things. Ringu (2017).

Primordial awareness is always there, but one typically doesn’t recognize it. It is metacognitive insight that brings about its recognition, but these are not actually in essence separate, as metacognitive insight is an expression of primordial awareness.

Awakening. As discussed in the previous sections, the Indo-Tibetan essence traditions have been practiced as a form of psychological development in some form for thousands of years. The goal of the contemplative essence psychology of mahamudra and rdzogchen is the development of full human potential known as a Buddha in Sanskrit or Sangs rgyas in Tibetan (Buswell 2013). In Sanskrit, Bud means awakened and Buddha literally means *awakened one*. The Tibetan term gives more insight into the goal, Sangs means *purifying*, the purifying of emotional and cognitive distortions, and Gye rgyas means *flourishing, the flourishing of the 80 positive qualities of an enlightened mind*.

Awakening usually refers to contemplative achievements that are actually part-way on the path to Buddhahood, and one can experience aspects of awakening without its stable attainment, and while still early on the path of full purification of the mind. The process of purifying emotional and cognitive distortions is a goal that Western psychology also aspires to. However, the depth of awakening in the Indo-Tibetan tradition goes beyond the awakening from psychodynamic issues, and from dysfunctional cognitive and behavioral patterns that functioning in contemporary culture necessitates. This fruition of human potential manifests itself through:

- the different phenomenological dimensions that are fully cognizant through waking, dreaming, and deep sleep states known as the three-fold embodiment of unbound spaciousness (dharmakaya), lucid awareness (samabhogakaya) with non-dual geometric archetypal light fields (buddha realms), and the physical emanation body of everyday reality (nirmanakaya);
- the primordial wisdoms of mirror-like clarity, equanimity, discriminatory awareness, all-accomplishing executive functioning, and all-pervading spaciousness; and
- enlightened activity in the form of skillful application to reduce individual, cultural and social suffering and lead beings towards the realization of their full potential (Thrangu, K. 2011).

Omniscience. Omniscience (Skt. sarvajñāna; Wyl.ie rnam mkhyen), a term with metaphysical implications quite uncomfortable to our modern worldview, yet which is used somewhat uncritically in some contemporary spiritual communities to describe high stages of awakening, actually had a specific technical and, arguably non-metaphysical, definition in Indo-Tibetan Buddhism. For instance, the Bodhisattva Maitreya's work the Abhisamayalankara, which is studied by all the lineages of Tibetan Buddhism, outlines eight topics of study, the first of which is omniscience. Omniscience refers to the culmination of the knowledge, skill, and direct experience of how to reduce suffering and increase happiness through each of the Buddhist vehicles of practice. The goal of the bodhisattva includes liberating all sentient beings from their suffering and pain, and developing these ten aspects of knowledge within them (Ponlop, 2003).

Along with meditative (and metacognitive) training, Indo-Tibetan Buddhist contemplative education also emphasizes *cognitive* training comprising knowledge in ten fields that have been the focus of the traditional course of study since the first monastic universities of Nalanda in India and Samye, and rDzogchen monasteries in Tibet. These ten fields can be reduced to five:

logic, language, medicine and healing, the arts, and the Buddhist science of mind. Maitreya, in *The Ornament of the Mahayana Sutras* (one of the five treatises of Maitreya) states:

If efforts are not made in the five sciences, even great beings will not attain omniscience. Therefore, to refute and to nourish, and to attain omniscience, make effort in the five sciences. Gyatso, (2016, p.42).

Recall that before modernity, perhaps in the Middle Ages and before, it was possible for an intelligent and dedicated individual to learn the basic elements of almost every field of knowledge. Today it is impossible to be a polymath ("Renaissance" man or women) in the same sense of having at least a theoretical grasp of most of the knowledge disciplines known to one's local culture. Like the child in awe of her parent, it may have seemed to those living "on the streets" in ancient times that such learned individuals actually "knew everything." In bygone times such a rare person was also poised to espouse meta-knowledge about the state of knowledge as a whole, including "how everything is connected" and the relevance or import of any aspect of knowledge.⁴ This is what was meant by "omniscience."⁵ It was not just about experiencing the depths (or radical emptiness) of consciousness, but also about accruing the practical knowledge allowing one to *apply* one's wisdom to many (or all) aspects of life, including in ethical and political domains.

There exists bias in the West towards seeing contemplative development as entirely a non-conceptual or metacognitive process. However, in actuality the psychological development of essence practice takes place within the context of a larger liberal arts education.

Buddhahood. Buddhahood is often described as the fullest expression of wisdom and compassion. Wisdom is defined in Buddhist contemplative psychology as the capacity for deconstruction and liberation from fusion with all cognitive structures so that the light of awareness never goes out whether in waking, dreaming, or deep sleep states. Compassion refers to the development of skillful responses to the needs of other beings. Compassion therefore does not just refer to an affective state, but to the construction of cognitive capacities and skills to understand and respond to practical reality in such a way as to reduce suffering and lead other beings in the direction of their full potential. This is the same process discussed in the research on ego development; the increasing capacity for defusion allows for deconstructive shifts in the fundamental basis of operation (wisdom), from which more complex adaptations to life circumstances can be made (compassion).

In the broader tradition of the Mahayana, within which the essence tradition is the quintessence, Buddhahood refers not just to a deconstructive liberation from all experience, but

⁴ Of course, academics today do this by the thousands, but, each has only a very limited grasp of the full knowledge produced in their time.

⁵ In addition, from a more esoteric perspective, rigorous research into psychic phenomena indicates that it may be possible to obtain "non-local" knowledge (i.e. not constrained by space and time in the normal ways). Thus, though modern sensibilities prohibit us from considering anyone as literally "knowing everything," we can still consider the possibility that an adept could open perception or consciousness in such a way that they become a conduit for knowledge (as needed by others) that they did not previously "know" in the usual sense.

also a deeper integration and reorganization of cognitive structures brought about through a profound understanding of the various stages of practice and their pedagogical application in reducing human suffering.

Therefore, a Buddha is an awakened being, having fully purified the emotional and cognitive distortions of multigenerational traumatic conditioning, and opened to the omniscient capacity to lead other beings to that realization.

Though, from our contemporary context, Buddhahood can be interpreted as a horizon, a hypothetical state pointed to by a path, the various aspects of awakening and the outlined steps toward Buddhahood can be confirmed experientially and incrementally through dedicated practice.

3. Integrating Contemplative Essence Psychology and Adult Development

This section focuses on the mapping of the contemplative essence psychology of mahamudra and rdzogchen in terms of mature adult development and is informed by the literature on metacognition. We have three goals. First, to show that contemplative essence psychology contains many of the conceptual tools and pragmatic understandings of a well articulated psychology of adult development. Second, we will explore how contemplative essence psychology can inform modern developmental models, and can deepen the goals of modern psychology to support mental health, and psychological growth and transformation. Third, we will discuss how modern developmental models can inform contemplative essence psychology to make its principles more available to the modern mind.

In the modern western understanding of the structural stages of development, such as those developed by Freud, Piaget, Fisher, Commons, Loevinger, Cooke-Greuter, O'Fallon etc., has developed over the last 100 years due to the sophisticated maps developed from third person scientific research into the longitudinal growth of human beings through the life span. Yet the maps and practices of the mahamudra and rdzogchen contemplative traditions offer Western psychology a perspective and path of human potential evolution and flourishing previously unexplored in Western psychology, and that is deeply needed in the contemporary world.

This section begins by exploring the *history* of the east/west convergence, including *methodological* differences, and *contemporary* clinical and research advances. We then propose principles of human psychological growth that integrate the developmental and contemplative fields, starting with *underlying mechanisms* that pertain along the full arc of maturation, and then focusing in on the *specifics of each stage* or level in the journey.

The section also offers a glimpse into an integrative process that could engage many generations of future dharma practitioners and psychologists in the process of reducing human suffering and actualizing potential.

3.1 Contemplative vs. developmental psychology: Historical and methodological comparisons

East vs. West: Phenomenology vs. Structuralism and Theory vs. Application

While much of our discussion will focus on the overlap between eastern and western approaches, the distinction between phenomenological and structuralist approaches to knowledge helps to contrast the two and explain their complementarity. The modern west seems to have learned so much about the human mind – its pathologies and modes of suffering, its capacities and further reaches, and the relationship between the emotional and cognitive modes of decision making – and yet it has kept this wealth of knowledge at an "objective" distance from embodied application in the lived lives of citizens. We seem to be as, or more, unhappy and neurotic vs. any historical period or civilization. In contrast, the findings of eastern contemplative traditions are not "up to snuff" in terms of modern scientific proof, and yet have always been aimed directly at improving the lives of real practitioners and cultures.

Wilber (2006) clarified the difference perspectives of these two methods of mapping psychological experience, through a distinction between *first-person* phenomenology, associated with the contemplative tradition, and *third-person* structuralism, found in Western forms of inquiry. Indo-Tibetan contemplative psychology is an ancient first person subjective, phenomenological tradition developed through deep introspection and interior research over many generations. The only way at this time to fully verify the claims of the tradition is to engage in the meditative journey oneself, to carry out the phenomenological metacognitive exercises prescribed and to compare the results to those collated and systematized by the tradition.

Compared to contemplative psychology, the field of adult development research is in its infancy. The work on cognitive structural development by Piaget, Commons, Fisher and others, and the work on constructive ego development by Loevinger, Cooke-Greuter, and O'Fallon are third-person structural disciplines. These maps have developed from the objective scientific structural analysis of studying levels of cognition and ego complexity in relatively large population samples. This research has led to the development of pedagogical approaches to supporting psychological development and education, but the development of these methods has come from the outside in, not the inside out. Perhaps because of this, or simply because of its relative recentness, it yet stumbles to create authentic applications as large-scale as its data sampling.

While science (adult developmental research, but also brain research, socio-political studies, etc.) can clearly add to the contemplative essence psychology by validating and extending its principles, it is less acknowledged that the eastern schools offer a wealth of information about the *experience* of adult development, especially at higher levels, as well as a treasure trove of nuanced practical instructions about pitfalls, dead-ends, common traps, fast-tracks, and diagnostic principles for practice guidance, that could help the findings of adult development become more widely implemented and more deeply understood.

Within contemplative methods, the mahamudra and rdzogchen stages of practice lead to the maturation of the very subtle and awakened bases of operations through deepening degrees of

realization barely considered in western psychology. They are also accompanied by greater phenomenological nuance with respect to this development than does the Western research into adult development since the former in fact articulates the precise and actual means to bring about the transformation. The lineage libraries of the Tibetan monasteries consist of many meditation root texts, practice manuals, and commentaries developed over at least 2,000 years. Each of the five Tibetan schools has specific perspectives on the theory and practice of contemplative development, and continues to train contemplatives in these inner sciences to this day. This cultural wealth amounts to massive amounts of interior phenomenological research that has yet to be translated and/or generally disseminated.

East vs. West: Methodological Considerations

In integrating the Eastern and Western "sciences" of the mind, we should be explicit about their methodological differences. For example, though both make use of rigorous intellectual/logical analysis within peer communities employing debate; Tibetan psychology does not have an extensive research on the early stages of development (with regard to cognition); while western psychology does not have extensive research on the late stages of development (with regard to meta-cognition). Above we also mentioned the "WEIRD" biases of Western psychology due to the lack of diversity of subjects in most studies.

In comparison to pre-modern methods of psychological inquiry, the Western "scientific" study of psychology has several characteristics that underpin its strengths, yet also underpin its limitations: (1) its focus has been (with important recent exceptions) upon *pathologies* (the "disease model") rather than normative or exemplary human functioning; (2) as mentioned, it has taken a keen interest in the study of *children* (which is absent in pre-contemporary psychological, philosophical, and religious inquiry); (3) the *scientific method* itself, which is suspicious of the biases inherent in subjective insight, experiential knowing, and intuition; and bases rigor upon measurement and replicability; (4) its universalist, *non-metaphysical* and atheist bent, which forbids justification based on explicit dogmas (though it is still usually blind to tacit cultural biases); and (5) it can use random sampling and longitudinal measurements to discover generic developmental and cultural patterns not discoverable by less rigorous methods.

Eastern knowledge creation methods have their own comparative strengths: (1) they take seriously the revelatory powers of contemplation and intuition, giving *phenomenological inquiry* a high status, particularly in the human sciences of psychology, ethics, wisdom, and politics; (2) they afford more authority to the judgment of (communally validated) *adepts* in the fields of consciousness and wisdom; (3) they are explicitly aimed at *pro-social and emancipatory* aims (thus their close affiliation with religious traditions), and thus at the *practical* needs of people to find meaning, reduce suffering, and maintain positive psychological states – in contrast to Western science which is often either at an "objective" (and thus disembodied) distance from such matters, or is heavily influenced by market and political incentive structures; and (4) the belief systems and injunctions they produce have been *tested in grounded contexts and adapted for centuries*, which, though it does not guarantee the same degree of "truth" rigor afforded by the scientific method, but guarantees a much deeper relevance, practicality, and resilience than the vast majority of scientific investigations can afford (unless they have been "put to the test" for a very long time in multiple life contexts).

Subjective insight into the nature of one's own mind and cognition can be very difficult to articulate verbally/conceptually. In fact the rich detail and nuance of any deep experience is similarly ineffable, and language can only serve as a tentative pointer for others who have had the experience being described, or who are searching for that experience. The performance of a skill, such as leading a large group or maintaining equanimity in the face of frustrating circumstances, can have little correlation with one's ability to describe or theorize about the skill – the classic distinction between procedural vs. declarative knowledge (e.g. Anderson, 1983). Western science prioritizes declarative knowledge that can be used to describe, explain, or technologically invent something; while Eastern frameworks prioritize procedural knowledge that can be experienced and used in human decision making and action.

Traditionally, the esoteric wisdom of adepts becomes encoded into philosophical texts, poetic metaphors, allegorical stories, and practice injunctions carried forward by a culture. Those raised within such cultures can be *doing* and *experiencing* things that encode deep wisdom about the human condition, even though the individuals involved have no reflective understanding or what, why, or how they are doing (though some in those cultures may have high reflective or scholarly knowledge in that domain). The western observer, focusing on the lack of sophistication of the commonplace practitioner, can easily dismiss such knowledge as frivolous. This misses the important facts that (1) knowledge/wisdom can be rigorously *lived* without be explicitly "known," and (2) knowledge/wisdom can be carried tacitly at the level of *culture* in a way that is relatively independent of the explicit knowledge of participants.

Cultural rituals, worldviews, texts, and artifacts can harbor deep forms of knowledge, honed over centuries or millennia of use and tuning, that can remain hidden within individuals and invisible even to whole populations – as unreflectively embodied wisdom that later cultures or individuals can mine to recover (or regenerate) as explicit principles. As the sources and iterative tuning steps of this knowledge is usually lost, the "proof" of their validity is in lived experience, and not in scientific demonstrations or arguments. Yet the long history of adaptive use and cultural replication within Eastern traditions offers forms of validity that complement, not just contrast, the experimental methods of the West. Though it is not the modern way to simply *believe or adopt* them based on the legitimacy of authority figures, we can yet *respect and engage* them as presumably encapsulating valuable encoded knowledge about the human condition and its flourishing, beyond our Western world view and current science, that can be decoded and used.

East and West: Early Convergences

Before the recent advent and popularity of mindfulness practices in the west, the deeper regions of theory and practice of Asian contemplative psychology was known by a relatively small group of psychologists and theorists who struggled to reconcile Eastern and Western conceptions of development (Alexander et. al. 1990; Washburn, 2000; Dale, 2013; Wilber, 2007/2017; Brown, 1986; Engler, 1984).

Early longitudinal research by Alexander (1982) into Transcendental Meditation (TM) indicated that TM meditation facilitated ego development, as measured by Loevinger's (1976) test of ego development. The TM subjects, who were prison inmates, progressed over a 4-year period from Loevinger's *conformist* stage to the Expert (*self-aware*) stage. In a second one-year

longitudinal study those inmates who were already meditating developed to Achiever (*conscientious*) stage, which corresponded to a dominance of mature abstract formal operations. However, Alexander's research into meditation, which included prolific efforts, with some 30 publications, only examined TM meditation, and unfortunately, due to the fringe perception of TM in academia, his results were not taken seriously outside the TM community, and no further researchers explored the relationship.

Mahamudra and Brain Research

As seen in recent research (Schoenberg et al., 2018) an increasing number of Western practitioners are developing through the traditional stages of contemplative realization. As such, the next step in the research is to investigate those few individuals who are stabilizing awakened awareness and purifying the unconscious mind through the practice of automatic dharmakaya release (*rang shar rangrol*).

Most of the brain-imaging research related to contemplative practice has been done within the mindfulness paradigm. However, Brown and associates recently completed an important study including the more advanced states covered in mahamudra. Drs. Brown, Brewer, Schoenberg, and Churchill recently completed a study with 30 intermediate level meditators that elucidated these stages of mahamudra meditation as having clear and distinct neurological signatures common to meditators at each stage of meditation (Schoenberg, et. al., 2018).

The study gave the first neurophysiological correlates of discrete mental states during Indo-Tibetan essence-of-mind practice using electroencephalography (EEG). The contribution of this study was its focus on the process of awakening as discussed in this paper, and represents an advance over prior studies focusing on mindfulness practices. The two higher stages of mahamudra meditation, one-taste yoga and non-meditation yoga, were differentiated into four specific meditative stages with each yoga comprising two meditative states.

The EEG findings indicated two major patterns. The first was that the current density upon entering the meditation state weakened in comparison to baseline control conditions observed in all frequencies and regions of interest. It is hypothesized that this was because the foundation of essence of mind meditation practice is to shift out of the cognitive/brain effort-effortless axis into recognizing aspects of mental experience that are always already present.

The second main finding was that while the default mode network activity in the medial ventral pre-frontal cortex and posterior cingulate cortex did not significantly increase across meditative states there was a unification of enhanced beta and gamma band density magnitude increasing from meditation state 1 (ocean and waves) through to meditation state 4 (stabilized non-meditation awakened awareness) that spanned the anterior cingulate cortex (ACC), precuneus, and parietal lobes. This separation of the default-mode network and the executive functioning system reveals an active executive functioning and yet non-self-referential pattern of activity i.e. the executive functioning of the brain was operational while the basis of operation shifted beyond the self-structure to timeless awareness and then awakened awareness.

The results also indicate that as progression of the effortlessness became stronger there was enhanced ACC (executive functioning/self-regulation), parietal and insular activation suggesting

the activation of brain networks associate with saliency, conflict monitoring, emotional control and shifts in perspective-taking that are inferred as supporting the very subtle meditative states of spacious awareness, non-duality, emptiness of phenomena, lucidity and referenceless.

Numerous EEG studies have revealed that EEG bands in the higher frequencies (beta, gamma) have been associated with the experiences of selflessness, non-judgmental awareness, and compassionate loving kindness (Schoenberg et.al, 2018). Our research showed that the anterior cingulate cortex (ACC), the central brain structure involved in executive functioning (working memory, theory of mind tasks, encoding reward prediction and prediction error, emotional regulation, cognitive processing), homeostatic physical states (hunger, thirst, awareness of breath etc.), and the encoding of stimuli valence through sensory modalities was active in the gamma bandwidth. This suggests *enhanced activity of executive control* capacities as they increasingly engage in maintaining *the view* as the practitioners shifted to deeper level of natural effortless meditation.

Increases in Gamma frequencies were also recorded in the parietal pathways of which the ventral stream relates to perspective shifting, such as from a first-person subjective perspective to that of a third person observer. Simultaneous to the continued activation of the parietal pathways, the self-referencing activity associated with the posterior cingulate cortex (PCC), part of the default mode network, remained deactivated throughout the stages of meditation. This was interpreted as relating to the phenomenological shifting from identification with the self (PCC) and to that of a referenceless basis of operation (parietal).

Beta frequency in the insular cortex associated with the metacognitive awareness and the modulation of interoceptive and emotional stimuli were also recorded. The researchers hypothesized that this was a possible neural marker for the non-preference or *equanimity* towards internal stimuli, which is a central marker of stage four, awakened awareness.

Further research is warranted, but one might hypothesize from the results that just as these states give specific neurological signatures so will the trait acquisition of these states as a permanent basis of psychological operation show specific neurological signatures. As practitioners engage in repeated meditative state practice, and the integration of the state into their lives, their basis of operation begins to permanently shift, and this is paralleled by a transformation in the neurological activity of the brain that can be measured. It is hoped that such research will support the legitimization of Indo-Tibetan contemplative psychology as a powerful means of reducing suffering and supporting the flourishing of positive mental states and altruistic engagement.

Clinical Implications

The adult developmental psychology of the Buddhist essence traditions has relevance to our understanding of psychopathology. It can be surmised that a path of contemplative practice that facilitates developmental would certainly make it easier to clear past developmental fixations. Forman (2010) in his text on integral psychotherapy noted that there has been little research on stages of adult development and psychopathology except that done by Gil Noam. In Noam and Dill's study of 89 adults in an outpatient facility (1991) it was discovered that whilst psychiatric symptoms exist at every stage of self-development there "was a clear decrease in symptom

severity in those individuals with higher levels of identity [ego] development” (Forman, 2010, p. 95). This finding was also later corroborated with adolescents (Noam & Houlihan, 1990). Forman quotes the authors conclusions: “Correlations between identity development and symptom severity scores were uniformly negative indicating decreasing distress from psychiatric symptoms with increasing ego maturity, across all symptoms dimensions” (Noam & Dill, 1991, p. 214).

Further research into advanced practitioners of Buddhist Essence meditation, and psychopathology would be an important contribution since Noam’s research only tested subjects up to 4.0/Pluralist and none who had shifted a basis of operation to the metaware tier of ego development. The implications of snags rgyas, the flourishing of positive mental states in an enlightened mind, are profound for our understanding of mental health. The contemplative tradition teaches a means of treating the mind toward eradicating all negativity, so the mind becomes stainlessly clean (Tbt: dri med) and open. Within that openness the tradition's "80 positive qualities of mind" can flourish.

A study undertaken by Daniel Brown Ph.D. and Jack Engler Ph.D. (1986) revealed this potential in the Rorschach of a Theravadin meditation master. Rorschach data were taken from tests with meditators across the stages of contemplative development. Whilst intermediate meditators still showed signs of psychopathology and even personality disorders, the one Rorschach of the master showed that his intrapsychic structure had undergone a radical reorganization with no evidence of any sexual or aggressive drive conflicts, or any instinctual drive for that matter, pointing to the fact that there are no permanently opposed endopsychic structures at the core of the personality structure. This understanding of the possibility of the positive mind is essential to our understanding of mental health and the direction that investigation should pursue.

Further research into the phenomenology of the higher tiers of adult contemplative development will also reveal the subtler forms of pathology associated with these realizations. Essentially the crux of pathologies related to the different basis of operations, existential modes, is linked in the language of Indo-Tibetan contemplative psychology to the under or over application of emptiness. “Problems at any of those sub-phases will generate pathologies (for example, failure to adequately dis-identify or transcend creates a fixation or addiction; failure to adequately integrate or include creates an avoidance or allergy” (Wilber, 2017, p. 413). It will be increasingly important that these possible pathologies are understood so that psychologists trained in contemplative practice will be able to differentially diagnose and treat such pathologies.

3.2 Underlying Mechanisms in Contemplative and Developmental Growth

This is the first of two sections in which we will compare and coordinate contemplative and developmental models. In this section we focus on themes that address development as a whole, regardless of level. In the next section we focus on phenomena that arise at different levels. In other words, in this section we discuss the fundamental principles or underlying causal mechanisms of development and contemplative achievement, operating throughout *all* levels and explaining the transitions between levels. This includes patterns that repeat or reiterate several

times across the spectrum of growth. In the next section we describe both capacities and practices as they *differ* across the spectrum of levels. Remember that adult cognitive development and contemplative development are overlapping but *distinct* processes. The "levels" described by developmental vs. contemplative theories are related but different, as we will discuss.

State, Stage, and View

Wilber-Combs Matrix. Ken Wilber, an important innovator in the transpersonal psychology movement, was also an innovator in the field of adult development. He synthesized over 100 psychological theories of development, revealing general trends and principles (Wilber, 2000). Through this body of work he saw that the concepts of state and stage were not sufficiently differentiated in transpersonal psychology models and eastern spiritual frameworks. Wilber (2007) clarified the difference between states of consciousness and stages of development, and thereby helped a generation of spiritual seekers and contemplative practitioners to understand that achieving an esoteric or "spiritual" state experience, even stable access to such an experience, does not necessarily translate into stable psychological maturity. Wilber (and Alan Combs) proposed a matrix separating the stages of ego/self development from stages of state identity (i.e. stable access to fundamental states). Along a horizontal axis they plotted levels of experiential state-identity: Gross, Subtle, Causal, and Nondual (i.e. the modes of existential awareness, or bases of psychological operations). Along a vertical axis they plotted the levels of (ego-) self-development as described in this text.

The point being that the two dimensions are independent – one can achieve any of the state experiences in any of the developmental levels – but one's *interpretation* of that experience will depend on the complexity capacity and psychological sophistication appropriate to their developmental level. For instance, a pastoral nomad in medieval Europe (Magic), a Christian fundamentalist in 18th century France (Mythic), and a Wall Street executive (Rational), could be given the same instruction, and in practicing the same way, experience the same state of formless awareness, and perhaps even mature it into a basis of operation or experiential mode. Despite sharing the same state/trait experience, the individuals would likely interpret their experience in completely different ways.

Though Wilber focuses on the primordial states mentioned in eastern traditions, i.e. waking, dreaming, deep sleep, etc., we will use a more extensive meaning of "state." Simply put: a state is an experience. It is what is happening in the moment, and from a neurological perspective is about what is *firing* in the brain (in any moment). In contrast, stages are learned capacities, which from a neurological perspective, are stored in memory and are about the *wiring* of the brain (which changes gradually through learning, etc.). Put another way, stage are about structure and state are about activity (activation). The state experiences we are most interested in for contemplative essence psychology are those that can mature into stable "bases of operation" and which form important foundations for ego development.

Views (1) – state-stages. An important question is, what is the relationship between states and stages, and in particular, how does the experiencing of esoteric contemplative states (or "spiritual" states, flow states, etc.) effect one's stable traits? To a first approximation, the Wilber-Comb matrix argument is that there is *no necessary* relation – the state and stage axes are perpendicular, i.e. independent. But, clearly, contemplative practice does help people grow

psychologically. Wilber does not say that meditation does not facilitate self-development, in fact he alludes to Alexander's research sharing that meditation can engage structural self-development as well as state-development: "In fact, meditation, can help move you *an average of 2 vertical stages* in four years" (Wilber, 2006, p. 137).

What we can say is that dedicated practices leading to state experiences can lead to *stable intentional/skillful access* to those experiences. And as any skill becomes mastered and used repeatedly, it eventually becomes internalized and normalized within the unconscious, so that it becomes automatic. Wilber and others have differentiated the trait changes (the modes of advancing or growing) associated with development from those associated with contemplative practice, calling the former states and the later *state-stages*. The Indo-Tibetan calls these *views*. One's access to a view matures from unstable access during meditation, to stable skillful access in meditation, to stable skillful access in everyday life, to becoming an automatic "basis or mode of operation" within normal cognitive processing.

Though to a first approximation (Wilber-Combs model) states and stages are independent, actually it is more accurate to say that certain stable state-stages are *necessary but not sufficient* for acquiring certain stages (see O'Fallon in this issue and Darrall-Rew & DiPerna, 2016). A number of writers (including Wilber, 2017; O'Fallon, 2016; DiPerna, 2014) have clarified that the state-based process of *waking up* is not necessarily the same as the stage-based process of *growing up*. All these theorists agree that access to, and the stabilization of, the higher stages of structural cognitive development are dependent upon the access to, and stabilization of, deepening degrees of metacognitive modes of operations.

We continue our conversation of view below at "Views (2) – as bases of operation." Next we explore the question: what processes are involved in creating these state-stages or views?

Unlearning, Disembedding, and Liberation

Unlearning: constructive vs. deconstructive growth. There is a prevailing opinion, implicit or explicit, that the later states of growth in psychological maturity and complexity necessarily track with later levels of spiritual or contemplative realization. However, suspicions that the two are actually distinct have been deep in recent times, with the many disappointing, and to some shocking, stories of "awake" or "enlightened" spiritual teachers who have committed moral breaches or other severe errors of judgment (Arterburn & Felton, 2001; Bell, 2002). Deep spiritual states don't necessarily lead to practical wisdom. The Wilber-Combs principle that states and stages are distinct explains this in part – but there is more we can say about it.

The difference between spiritual growth and cognitive growth is clarified in noting that cognitive development is mostly a process of *additive* growth, while most contemplative practices aim, in part, to *deconstruct* cognitive conditioning (McKee & Barber, 1999; Murray, 2018). Let us consider the importance of deconstructive learning, or *unlearning*.

As noted by developmental theorists (see section 2.2), the maturation of human cognition involves the accumulation of concepts, skills, and perspectives over time – through processes of differentiation (perceiving ever more nuanced differences and details) and integration (conceiving of ever larger gestalt wholes and general concepts). These build up hierarchically,

layer upon layer, from sensorimotor operations to concrete thinking and then "formal operational" abstract thought and beyond. Each piece of learning can be thought of as both a new tool that creates fresh capacity and *opportunity*, and a new binding or set of associations and assumptions that *constrains* the possibilities of future thought and action. For example, learning how to ride a bicycle or do multi-column multiplication creates new capacities; but also, as these skills are practiced and embed themselves into lived experience, learning them tends to make it less likely that one will learn and experience alternative ways. Beliefs about the self and skills associated with one's sense of self are particularly resistant to change and adaptation. Experiencing alternate approaches often requires *unlearning* and disembedding from learned patterns and assumptions (see Murray, 2019, on "unknowing"). One must often free oneself from the old to make space to constructing the new. There are obvious examples where unlearning is called for, for instance, when one comes to believe that one is not good at math, or that people on the other side of town are not to be trusted – but the applications of unlearning are broader than is usually recognized.

Hierarchical complexity models of development in the Neo-Piagetian schools (including Commons, Fisher, and colleagues) deal primarily with additive growth. While ego development (Loevinger, Cooke-Greuter, O'Fallon, and colleagues) differs in that it includes both additive learning and deconstructive unlearning. In ego development each unfolding stage of cognition (sensorimotor, preoperational, concrete operational etc.) leads to a metacognitive application of that level of intelligence towards the internal world of the psyche. This allows one to see the limitations of prior learning and either contextualize the prior learning by transcending into a wider perspective, and/or correcting or dismantling the prior learning. Both moves lead to new modes of freedom and choice.

Disembedding – self from content to context. As we have indicated, in many contexts in order to learn something new one must unlearn an existing structure. More precisely, what is usually needed is to *distance or disembed* oneself from the prior structure to clear away sufficient clutter and open up cognitive and behavioral space so that one can experiment with new objects and configurations of thought. This inhibits interference from habitual patterns that would crowd out the growth of new patterns. After the new learning is well established, one can then choose to revisit and *integrate* the old way with the new way, expanding the options available to respond to diverse contexts. In sum, unlearning is *disembedding from*, not *erasing*, prior cognitive conditioning.

In fact, the life-long process of ego (and meaning-making) development involves perpetually *recurring* phases of learning and *unlearning*. For example, to advance into formal operational thinking must critique, deconstruct, and/or disembed from conventional thinking and assumptions; while moving from formal operational to post-formal operational likewise involves dissembling from many of the assumptions of formal operational thought. Learning and unlearning occur at, and define, each major junction of development.

Creating this cognitive distance amounts to taking a broader perspective on prior conditioning, as in Kegan's process of reflectively turning subject into object – we come to see and evaluate a part of ourselves that was previously hidden. The ACT model (Hayes, et al., 2013) describes this as a shift in psychological operation from *self as content* (i.e. from fusion with a conceptualized narrative of self) to *self as context*, in which one operates psychologically as the observing self.

The pre-differentiated phase of cognitive processing is described as cognitive fusion or embedding. The term defusion (or cognitive defusion, Hayes, 2011), is another term for this process of constructing a part of the self that observes (reflects on) another part of the self. It is also known as disembedding, de-reification (Dorjee, 2013), re-perceiving (Shapiro & Carlson, 2009), decentering (Safran et al., 1993), deautomatation (Deikman, 1982), and detachment (Bohart, 1983).

Thus, as an infant grows into childhood there is both a growth in the increasing complexity of cognition and affect, and simultaneously a greater degree of being able to defuse from the objects of experience at ever deeper or more entrenched layers of the psyche. Ideally, over a lifetime this leads to greater freedom and simplicity. Unlearning can also be thought of as a letting go of, a liberation from, a seeing-through, or a deconstruction of some aspect of the self or meaning-making apparatus, and in so doing opening to a wider view of reality (and self) that is not constrained by that conditioning. "*Insights*" develop through or leading into this wider space. Insights can include deconstructive revelations that "[such] is actually not (necessarily) true," and *constructive* knowledge that "therefore [such] is (possibly) true."

Phases of development are represented in the STAGES model through its articulation of the *receptive* (passive), *active*, *reciprocal*, and *interpenetrative* phases of each tier. Each phase involves a different type of metacognitive process. The receptive phase occurs when one has disembedded from the prior world-view, creating enough distance to open to new types of objects in awareness (related to Kegan's subject-to-object process). At first the learning task is simply to recognize these objects (raw awareness). Further development (active) leads to the ability to compare, contrast, and order them (and to a fascicle ability to experience arisings without being merged with them – detachment). Further development (reciprocal and interpenetrative) leads to the integration of the new knowledge with what was distanced in the prior worldview (assuming development progresses in a robust way). This process of progressively deepening insight shifts the individual from temporary states of functioning to possession of enduring psychological traits (i.e. from states to stages). This contemplative mechanism of being aware without mental engagement in the contents of awareness is central to the process sequence of: (starting with passive fusion), passive raw awareness, active and reciprocal differentiation, and interpenetrative integration drives psychological growth through all stages of ego development (Wilber, 2000; O'Fallon, 2013).

Levels of emptiness. Contemplative essence practices aimed at this goal are also called "*emptiness* practices" – i.e. the contemplative metacognitive practice of examining direct experience to recognize its constructed nature, as it matures through the stages of contemplative practice. First the student learns the *theory* (i.e. conceptual map), that everything one experiences is constructed by the mind, and decomposable into parts ad infinitum. This idea is examined conceptually as it relates to the objective and subjective worlds of experience. This cognitive understanding is then matured through a series of progressive metacognitive practices examining specific psychological structures. The examination proceeds in phases with the decentering of the: body, self, emotions, thoughts, time, duality, core beliefs, and attentional system.

Emptiness practices makes visible to awareness tacit assumptions that *construct* one's sense of self and understanding of world. To make these constructions objects of *awareness* is to motivate the *deconstructive* move of perceiving reality absent of them. The result is not necessarily as

much a "truth" as a perspective one learns to take. That is to say, one does not so much discover that body, self, time, concepts, etc. "do not exist," but rather that the ways they appear to us are constructions of the mind. Thus "emptiness" in these traditions does not take the nihilistic meaning of knowing (for sure) that something does not exist, but rather indicates the freeing capacity to *choose* to perceive the world absent of certain assumptions or modes of conditioning.

Unlearning can happen at many levels. Learned knowledge, beliefs, and practical skills can be unlearned or re-framed when reflective metacognition shows them to be inadequate. Psychotherapy is usually a process of bringing to awareness, then evaluating, and then disembedding from, beliefs and learned habits that negatively impact our *relationships or everyday happiness*. The unlearning that is of interest to us here involves the even deeper cognitive structures that define one's sense of identity and manufacture the contents of one's familiar experiential field. Compared to western psychology, contemplative traditions provide a more precise map of the process of unlearning the *self-system and the perceptual system*, that subsist at more primitive/foundational levels of the mind. The meditative processes outlined by the traditions of mahamudra and rdzogchen support deconstructive insights into the constructed nature of reality (in perception, conception, and belief).

We can expand upon the notion that deconstruction (unlearning) can target specific levels of early/foundational development. Very early the infant learns to process the unintelligible buzz of sensory input to perceive individual objects *as* recognizable objects. At some later point one *constructs* one's perceptual "understanding" of time, and of space. Later one learns that, among this activity of perceptual objects and events moving in time and space, some are *mine*, i.e. those that I have control over and feel as *my* body. Later in the development of the self/ego one learns that images that arise from memory and imagination can be distinguished from perceptual images, i.e. one learns to differentiate the duality of the interior vs. exterior worlds (imagination and reality begin to separate). Eventually the infant begins to learn that objects have *names*, and language and conceptual categories (classes defined by durable features) begin to form. Along this path one also learns that the feelings and needs one experiences are distinct from the mother's (i.e. that others have their own interiors, needs, and experiences), unmerging self from other to build the first steps into autonomy.

Each of the early constructions noted above are essential to human functioning. Yet each also locks one into a particular mode of perception, conception, and being, and becomes the unexamined unconscious ground from which one acts. Disembedding from each of these foundational structures has its own particular results. (Results which contemplative traditions valorize, but which might also be seen as hazardous for some individuals.) Each of these types of conditioning (learning) was constructed in its own time and level within the cognitive architecture. Different techniques may be needed to disembed from each of these (though some techniques will target more than one of them). The Indo-Tibetan traditions specialize in elaborating exactly such a diverse toolbox of methods, which the contemplative essence schools have attempted to coordinate them into a coherent system.⁶

⁶ It is also the case that individuals will differ on what method or "trick" works best for them to see through any given type of conditioning, and the traditions offer a variety of approaches to each goal.

Eastern scholars have contemplated this territory deeply, but modern cognitive science is also discovering much about the fine-grained sequences of acquiring these skills (in part through the study of infants and children, something the wisdom traditions did not do). It seems possible that specific contemplative practices and contemplative states can be mapped onto this progression of infant (and beyond) development. States and state-stages such as thought-free empty awareness, no-self, non-dual merging of interior and exterior realities, timeless presence, vast spaciousness of open awareness, etc. – can, theoretically, be mapped to specific layers of early cognitive processing being uncovered in cognitive science.

Supports for cognitive defusion. Into/Tibetan contemplative essence psychology and theories of contemplative metacognition prescribes a number of methods and principles for achieving/supporting the process of cognitive defusion (disembedding, etc.) at various levels of cognitive processing. Here we can draw from our tour of the literature on metacognition and contemplative practice. *Concentration* practices create focused awareness and inhibit distractions; and include attitudinal adjustments (e.g. equanimity) that support open awareness. For example, Hayes' ACT model includes “the creation of *nonliteral, non-evaluative contexts* that diminish the unnecessary regulatory function of cognitive events” (Hayes, et al., 2013 p.4). ACT (and MBCT) teach the client to come into direct experiential contact with the present moment (rather than being dominated by conceptualizations of the past and future) and, rather than attempting to alter the form, frequency, or intensity of cognitive experience (experiential avoidance), learn to accept it and be curious about it (Hayes et al., 1996).

We have noted that affective cognition is closely tied to the rest of cognition. For cognitive disembedding to serve its purpose in psychological healing and liberation, it must be accompanied by an attitude of acceptance (equanimity). If prior learning is rejected, distorted, or repressed without being re-integrated, this can lead to psychological dysfunction (Wilber, 2017).

In the psychotherapeutic disembedding from identification with dysfunctional experience such as maladaptive thoughts, negative beliefs, reactive emotions, and traumatic sensations, the client is able to develop perspective on their experience that allows for transformation. According to Yates (2017) mindfulness recodes the information from the object level so the dissociative processes of internal verbalization and defense mechanisms, which distract from immediate experience, do not distort it. This process of decreasing temporal dissociation reduces cognitive fusion (“the tendency to buy into the literal meaning of thoughts, feelings and bodily sensations” Herzberg et al. (2013, p.1)). This is supported by (Dahl et. al., 2015) research done on how the attentional practices of meditation stabilize the self-regulatory meta-level (Jankowski and Holas, 2011) of the metacognitive attention (Yates, 2017).

Views (2) – as bases of operation. Picking up our discussion of view from above (“Views (1) – state-stages”), the concept of *view* is central in mahamudra. *View – tawa (Tbt.) or dristi (Skt.)* – literally means the view from which one experiences phenomena. We mentioned above that a view is a stable state-stage in Wilber's terminology. Though some treatments focus on one particularly significant state-stage, noting that establishing “the” correct view is an essential milestone, we will speak of views in the plural.

Above we mentioned how cognitive defusion (unlearning, subject-to-object shifts, emptiness practices) help *establish* a view. But what exactly is a view? In the most general sense, views are

modes/levels of *perceiving* the world, while stages are modes/levels of *conceiving* (making meaning of) the world. The developmental stages of meaning-making (and ego development) are largely about what one can see, recognize, reflect upon, and contextualize – primarily manifested through language. This constitutes an *explicit conscious* capacity to demonstrate understanding of something using one's conceptual apparatus. A view is more perceptual than conceptual, and does not require verbal elaboration to be achieved. Referring to our distinction between meta-knowing, meta-sensing, and meta-thinking, the view is a type of meta-sensing. We might also say that a developmental stage involves *focusing in* to "grasp" an object, "peer" into its details, and "link" it with other objects as a larger whole; while a view is a capacity for *open awareness* that steps back/out to take in the whole as a field, and forms a ground or space of potential within which objects can arise – perhaps to later be grasped (focused on). (Though practices that help *establish* a view will also use focusing practices.)

The different layers of cognitive processing noted above imply a differentiation (perhaps even a hierarchy) of views. Contemporary psychological models of metacognition and contemplative practice talk about views, but have yet to fully tap the knowledge within contemplative essence traditions. For example, Dorjee's (2013) model explicitly acknowledges the need to better articulate the progression of views, which they call "modes of existential awareness," which come from the increasing degrees of de-reification achievable with contemplative practice. Our analysis here argues that views are more adequately defined by what layer(s) of perceptual/conceptual habits of mind have been *deconstructed/disembedded* than by a hierarchically built-up capacity. The more advanced "higher" views come from more flexible/free bases of operation at *deeper* layers of cognition.

Brown (2017) explains that the view is dependent upon the basis of mental operation (*spod yu*), the loci of identity, level of awareness or vantage point from where the mind's metacognition is operating. In essence practice the meditations are less about meditating on something as they are about learning to operate from a new level of awareness, a new basis of operation, and from there to take a new perspective or view on experience. The process of contemplative development as outlined in the essence traditions is a metacognitive process of learning to shift the psychological basis of operations to deeper and deeper levels of awareness.

One's access to a view matures from unstable access during meditation, to stable skillful access in meditation, to stable skillful access in everyday life (when one consciously chooses it), to becoming an automatic (natural) basis or "mode of operation" within normal daily cognitive processing. As awareness becomes liberated from confused identification with the contents of consciousness it is eventually able to recognize "primordial" aspects of its nature. With each new basis of operation, a field of new types of objects (phenomena) is available to conscious awareness. As in O'Fallon's receptive phase, at first this new field may seem empty-yet-pregnant, or vibrant-yet-elusive. But, with practice and time, new types of objects take form, and are seen to arise clearly within this newly expanded field, and can be objects of reflection, comparison, manipulation.

Mind vs. Event Perspective (figure and ground in contemplative practice)

Let us return to an aspect of metacognition mentioned in Tashi Namgyal's (2006) elaboration of one taste yoga: the mind perspective vs. the event perspective. Each basis of operation (state-

stage or view) has the capacity to view phenomena (or content, i.e. taking the event perspective) and has the capacity of self-recognition (through metacognition, i.e. taking the mind perspective). The *event perspective* refers to the perspective of mental objects perceived at that particular level of awareness i.e. concrete objects for the concrete tier and subtle objects (such as thoughts) in the subtle tier (and awareness itself for the metaaware tier). The *mind perspective* refers to the perspectival capacity to self-reflect on subjectivity and recognize the level of awareness from which the mind is operating.

In One Taste Yoga, establishing the view involves exploring the timelessness of the spacious phenomenological field of perception, and then recognizing the nature of the awareness that perceives such a field – thus shifting from event to mind perspective. Tashi Namgyal (p. 225) lays out three stages to the actual identification of the spontaneous coemergence: “When the meditator perceives the clarity of perceptive form and its unidentifiable emptiness as being the inseparable, denuded union of appearance and emptiness or emptiness and appearance, he has gained insight into the intrinsic coemergence of appearance” (p. 233). Brown (2005) calls these mind-simultaneous, cognition-simultaneous, and appearance-simultaneous views.

The complementary abilities of *focusing* attention on specific details or parts, and *open monitoring* of the perceptual field (i.e. zooming out to see contexts and wholes, like scanning in peripheral vision) have been identified as primary or core cognitive functions (Ainsworth et al, 2013; Fujino et al, 2018; McGilchrist, 2019). Open monitoring is not necessarily open to all phenomena in the moment, but is a vigilant yet relaxed seeking for any phenomena within some bounds (called “still hunting” by Bonnitita Roy – personal communication). For example, one can open one's perceptual field to awareness of “all moving things,” “all red things,” “all sounds,” or “all thoughts” that might arise in any moment (opening to *every* phenomena arising in any moment is quite difficult and perhaps impossible, but see, for example, Shinzen Young's “cross training” methods of opening to inner sight, sound, and touch separately and then in a coordinated fashion (2016a,b)).

The mind perspective adds an additional shift to this open monitoring. It moves from the outward-facing open monitoring to sensing the subjective field itself – a figure-ground switch like seeing the frame holding a picture, which is very close to, or yoked to, the inward-facing sensing of the organ of perception *of* that field. In the still-hunting of the deer hunter, one maintains a relaxed open gaze anticipating movements that might reveal the prey. But it takes only a slight sift of perspective to notice the open field itself, which in this concrete case means the expanse of grass and shrubs, moving slightly in the breeze, covered by open sky; and another slight shift to feel into the *nature* of that open space – e.g. its expansiveness, the lushness of its texture, the warmth of its color pallet...; and yet another slight sift to become aware of the looker (the hunter) and notice these qualities as qualities one is feeling coursing through one's body; as a still point of observation that is both apart from and a part of the field.

In the case of contemplative practice, the shift is to noticing that some “I,” or awareness-looking-through-my-eyes, or awareness-itself (perhaps just different meaning-making metaphors for the same phenomena) is *doing/being* something that is experiencing the phenomena. (The event-vs-mind perspective shift can be demonstrated at the *concrete* level by shifting from feeling/exploring an object, say a pen in one's hand, to experiencing the hand from the inside *as* touching/feeling/exploring the pen.)

The application of these core processes of focused awareness vs. open monitoring (and event vs. mind perspective) reiterates through developmental tiers, first within sensory-motor perception of the *concrete* world, and later with ability to metacognitively direct thought itself in the *subtle* tier. (At the *metaware* tier the process reiterates with a deeper awareness of the mind-body system as an integrated whole, including apperception of aspects of the unconscious revealed through somatic signals, and an awareness of awareness itself.)

The STAGES model can be used to tie this aspect of mahamudra to developmental theory. STAGES posits that each developmental stage starts with an exterior (other-oriented) orientation and matures to interior (self-oriented) orientation. STAGES scorers can distinguish "early" vs. "late" phases of any of the 12 levels by assessing the exterior/interior dimension within language cues. We suggest that the exterior orientation can be mapped to the event perspective, and the interior to the mind perspective. In this treatment mahamudra informs developmental theory by adding details about the practice of mind-vs-event perspectives; while developmental/cognitive theory informs, or empirically confirms, the mahamudra model.

Psychological science indicates that self-understanding is often preceded by understanding of the external world. For example, a child learning about the concept of anger (concrete) or prejudice (subtle) will see it as a negative characteristic of others well before seriously considering "am I prejudiced [or angry]?" As Forman notes: "All the stages of identity development, therefore, rely on different forms of outer-directed cognition eventually being used in the inner world of the self" (2010, p. 80). Similarly, STAGES proposes that new objects of awareness are recognized outside the self first, and within the self later – i.e. that exterior awareness precedes interior awareness, and that this pattern iterates for every developmental fulcrum.

Here we should clarify what is meant by exterior vs. interior, which is actually, as Forman calls it, outer-directed vs. inner-directed, or about you/they/it vs. about me. I.E. this is *not* a classification of objective (or 3rd person) phenomena vs. subjective (first person) phenomena, since one can be thinking about both the behavior (external or concrete) *or* the cognition (subjective or subtle) of another person (vs. oneself).

The outer-vs-inner directed (exterior-vs-interior in STAGES terminology) maps directly onto the event vs. mind perspective in mahamudra, if we treat exteriors as the content of perception/cognition and the interior as the metacognitive process of becoming aware (making object) that mental content or process. Logically the content must come first – one must be able to notice objects in the field before scanning the field itself for possible instances of those objects.

In the inner-directed phase of each developmental fulcrum the individual is using the sophisticated cognition that they have developed in cognizing about the *exterior* world, and are now directing that cognition towards the *self* in the form of metacognition. This process then re-formats the self-structure according to the new higher order cognitive actions. As such, each level of cognitive complexity has an associated level of metacognitive complexity, and a new understanding of the self-structure. (This also implies that the notion "going beyond the self" is ambiguous, since what one identifies with shifts at each level, into ever more subtle and decentered phenomena.)

In contemplative essence practice a toggling is apparent between the object and subject, as well as between the event perspective and mind perspective. For instance, during the process of developing attentional capacity the practitioner begins by developing the ability to stay on an object from the event perspective. Once stability is developed the meditator learns to switch perspectives and meditate from the mind perspective on the inherent spaciousness, non-reactivity, lucidity, and knowingness of awareness. (To say it another way, one shifts from the content of experience to the meta-cognitive contextual awareness of the experience.) When the aspirant begins to study emptiness he or she would also first come to understand emptiness through its application in the analysis of everyday objects, the most common approach being Chandrakirti's sevenfold reasoning (Pianka, 2009). Once one has the conceptual understanding that the human body, a car, etc. can be broken down into innumerable parts, none of which constitutes a *body*, then that same analysis can be non-conceptually applied in meditation to the self-structure leading to a recognition of a level of awareness beyond the self. This same pedagogical process of focusing first on the event repeats itself to support the recognition of the space-like nature of awareness during one-taste yoga, and the recognition of referenceless awakened awareness during non-meditation.

In the next section we will illustrate the interplay of mind vs. event perspectives sequence over several levels (3.0 to 6.5).

Summary: Repeating Patterns

We have noted several inter-related processes that repeat or reoccur periodically through the entire developmental sequence: (1) the movement from receptive (passive) to active to reciprocal to interpenetrative modes; (2) movements of learning, unlearning (or disembedding), and re-integration; (3) the movement from state experiences (first as glimpses and later at will), to steady automated state-stages or views (which create awareness capacities that enable particular fulcrums of development); and (4) shifting between event perspective and mind perspective (mapping to STAGES outward/exterior vs. inward/interior focus).

From the metacognitive literature we can also note (5) the interplay of attention and intention (as attention to intention, and intention on attention). Once metacognition brings the nature of this interplay into awareness, one can de-activate the processing involved in attention and intention to develop choiceless awareness (just sitting) as an automatic, natural process.

We have also noted, from the STAGES model, (6) the pattern of growing from understanding individual objects to collective objects, which can also be understood from MHC (Commons' and Fisher's theories) as increasing complexity from the awareness of objects in isolation, to perceiving relationships between objects, to seeing ever more complex systems of objects, to having those systems so fully integrated that a new whole emerges at a new level. Within the contemplative psychology of the Mahayana this shift from individual to collective relates to the shift from an individual and personal experience of awakening to the recognition of the universal interconnected and interdependent matrix of reality that is a collective. It is a shift from an apparently awakened 'me', to an awakened 'we'. This shift in realization has a profound implication to ethical and moral behavior as the individual realizes that their personal spiritual unfolding actually co-arises and is inseparable from the spiritual unfolding of the larger social body and by extension all sentient beings.

All of these patterns are described in the scientific psychological literature in terms of basic functions of the mind, and they are present in the Indo-Tibetan contemplative essence tradition through practices meant to support human liberation. This tradition elaborates, in successive levels, the metacognitive refinement of psychological insight into the constructed nature of human experience; and does so with practice injunctions that support the experience and embodying of these states and stages, vs. the mere objective (disembodied, conceptual, theoretical) understanding of them.

3.3 Levels of Developmental and Contemplative Growth

In this section we shift from describing repeating or iterating patterns of developmental capacities and practices to describing capacities and practices as they *differ* across the spectrum of levels. Here again, the contemplative essence tradition can be seen to coordinate well with modern psychological and cognitive theories.

Tiers: Gross, Subtle, and Causal

We will start with the large-scale structure of development, sometimes described as a progression of "tiers," and we will later discuss finer grained phenomena per level (by stage). As mentioned above, standard western psychology has elaborated on the significant movement from concrete operational to formal operational thinking, where the latter includes the adult capacities of abstract and logical reasoning. These shifts can be seen as emergent leaps in the types of objects that one can be aware of (and thus coordinate and manipulate). Fischer's Skill Theory refines the idea to specify these tiers: sensorimotor operations, representations, abstractions, and principles – where the first two are concrete operations, the next two are formal operations (Fisher, 1980). Common's model adds a higher tier for paradigms, making way for "post-formal" and post-post-formal operations (Richards & Commons, 2002).

As has been described, these models map cognitive complexity alone, while ego development models include the application of complexity capacity to the *interior* domain of the self, or the domain of the ego-involved, and thus describe processes of unlearning and disembedding that map transformations of the whole self, opening up ever wider fields of perspective and state-stages of awareness. (Remember that this describes the ideal case, in which increasing heights of complexity coordinate with increasing depths of state-stage development – while, in less than ideal, yet common, cases height and depth can develop separately, as noted in the Wilber-Combs principle.) O'Fallon's Concrete and Subtle tiers map to the concrete and formal operations and of other models, and she adds a post (or post-post) rational tier called Metaware, in part influenced by Wilber and his descriptions of the spiritual aspects of the post-rational territory.

Wilber's and O'Fallon's models are strongly influenced by eastern models, which describe three fundamental tiers: gross, subtle, causal. Drawing on the Indo-Tibetan tradition, we can expand this to include four levels:

- The *coarse* (or gross) level of mind, which has a basis of operation of awareness fused with body, thought, and self structure, and is also the foundational metacognitive mode of the concrete tier of development (STAGES Concrete tier, 1.0-2.5). O'Fallon extends the

mahamudra notion of View into the lower tiers, suggesting that developing View at this tier involves the ability to simply *focus attention* on concrete objects (individual and collective).

- The *subtle* level of mind, which has a basis of operation of awareness beyond the self-structure, and is the foundational metacognitive mode of the subtle tier (STAGES Subtle tier, 3.0-4.5). According to O'Fallon, the basic View of this tier involves the ability to focus on the objects of thought, including subtle feeling states.
- The *very subtle* level of mind, which has a basis of operation awareness beyond temporal/spatial processing, and is the foundational metacognitive mode of the metaware tier (STAGES Metaware tier, 5.0-6.5). For O'Fallon, the view at this stage can also include awareness of the meaning-making process happening in real time (leading to construct awareness).
- And, the *awakened* level of mind, with a basis of operation beyond informational processing of the intentional/attentional system, and which is the foundational metacognitive mode of the unified tier (STAGES Unified Tier, 7.0-8.5).

Seen through the STAGES model, contemplative psychology provides the theory and means for recognizing the bases of operation that are the foundational identities of the higher tiers of development (metaware and unified) necessary for advanced adult development. From the perspective of Indo-Tibetan essence psychology, contemplative practice focuses on the knowledge and skills to support the recognition of new contextual existential modes of awareness, basis of operation, and the integration of perceptual and mental content into those basis of operations. As seen in Table 1 below, the direct relationship between the tiers of development, levels of mind, and basis of operation allow for a potential theoretical integration of these theories.

Table 1. Tiers of Ego Development, Levels of Mind, and Basis of Operation.

Tier of development	Level of Mind	Contemplative Bases of Operation
Concrete	Gross	awareness fused with body, thought, and self structure
Subtle	Subtle	awareness beyond the self-structure
Metaware	Very Subtle	awareness beyond temporal processing
Unified	Awakened	beyond localized informational processing of the attentional system

Concrete and Subtle Tiers – practices and capacities

1st and 2nd PP religion and practice. When eastern spiritual and contemplative teachings were brought to the west in the mid-twentieth century they were somewhat distorted – modified

to suit western cultures, and perhaps also biased because of common characteristics of eastern teachers who would be drawn to teach in the west, leaving their cultures behind. What was generally lost is the importance of foundational practices within what we would here call the concrete and tier (and also but to a lesser degree, the subtle tier). Spiritual seekers and contemplative enthusiasts usually imagine they seek some state or stage beyond the norm. Though spiritual and contemplative practices almost universally reiterate traditional teachings about ethical and physical foundations, it is easy for these to become attenuated in western culture – as if "we already have that taken care of," when in fact, the opposite case could be made that it is in the ethical sphere and the early psychological "attachment" domain that the West is most lacking and/or pathological. That being said, many are indeed inspired by the ethical principles and moral narratives brought from the East; and body-based yoga practices have obviously proliferated in the west.

As in other religious traditions, most followers/practitioners of Buddhism live in simple pre-modern contexts and have infrequent opportunities to develop abstract thinking skills. Even for the minority who studied in monasteries, where intellectual rigor was taught, the opportunities for exposure to diverse perspectives was much less than that afforded by the modern world with its communications and transportation technologies.

Meditation in itself is not seen as enough to facilitate the kind of integrated growth necessary for the training an awakened mind. Foundational features that we would associate with concrete or conventional modes of thought accounted for the bulk of religious engagement for most traditional practitioners. These include: story telling; rituals; the repetition of movements, words, or sounds; simple actions of service and devotion; and numerous rules and principles defining an ethical lifestyle (prohibiting lying, stealing, killing, etc., and encouraging pro-social attitudes). At this foundational concrete level of understanding Buddhism also offers a number of tools for tuning the *attitude*, *motivations*, and background *knowledge* of the practitioner so as to support the central goals of skill-building, mental purification, and insight generation. Examples include: the charnel ground contemplations of inevitable sickness and death; and invocations calling for the guiding support of ancestors or etheric teachers. Within Indo-Tibetan schools, the Khrid system from Bon rdzogchen prepares the mind for emptiness practices through methods including contemplating impermanence, setting clear intentions, and mentor-bonding.

The above apply to ordinary followers and practitioners. Those in charge of the more rigorous studies of the monastery sternly enforced ethical rules and concrete behavioral injunctions, as prerequisites to more esoteric practices. Though, surely, there are exceptions, this level of concrete-tier rigor contrasts greatly with how, in the contemporary west, "almost anyone can walk off the street" and plunge deeply into a contemplative practice program. The west also tends to lack the rigor of the custom-based teacher accreditation/legitimation methods maintained in the east – allowing for many teachers with questionable foundations who "hang the shingle" advertising their gifts. (Of course there are many exceptions in the west to this low bar for student entry and lack of teacher certification rigor.)

Contemplative training has been historically undertaken within the larger context of a monastic liberal arts education that included study and intensive retreat experiences. In the subsection on "omniscience" above we noted that, along with metacognitive (meditative) training, Indo-Tibetan Buddhist education emphasizes *cognitive* training comprising knowledge in ten

fields (that can be summarized as: logic, language, medicine and healing, the arts, and the Buddhist science of mind).

All this is to say that, when considered from its indigenous context, Buddhist contemplative frameworks were *well aware* of the necessity of concrete operational (1st PP and 2nd PP) thought and associated behaviors as the prerequisite foundation upon which formal-operational domains (3rd PP) were built – even though one might think the concrete operational considerations were lacking by observing only western instantiations of eastern practice.

3rd PP skill-building – metacognition. Contemplative traditions also directly support 3rd PP capacities in two forms: *metacognitive* thought and abstract *theoretical* knowledge. Formal operational thought includes the metacognitive capacity to monitor and think about one's own thought processes. It also includes the *logical* reasoning capacity for causal analysis and self-reflection, which in contemplative contexts is essential for developing an understanding of the cause and effect of the pervasive reactivity characteristic of the undeveloped mind. These combine to produce skills such as reflective thinking, critical thinking, perspective taking, self-authorship, and self-directed learning.

The fundamental practice of honing one's ability to focus on concrete objects, such as a candle flame, a mantra, or the tip of one's nose, are *concrete* practices. Mindfulness practices that call for one to maintain focused attention on the interior world of thought processes and subtle body sensations correspond to *subtle* tier 3rd PP skills in the STAGES model. These processes can lead one to elementary insights into the emptiness of thoughts, beliefs, and egoic attachments (see the sub-section above on "Prajna: insight into impermanence, reactivity, no-self, and emptiness").

It is important to emphasize the significance of the fundamental cognitive skill of sustained attention that is developed in the tradition through the practice of calm/staying concentration meditation. The stages of meditation are a form of learning, and like all forms of learning the ability to concentrate on the topic at hand is primary to learning about the topic more deeply. The research undertaken into the stages of contemplative metacognition reveal that the Anterior Cingulate Cortex (Schoenberg et al., 2018), which is activated in states of heightened concentration, is engaged by intermediate practitioners when learning to stabilize the new existential modes of operation in one taste and non-meditation. The training of attentional capacity is therefore fundamental to moving into the stages of adult development associated with contemplative practice. Within traditional Indo-Tibetan practice instructions we can find correlates to all of the sub-processes of attention cognitive processes noted in Grossenbacher et. al., (2017), including disengaging, shifting, engaging, sustaining, monitoring, and scope modulation of attention.

First the student learns the theory that everything in reality is constructed, made of parts connected to other parts ad infinitum. This truth is examined conceptually as it relates to the objective and subjective world of experience (in other words they are given the cognitive map). This cognitive understanding is then matured through a series of progressive metacognitive practices examining specific psychological structures. As we said, the material is first understood in an outward-facing more objective or conceptual sense; and then applied to the inward-facing domain of understanding and transforming the self.

3rd PP skill-building – logical reasoning and theoretical knowledge. We noted the importance of abstract *theoretical* understanding about causal relationships and subtle interior processes. The theoretical knowledge needed to authentically practice the mahamudra or rDzogchen essence psychology would include at least the following:

- knowledge of causal (Hinayana), systemic (Mahayana), and (essence) metasystemic levels of analysis to understand the causes of individual and social suffering and happiness,
- basic knowledge of how individual psychology, personal health, and the outer environment effect learning and practice,
- knowledge of motivation and its development from an individual focus on peak performance to the full maturation of the heroic altruism seen in the bodhisattva,
- the knowledge of the importance of character strengths and their development, and the self-knowledge needed to recognize personal character strengths and weaknesses,
- a pragmatic understanding of contemplative Buddhist psychological models of mind (attention, eight consciousnesses, levels of awareness, mental structures, etc.),
- understanding of the theoretical map of the contemplative journey,
- knowledge of the theory and developmental stages of practices for visualization, concentration, mindfulness, insight, energy cultivation, dream and sleep yoga, and essence practice, and
- the knowledge of the interaction between the practices and the possible aberrations of the practices.

Rudimentary versions of most of these ideas can be understood by concrete thinking. It is also true that more advanced forms of understanding them can move beyond the linear cause-and-effect, and strictly hierarchical relational structures of 3rd PP thinking into co-definitional, interpenetrative, ecological, and holographic structures understood by 4th PP cognition.

4th PP capacities. Because of the previously mentioned differences in the contexts of pre-modern vs. modern cultures, there are marked differences in how each person perspective manifests itself in traditional eastern vs. modern western contexts. *3rd PP* skills in traditional (here eastern) cultures were more limited to advanced study, as in the monastery, or among the well-to-do, or to highly cosmopolitan regions having a constant influx of alternative perspectives. Because the development of modern science and technology has required a sizable infrastructure including robust cross-fertilization of ideas and the efficient production and transportation of materials, and a work-force supporting all of that – all missing in traditional cultures – 3rd PP formal operational thought in traditional Buddhism took the forms of rigorous logical analysis and highly abstract concepts and models *without* including the "scientific method" presumed to have given rise to modernity. That 3rd PP cognition is more the norm in modern society implies that a higher percentage of people are ready for deep contemplative training (vs. say, concrete

level Buddhist religious dogma, beliefs and rituals). That being said, it may also be the case that the modern mind has a more neurotic and complexly dysfunctional psyche, with more incomplete 1st PP and 2nd PP foundations, which could either inhibit contemplative insight or, worse, produce dangerously distorted outcomes from contemplative practices applied without the proper prerequisites (as described above).

There are also differences in how *4th PP* manifests in traditional vs. modern contexts. 4th PP emerges, in part, from grappling with the *limits of the 3rd PP* worldview. We see that 3rdPP empirical science, technology, and logical thinking have created as many problems as they have solved – both the achievements and the calamities of modernity are pronounced, whilst the calamities threaten to destroy humanity and the entire biosphere. 4th PP is associated with deconstructing the modern narrative and its materialists, triumphalist, and imperialist overtones; and revealing the hidden habits of externalization, extraction, and short-term thinking that feed modern progress. In comparison, traditional cultures had only a hint of the havoc possible when 3rd PP thinking took control. Thus their development of 4th PP capacities was not only rarer (in proportion to the number of 3rd PP thinkers that could develop further), but also less well fleshed out.

In addition, the 4th PP worldview is spurred by the cognitive dissonance that occurs when one encounters perspectives and viewpoints different than one's own. As we said, though some monasteries and cosmopolitan centers were known as places where cultures and knowledge-systems intermixed, it was nothing compared to the rapid movement and confrontation of ideas possible today. In the STAGES model 4th PP involves understanding subtle *collectives*, which includes the ability to reflect not only on one's thoughts and others' individual ideas, but on whole *systems* of ideas (as well as interior systems of sub-personalities). It is the collision of entire cultures and world-views, seen not over the slow course of human migration and generational shifts, but in the immediacy of televised (and twittered) wars, class conflicts, and intersectional identity politics – that forces us to see the limitations of, not just individual ideas, but our deepest cultural and identity-forming tacit assumptions.

Thus the 4th PP mind begins to contemplate the movement and evolution of *collective* thought, in the form of belief-systems: memes, worldviews, identities, paradigms, etc. Following the STAGES model of exterior (outward facing) before interior (inward facing) learning, we first see the noxious assumptions within unexamined belief systems as *out there* in "the system" ("the man," patriarchy, capitalism, the military industrial complex, etc.), and only later begin to know that our own thinking is always inevitably constrained by tacit cultural and psychological thought-systems. (3rd PP can see how the individual thought *processes* cloud mental clarity, but is not yet thinking in terms of collective thought-systems.) 4th PP thought also sees how knowledge is *hermetically bound* and *highly contextualized* – i.e. the interpretation of any text, concept, or idea can vary greatly based on the cultural and historical background it is interpreted within. In sum, truths and beliefs are revealed as social constructions.

The above partially explains why traditional religious and spiritual cultures can seem ethnocentric, patriarchal, and over-confident from the contemporary (or post-modern) perspective. Given this explanation of how 4th PP thinking in modern times will differ from 4th PP thinking in pre-modern times, we can still note how 4th PP cognition is represented in Buddhist theory and practice. 4th PP ego development occurs when one applies 4th PP cognitive

complexity capacity to the domain of ego or self-involvement (including self-understanding and relational understanding). As we said, 4th PP perceives complex systems of objects or ideas (including systems of interior parts/processes). It begins to notice not just the impact of *certain types* of thoughts, but the misfortunes perpetrated by *thought itself*, and by reason itself. 4th PP cognition is also well equipped for multi-perspective taking, as it sees the limitations inherent in all/any perspective (not just some perspectives). In addition, 4th PP can better tolerate paradox and uncertainty, a hallmark of flexible thinking. It can better see variables and relationships as interdependent, and conceptualize open boundaries between systems (Koplowitz, 1984).

We can postulate that Hinayana, the first turning of the dharmic wheel, roughly corresponds to the awakening of 3rd PP; and the Mahayana, the second turning, roughly corresponds to the awakening of 4th PP. Mahayana introduces notions of emptiness (of various forms) and non-duality, and many of its texts work specifically with paradoxes, which is another 4th PP capacity. For example “deep examination of the essence of mind through wisdom will reveal the mind in an ultimate sense to possess neither intrinsic nor extrinsic reality; it is without structure” (Namgyal, p.64). The doctrine of dependent origination concerns the massive (systemic) co-determination of all objects of awareness. Mahayana is also more concerned with the liberation of the *collective* than the individual (as in Hinayana).

4th PP opens consciousness to the conditioning of and limitations of the mind; but, until 5th PP is obtained, these realizations are usually conceptual and after-the fact. The insights about the constructed nature (the emptiness of) self and ego, beliefs and ideas, and norms and preferences – are obtained through post-reflection, and perhaps after conceptually understanding another's erudition. They are more likely to be applied to understanding or critiquing others, groups, or "the system," than oneself. At 5th PP these insights become perceptual, immediate, and deeply personal, as conventional reality and the scaffolding of the self begin to radically disintegrate.

Metaware and Unitive Tiers – practices and capacities

We have noted how 3rd PP and 4th PP world-views manifest quite differently in pre-modern vs. modern (and post-modern) contexts. One might think that this trend will continue into the metaware tier (5th and 6th PP). This pattern is not as noticeable in the metaware tier as one might think. This is because the main differences between the two cultures in the subtle tier have to do with the large differences between pre-modern cultures and contemporary culture (which is a mixture of modern and post-modern worldviews). *There are no* post-post-modern (or metamodern, or metaware) cultures; there are few if any fully post-post-modern (or metamodern, or metaware) organizations or groups. The metaware system of thought has not been realized by enough people, and has not been worked over and through in richly intersubjective contexts enough to have evolved any stability (even local stability) at the collective level (this is mostly true of 4.5/Strategist also). Therefore there are not any appreciable metaware *cultural* contexts or artifacts to influence one's growth into and through the metaware tier. Therefore there is actually less difference between the metaware mind in traditional Buddhist contexts vs. contemporary contexts (though there should still be *some* differences). Therefore, we will not try to explicate East/traditional vs. West/contemporary differences at the metaware tier as we did with the prior two tiers.

With a foundation in causal analysis (3rd PP), Buddhist contemplative thought then evolved from a reductionistic perspective on human suffering (abhidharma, higher teaching, 3rd PP), to a systems perspective (madhyamaka/middle-way, 4thPP), and then to a later metasystemic perspective (awakening, 5th to 6th PP) (Guenther, 1989; Wilber 2014; Brown, personal communication, 2017). (We can postulate the Buddhahood corresponds to the Unitive tier of 7th and 8th PP.) Each phase of the teaching is an expression of a cognitive paradigmatic shift in understanding human suffering and happiness and its causes – a turning of the wheel.^[1] These shifts map well to our modern understanding of cognitive development.

In relationship to the exploration of contemplative psychology it is useful to explain the four stages of the Metaware tier, the aspect of the STAGES model that most pertains to Buddhist psychology. Terri O’Fallon (2013b) describes that in the metaware tier the mind can begin to perceive both the fullness of objects and the emptiness of awareness itself (which relates to the event and mind perspectives). The process through the metaware tier is the process of eventually reconciling awareness and its object in a non-dual recognition.

Each of the four stages of stabilized metaware apperception have a different focus or object of awareness but all have a sense of awareness with a ‘fullness’ and ‘emptiness’ of the objects that arise in awareness as the silent eternal, infinite field of the Witness. As one moves through these four metaware stages, the emptiness-fullness poles and the witness-kosmos poles gently collapse into each other in a process that comes to completion in the theorized fourth unitive tier (O’Fallon, 2013b, p.6).

Based on Indo-Tibetan essence teachings, the processes de-reification (or decentering) of the constructed nature of reality, generated by contemplative insight, pass roughly through these phases: body, self, emotions, thoughts, concepts, time, duality, core beliefs, and the attentional system. The first four of these are associated with contemplative insights in the subtle tier, the next four from the metaware tier, and the final one in the (much more speculative) unitive tier. Drawing on contemplative essence theory, we can describe some of this territory below in terms of no-self, timelessness, spacious freedom, the non-dual state, non-meditation, and non-localized awareness, and bodhicitta.

No-self. The relativistic experience of the self is, from the perspective of the essence traditions, the beginning of recognizing the emptiness of the self. Beginning at a pluralistic consciousness (4.0) that recognizes the social construction of the self, the ability to recognize mental structures that have been fused with awareness (at 4.5), matures into recognition of the creative construction of language, meaning, and perception (at 5.0 and 5.5; Cook-Greuter, 2000; O’Fallon, 2010a). Such processes support a shift in perspective that leads to an experience of self beyond conceptual construction. This shift in operation happens by making the prior subject of experience (the narrative-content self) an object.

In terms of practice sequence, as mentioned above, in order to shift the self-structure to a new identity (self/oneself) of awareness beyond self-structure, the practitioner recognizing, through insight meditation, that the self is a mental construction. The meditator then concentrates on the recognition of awareness that reveals itself as being beyond this self-structure. This continues until this awareness beyond the self is established as a new center of identity, a new basis of operation (a new "self"). Once this basis of operation becomes stable the relative activity of the

mind can be allowed to return but this time viewed from a different existential mode. The change of basis of operation does not just change the fundamental level of identity or existential mode, but also allows for the reorganization of one's perception of the self-structure (and also of time, as noted below).

Really understanding that the self is a construction allows for the re-organization of the self-structure and its personal narrative into a structure that appreciates its relative existence. As such the process of deconstructing the self-existent reified entityness of the self offers the opportunity for reconstructing a new self – informed by the knowledge brought about by the transition to a new identity/basis of operation. In the developmental theory outlined by O'Fallon this reconstruction of the self begins at 5.5 and deepens to completion at 7.5. After the passive stage of stabilizing a new metacognitive basis of operation at the metaware tier of the very subtle level of mind 5.0 and the unified tier of the awakened level of mind 7.0, there then follows a more active phase of reintegrating the active constituents of mind such as thought and imagination.

Emptiness of time. This developmental process into the metaware tier leads to a recognition that culminates in the experience of the temporal organization of reality being a mental construction. This does not negate the experience of time, nor the objective (seeming) dimensions of time described in science, but only negates its experiential subsistence. In essence practice the meditation on the emptiness of temporal experience opens up the recognition of a spacious field of timeless awareness as a new basis of operation, corresponding to developmental stage 5.0. This process of orienting toward the larger whole field and then integrating the parts within the field is fundamental to the essence contemplative path. Once there is a new basis of operation, the practice of one taste meditation begins as the meditator works to maintain this newly emerged point of view simultaneous to the ongoing everyday activity of thought, affect and mental imagery arising in the mind. The emphasis is still on learning to stabilize the field of psychological operations during this mental activity and not suppressing it.

In corollary to the Into-Tibetan framework, O'Fallon's research (2013), reveals that the mind expands its phenomenological perception of time to a large historic time frame and planetary space frame at 5th PP, and then to an understanding of evolution in the eternity of time and infinite of space, an infinite cosmic evolutionary process, at 6th PP. At that stage of integrating context and content it is understood that eternity and infinity are content, they are vast constructions of mind within which the evolutionary process continues indefinitely. Within 5th PP understanding, the mind can intuit possible futures along the trajectory of open and infinite time/space. However, this form of intuitive knowing is still based on a subtle construction of time and space. Beyond this, at 6th PP, is an understanding of the unbounded and timeless unconstructed nature of mind. At this level of stabilized contemplative development the fullness of evolution is held in the openness of unbounded awareness as part of the individual's on-going moment-by-moment experience. Practitioners at this level of development report experiencing the unfolding of cosmic evolution simultaneous to a liberating freedom and compassion whilst engaging in the everyday activities of daily living.

Metacognitively this means that the self is experiencing and understanding itself at 5.0 to be an expression of a historic ancestral process. The individual recognizes from a timeless basis of operation that the self and the language used to describe the self has been constructed over multiple generations. This matures and deepens so that by 6.5, the end of the Metaware tier, the

individual recognizes from a timeless basis of operation that the self is an expression of a cosmic evolutionary process played out on the stages of infinite time and space. These insights are not just cosmological musings, but are how the individual interprets and makes sense of everyday challenges. Just as the Great Law of the Iroquois held that all decisions should consider the next seven generations (140 years), at the level of 6.5 there is an ethical appreciation that each decision should consider the cosmological evolutionary process and whether decisions are reducing or increasing psychological, physical, cultural, systemic, and environmental suffering for the evolutionary whole.

Spacious freedom and the Non-dual state. When, through the deepening of purification caused by maintaining timeless awareness as a basis of operations, the coarse and subtle level mind with its concrete and abstract concepts quiets, the mind becomes non-conceptual, and the student orients to the field of spacious experience recognizing the non-duality between the awareness and the background spaciousness of the sensory fields. This realization of the spaciousness of mind opens the path of practice known as *spacious freedom* which relates to the 5.0 level in Stages. As this level of practice matures it opens the direct experience of interconnection and interdependence that are indicative of the authentic experience of compassion as understood in the Mahayana, a compassionate spaciousness that phenomenologically is experienced as holding all beings of the past, present and future in a deep motherly embrace. This parallels the metacognitive maturity of the Metaware tier flowering at 6.5 into a deep experience of the metaware community that exists as a timeless ‘we’.

At that point the practitioner then refines the recognition into the empty constructed nature of all experience and purifies the residual, hidden, deep and subtle core beliefs of the increasingly diaphanous self-structure. This purification leads to a natural non-dual state of timeless awareness-space without any artificial activity of mind and within which all mental activity arises automatically and naturally as empty open constructions.

Non-meditation and non-localized awareness. This natural state is then used as a foundation upon which to set up the orienting instructions of non-meditation (correlating with entry to the Unified tier, 7.0). Here the practitioner shifts his or her identity out of identification with the attentional system’s localization of individual consciousness and information processing to the non-localized, limitless basis of operation, and the existential mode, of awakened awareness. This is the establishment of a new phenomenological field of awareness, and, in order to stabilize this new level of development, as at the previous level of practice in recognizing the awareness empty of time, the identification with all the mental activity of the previous level needs to be left behind temporarily so that a new, and in this case, referenceless identity as unbounded, pristinely lucid awakened awareness, can be established.

Due to the lack of sufficient research subjects at or beyond the 7.0 stage, O’Fallon’s model is theoretical. However, the process itself, the recognition of a whole field, and then the integration of parts into the whole, is derived based on developmental processes that continue to iterate. Mahamudra non-meditation or rdzogchen cutting-through (khregs chod) meditation allows the shift in the basis of operation of psychological operations to awakened awareness which when stabilized becomes foundation for the Unified Tier of adult development. This involves the recognition of individual-informational-attentional system, as an empty construction. Initially, the stabilization of this basis of operation takes the forefront of experience, as the relative activity of

the mind is less emphasized allowing for the familiarization with this new identity. Based on the re-occurring patterns at the first stage of each tier (1.0, 3.0, 5.0, 7.0) O'Fallon's model suggests that at the first stage of the metaware (5.0, very subtle) and unified tiers (7.0, awakened awareness) will have this passive (receptive) mode, which then transitions to more active (and reciprocal) modes as the new basis of operation is integrated with prior capacities and everyday living.

Unified Tier and Buddhahood. Here we move in even more speculative territory. In terms of the Indo-Tibetan path to liberation, once one establishes the views associated with awakening or enlightenment, one continues to work toward buddhahood by establishing these views in ever more mundane and challenging life contexts, and also by further purification of the mind toward complete freedom from prior conditioning (exhaustion). These steps are well documented through numerous Indo-Tibetan texts, so it is not this part of the path that is speculative, but rather the connections between it and modern developmental theory.

Here the practitioner deepens the strength of this realization by integrating into the new phenomenological basis of operation, through dream and sleep yoga, the deep habits of the unconscious substrate mind (this can begin in much earlier stages, but is probably required for advancing into the Unified tier). By developing the ability to maintain the basis of operation during the typically unconscious processes of dream and sleep the karmic tendencies created through identification during the life span, and deepest levels of non-awareness are transformed until all dream and sleep experience is viewed as an expression of awakened awareness. Once the process of dream and sleep integration is completed the waking sensory experiences and conceptual thought are integrated into the awakened awareness. At this point of development experience is an uninterrupted non-meditation where all experience automatically arises as *self-arising* and *self-liberating* (rang shar rang grol).

According to contemplative essence psychology, the process of realizing self-arising and self-liberating (rang shar rang grol) is completed when the storehouse of karmic tendencies – all unprocessed individual, ancestral, cultural, and racial conditioning—is released and exhausted (dharmadhatu exhaustion). When the conditioning is thoroughly purified (T. Sang) the basis of operation of awakened awareness becomes operational through all states, and the mind opens (Tt. Gyé) to the positive qualities of "omniscient wisdom."^[1]_{SEP}

Theoretically, from the perspective of Western psychology that looks at the content of experience and not the context (basis of operation), this process is a regression in the service of transcendence (Washburn, 1988), with a stabilized awakened basis of operation there is no longer any ego defense active in the on-going experience and all the unprocessed, repressed, disavowed psychological content that has accumulated over a life time can now be released. This is the automatic experiential/psychosomatic extinction of early childhood object relations, early traumas and the conditioning of perinatal experience (Grof, 1993). As the personal unconscious is released into awareness and automatically processed, then the deeper organizing archetypal structure of the mind begins to reveal itself as an unfolding process of spontaneous visionary experience known as thod rgal (Smith, 2016). At this level of mind, the underlying archetypal energetic structure of psychological reality reveals itself as non-dual with awareness.

In rdzogchen this non-dual archetypal creative expression of the nature of awareness is known as rol pa *play* energy, and is differentiated from the non-dual dgangs *elemental* energy of thought and fantasy, and the non-dual tsal *liveliness* energy that expresses itself as a supposedly external material world (Capriles, 2006). The fruition of this process, i.e. Buddhahood, correspond to stage 7.5, the full understanding of the causes of human unhappiness and the realization of the path of deep human fulfillment and happiness where all conditioned reified structures have been seen through as empty constructions, all accumulations of conditioned memories (karmic traces) have been released. This leaves the mind stainless (Tbt: tri med), allowing awareness to be self-sustained through waking, dreaming, and deep sleep states, and the flourishing of the 80 positive states of a developed Buddha mind dedicated to altruistic service of all embraced sentient beings.

Bodhicitta. As such the process of ego development is not just a progressive overcoming of the obstructions to one's true nature, but is the expression, distorted in earlier stages due to fundamental ignorance, of the nature of the unfolding intelligence of compassion. In a cultural environment dedicated to the education of the human heart and mind, such as one finds in the inner chambers of the monastic colleges, ashrams, caves and hermitage sites of Tibet, Nepal, or India, the growth of self leads to a corresponding growth in compassionate intelligence. The child learns to take increasingly complex cognitive perspectives, reducing narcissism and increasing the circle of concern to include family, nation, planet, and universe in a web of relationships. In the tradition of Indo-Tibetan Buddhism this is referred to as the unfolding of relative bodhicitta (T.by ang chub kyi sems), the compassionate motivation and the ensuing knowledge towards supporting the liberation of other beings. Absolute bodhicitta itself refers to the direct realization of the constructed nature of phenomena and the recognition of the nature of the mind. (Buswell 2013). When plotted on the map of adult development researched and theorized by O'Fallon, relative bodhicitta refers to the constructive development of the higher stages of ego structure, and absolute bodhicitta refers to the deconstructive realization of awakened awareness, the deepest and unconstructed existential mode (Dorje, 2016), basis of operation (Brown, 2017), or level of contemplative metacognition (Unified tier in the STAGES model).

Revisiting States vs. Stages: Necessary but Not Sufficient

Here we continue our discussion of states vs. stages from the earlier sections "State, Stage, and View" and "Mind vs. Event Perspective." Above we have been coordinating the views or stable state-stages of consciousness described in contemplative essence psychology with that levels described in developmental theory. This may seem at odds with the notion that states and stages are somewhat independent (the Wilber-Combs principle), but recall that, from O'Fallon, we claim that certain state-stages are necessary but not sufficient to certain developmental levels. As we have said, the Wilber-Combs principles is that one can achieve the views (and states) described by contemplative practices *without* necessarily having the corresponding developmental complexity or ego maturity. What O'Fallon adds is that certain meta-cognitive or contemplative states are *necessary pre-requisites* for higher stages of developmental complexity and ego maturity to unfold. In terms of the above discussion of the metaware tier, this means that one can have experiences, even stable state-stages (views) including egolessness, timelessness, and spacious freedom *without* needing to have achieved metaware cognition. But the converse is not true: i.e. certain stable state-stages (views) *are* necessary for the achievement of any developmental level (the particular prerequisite view *differs* according to the stage).

In fact, access and stabilization of higher contemplative metacognition does not require cognition complexity or ego development beyond a basic ability to follow simply follow instructions. As such, it is feasible for individuals to realize the fundamental nature of non-dual nature of awareness without much understanding of the process, a criticism often directed towards many contemporary spiritual teachers and adepts who are "self-realized" and yet are unable to build robust pedagogical environments for teaching others. In the Indo-Tibetan contemplative tradition this is similar to the concept of a Pratyekabuddha (Wyle. *rang sangs rgyas*), a *solitary realizer*, or *intermediate Buddha*, who is realized and yet lacks the omniscience of compassionately motivated structural development to be able to adequately lead others (Rahula, 2000). As such they cannot function as realized teachers because they are unable to communicate and individualize the instruction of the cognitive and metacognitive knowledge and practices of contemplative development. This phenomena can be further explained by giving examples of how it might manifest.

An "awakened mind" at 3rd PP ego development may show signs of overconfidence, egocentric biases, ethnocentrism, bullying, and lack of empathy. Having had state experiences of egolessness, timelessness, and spacious freedom, they may interpret them in terms of self-aggrandizement and power. They may describe these experiences mimicking the flowery language of the traditions, but not reveal any poetic, nuanced, or uniquely personal understandings of these state experience.

An awakened mind at 4th PP ego development may show signs of hyper-complex or abstract over-thinking. They may have a deep conceptual, experiential, and applied knowledge about egolessness, timelessness, and spacious freedom; but still exhibit evidence that they have unexamined shadow material, and blame others for the suffering that they co-create. They may be able to take many perspectives but still be a stickler about the meanings of words, not realizing how concepts are constructed with each context and thought. They may be preoccupied with metaphysical abstractions that seem to explain spiritual concepts, while lacking the embodied felt-sense of how subtle shadow operates within their own psyche.

In "States and STAGES: Waking up Developmentally," O'Fallon (in this issue) shares her preliminary model for how states (and views) interact with stages of development. She shares an "interpenetrative" model of how particular states or views are prerequisite to each stage; and how achieving a stage helps induce particular state experiences. O'Fallon's model is based on (1) close readings of a number of mystic-scholars, including Wilber, Aurobindo, and Diperna (who draws on Dan Brown's work); (2) empirical analysis of how words that describe state experiences appear over different developmental levels; and (3) anecdotal but substantial experience in working with individuals and scoring developmental assessments that represent the full range of adult developmental levels. The preliminary ideas we give here are compatible with O'Fallon, while not specifying as much detail; but we also aim to ground the ideas in the concepts described in this paper.

The primary novel feature of the STAGES model is that it sees the long arc of developmental levels in terms of patterns that repeat within each tier (and patterns that repeat within each level, which some other theories also have). It proposes that the same principals can be used to describe early, middle, and advanced development. As this framework encounters the contemplative traditions, it poses this question (among others): can those psychological/spiritual phenomena

that we attribute to advanced achievement be described in terms of processes that are also at work for *childhood* through adulthood, and then into "sage-hood?" (and Buddhahood). Contemplative traditions included foundational (concrete tier) practices, but did not study childhood development; and they studied advanced states and vantage point but did not study advanced levels of cognitive complexity in the way developmentalists do. Combining these worlds provides hints into models that might give a unified theory of states and stages. O'Fallon has offered a significant if tentative step toward such a model. Below we show a condensed overview of how such work can be described in terms of the concepts we have explored in this paper. The main principles include:

1. Establishing a *view* (vantage point) involves appreciating some particular form of *emptiness* (e.g. of conventional rules and roles, thought, concepts, self, time, duality, or particularization). That is, to look deeply into a gestalt phenomena (object or process) that is tacitly assumed to be whole – it is so taken for granted that it is invisible to us ("is us"). With focused attention we discover that the gestalt has parts that the mind brings together to create the whole. In seeing the process of this construction, the phenomena is "deconstructed," and seen-through as empty. The question posed is: when is this particular realization of emptiness *needed* to address a pressing developmental dilemma?
2. *Developmental* stages are characterized by capacities (major skills like "object permanence" or "reflective thinking") defined by their level of hierarchical complexity. Skills and capacities begin as *glimpses* of new worlds of phenomena (e.g. classes of perceptions, durable objects, or abstractions) that need scaffolded assistance and motivational challenges to be developed into mastery. These glimpses are *state* experiences; and the nervous system often tags them with expansive or ecstatic "wow" feelings, which motivate the effortful process of learning (glimpses of new territory can also be disorienting). Eventually, with practice, comes mastery and *automation*, so that the skill becomes an unconscious tool that we rely on without thinking about it or feeling anything special.
3. *Ego*-development (the *type* of development we are most concerned about) stages grow when any mastered level of complexity-capacity is turned reflectively and applied to deconstruct some aspect of the *self*. (This deconstruction is only *part* of ego development; it also involves what one does *constructively* with the insights gleaned from deconstruction, as described below.)
4. Stage transitions are motivated by *dilemmas*. In particular, the capacity developed at any stage eventually *over-functions* and starts to become as much of a problem as a solution. To solve the problem it creates, the mind must develop a *meta-capacity* that can see the first capacity and critique it and modulate it. That is, the original mastered capacity is *tacitly used* to manipulate things according to explicit needs and goals, but there is nothing yet in place to explicitly (consciously) manipulate the capacity itself.
5. Each developmentally-induced dilemma is solved in the *subject-to-object* move that builds the meta-capacity to explicitly see and manipulate the original capacity. E.g. "thinking" moves from something one does without reflecting on it, and thus something one *is*, to something one *sees* happening and can thus monitor and control. When an aspect of the

self-system moves from "having" one to being "had by" (e.g. "I am not my thoughts") one is less *identified* or merged with it. It is seen as a part of the self-system but is not felt part of the self-sense (e.g. I have a body but *I* am not my physical body). The subject-to-object move creates a new world or *field* of processes/objects that were once tacitly assumed to be part of the self, and invisible. E.g. when thoughts can be "seen," a new world, a field of thoughts, opens up to learn about and eventually try to strategically control.

6. As one deepens understanding of a field and its varied contents, one can step back to see the field as a whole, and step back a bit further to notice the borders or boundaries of the field, and step back yet again to sense that which *holds* the field in its awareness. This is the *event-to-mind perspective* shift. One develops a felt sense of that larger meta-self, and becomes identified with it as the *new identity or basis* of operation – a new vantage point or view.
7. This vantage point begins the process anew, because it is something one identifies with – that one *is* – but is not yet something one "sees" and can control (as "object"). From the event perspective the new capacity is a new *skill* – a tool for operating on some field of objects to meet goals. From the mind perspective the new capacity amounts to a new *self* – one that holds that field. Also, at the beginning, this new skill/self appears in (usually exhilarating) glimpses, as an un-mastered ability (– so the process starts from the beginning at a new level).

The above is a very condensed overview of a longer narrative and emerging theory; and one that is not fully fleshed out yet. O'Fallon (2020) fleshes out similar themes in much greater detail. In sum: we have suggested how state experiences can lead to new stages *if* the right steps are taken. We have also suggested how stage transitions can *require* certain states – those states are necessary but not sufficient because the state must be applied in a particular way (self-reflectively) to achieve the stage transition.

We have also shown that, though each developmentally-created dilemma *calls for* a certain states/views, i.e. certain mode of emptiness, in order to be solved, that the state/view that can be used to solve a dilemma can be experienced *prior* to the developmental stage (unfolding) where they are "called for." This suggests that a deconstruction could occur before it was needed, and even perhaps before one was ready to appropriately use or integrate it.

State experiences can arise "naturally" in developmental unfolding, but can also be catalyzed by contemplative practices, hallucinogens and intoxicants, rituals or extreme events, etc. We can ask in each situation whether such a catalyst is a healthy support for a process already needing or "wanting" to happen vs. a forceful thrust into dangerous territory (a complex question depending in part on the type of "set and setting" support available). Furthering an earlier discussion, we can note several dangers of experiencing a state experience before the self-system feels an authentic need for it, or before one can integrate the insights that the state allows for. We list some of the dangers below (these items overlap with each other):

- *Narcissism*: If the state experience is not successfully applied reflectively to deconstruct an aspect of the self, the new capacity may be appropriated to narcissistic ends, as a more

powerful tool with which to manipulate others, as opposed as a means for humble self-understanding.

- *Projection*: If the state experience opens up a territory that the individual is not developmentally able to make meaning of, the new "self" that emerges from the event-to-mind shift (e.g. witnessing consciousness) can be projected *out*, instead of being understood as a new self; and interpreted as, e.g. God, or collective consciousness, or some other metaphysical entity.
- *Grandiosity*: Alternatively, if the personality structure is too defended, or too naive, to "release" its hold in the deconstructive move, then the new view can be introjected inward and fuel grandiosity or ego inflation as in "I AM God" (or god-like).
- *Arrested development*. Ideally, the deconstruction of an aspect of self (a capacity) does not remove it or regress one to an earlier state, it allows one to see it (transform subject-to-object) and see it as constructed/empty (de-realize/de-center it). This gives one the choice/freedom/resilience to use a capacity more wisely. However, if the capacity is deconstructed *before* it is functionally *constructed* then a state-stage can result in a regression or the naiveté of a developmental delay. For example, when one "sees" that there is "no such thing as the self" before one has a functional autonomous ego, then one can regress into a pre-egoic state because one does not have the option to bring out the tool of a strong egoic-self strategically when it is needed.
- *Dissociation*: If the deconstruction/emptiness move threatens to reveal something about the self that the self (ego) strongly resists knowing, the state capacity may not be used to reflect upon the self; or if it does, the self may split, creating type of dissociation such as unhealthy "depersonalization" or "derealization".
- *Abstraction*: If one learns about or gets a taste of a state and does not allow the associated capacity to work, in an *embodied* sense, on the tacit and unconscious realms of the mind/body, it can continue to live in a world of abstraction (or hyper-abstraction), wherein concepts such as oneness, nonduality, emptiness, fullness, selflessness, and timelessness are disembodied concepts with a tenuous relationship to direct experience.
- *Attachment*: Finally, if one becomes "addicted" or attached to the experiential "wow" factor of novel states, and a hedonistic compulsion toward state experience (vs. a dilemma or desire to learn) is the primary motivation for inducing the state, then opportunities for a) deconstructive learning; b) solving the dilemmas of co-fused aspects of self, and (c) turning state capacities toward self-understanding – can all be forgone (and problems mentioned above, such as grandiosity, hyper-abstraction, and projection are more likely).

These concerns exist in "spiritual growth" contexts, but are also valid throughout the developmental spectrum. For example: "when is it too early to teach a child to read; or give them extended access to a computer?"

In the condensed overview there is much left unsaid, e.g. How such a sequence reiterates through the specific STAGES levels, and how this iteration relates to the specific "emptinesses" of thinking, self, time, duality, and particularity, is suggested in O'Fallon (2020). We leave for another time further discussions of how this relates to: experiences of emptiness vs. fullness; how the sequence involves the dimensions of interior/exterior, self/other, individual/collective, and receptive/active/reciprocal/interpenetrative; how the sequence touches on the primordial modalities of seeing, hearing, and feeling; and where movements of integration fit in with the narrative above that describes moments of differentiation.

4. Conclusions

The Mahayana tradition evolved these practices motivated by compassionate necessity to train heroic adept leaders with the capacity to address the suffering of individuals and culture. The training in ethics, meditation and wisdom was never for the purpose of developing higher states of consciousness or development outside of the cultural necessity for those skills to serve the wider social field. Those who held the lineages of meditation often kept them alive in isolated mountain ashrams. However, this was to keep alive lineages so that when society was ready for them the technologies would be operational.

The task ahead is to create pedagogical environments that lead to the flourishing of a contemplative psychology on western ground. Such integral environments would integrate the practices of psychological healing, self-development, and self-transcendence with the training of the aspirant within a particular field of activity such as law, government, religion or education. Perhaps then we have the hope to become a *civilization beyond discontent* (Brown, 1986).

The purpose of this study has been to assist in the translation of Indo-Tibetan essence psychology into a form that Western psychologists, and educated lay-people can understand. It is hoped that through greater understanding as culture we will come to have a deep appreciate and respect for the profound and insightful psychological theory and praxis that this tradition has to offer and as such be willing to engage in practices seriously for the betterment of the larger social good. At a time when those with the greatest ability to wield power, i.e. the politicians who hold the highest government offices, and billionaires sitting on corporate boards exerting great influence on society, act like sociopaths, there is a dire need for a spiritual and ethical renaissance. Contemplative psychology when enacted correctly can provide that resource.

This paper has outlined the basics of Indo-Tibetan contemplative psychology, the essence psychology of mahamudra and rdzogchen, the stages of adult ego development, and the research on metacognition as means of integrating these different perspective on psychological development with the intention of placing contemplative psychology where it belongs, at the very heart of the psychological understanding of what it means to be a human being.

From the perspective of adult ego development, Indo-Tibetan essence psychology is a body of theoretical knowledge and metacognitive skills that when applied sequentially in the direct experience of the practitioner leads to the unfolding of deeper levels of identity. These levels of identity result from the purification of awareness through disidentification from the deep structures of human consciousness through the three fundamental states of waking, dreaming, and

deep sleep. The fundamental praxis is the development of post-formal metacognitive skills. Through the development of attentional self-regulatory metacognition (steering the attention, increasing interest and brightening awareness), the recognition of the impermanent and constructed experience of soma and self, the illusory nature of temporal experience dualistic perception, the individual the practitioner refines his or her metacognition capacity until even the attentional system is seen as an expression of primordial awareness reveals itself.

Currently the practice of this developmental psychology is maintained within the relatively strict boundaries of traditional Tibetan lineages, which, from an exoteric perspective, package the practices in the garb of traditional religion. However, the esoteric theory and practice of Indo-Tibetan Buddhism has little in common with religion and has much to offer the modern world's understanding of mental health. Western psychology is, comparatively, in its infancy, and the advent of positive psychology as a major field is less than two decades old. The field of Indo-Tibetan contemplative psychology offers a tradition of practice developed to mature human positivity to its fullest, and is based on hundreds, even thousands of years of practice-based evidence, which is slowly being corroborated by research in the brain sciences. The integration of mindfulness and compassion practices in psychotherapy is only the very beginning of a meeting of western and eastern psychological traditions. The implications of the meeting could in time lead to a fundamental paradigm shift in psychology and education.

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Appendices

Appendix 1: Developmental Stage Descriptions

Below we give a short description of each developmental stage. Descriptions of stages 1.0 to 4.5 combine descriptions from Loevinger, Cook-Greuter, and O'Fallon, while descriptions of Stages 5.0 to 6.5 are from O'Fallon (2010, 2011, 2012, 2013). We primarily make use of the stage names from O'Fallon's STAGES model, which is described in the section "The STAGES model."

	<i>Person-Perspective</i>	<i>Stage</i>	<i>Tier</i>	<i>I/C</i>	<i>A/P</i>	<i>Compl</i>
6.5	STAGES Model	6 th Illumined	Metaware	C	A	Int Interpentr
6.0		Universal		C	P	Ext Recoprocl
5.5		5 th Transpersonal		I	A	Int Active
5.0		Construct Aware		I	P	Ext Receptive
4.5		4 th Strategist	Subtle	C	A	Int Interpentr
4.0		Individualist		C	P	Ext Recoprocl
3.5		3 rd Achiever		I	A	Int Active
3.0		Expert		I	P	Ext Receptive
2.5	2 nd	Diplomat	Concrete	C	A	Int Interpentr
2.0		Rule Oriented		C	P	Ext Recoprocl
1.5		1 st Opportunist		I	A	Int Active
1.0		Impulsive		I	P	Ext Receptive

Figure A1. STAGES Model (I/C=Individual/Collective; A/P=Active/Passive; Ext/Int=Exterior/Interior) Black numbers (2.0, 5.5, 6.5) show added vs. Cook-Greuter's model.

0.0 to 0.5 (Pre-personal and pre-language Stages). Though they are referred to in some of the cognitively-oriented Structuralist developmental theories, the early pre-personal and pre-language stages of childhood development are not explicated by the constructive developmental theories (though they are referred to in terms of prior building blocks of cognition). This is mainly because these theories of "meaning making" (and ego) development refer primarily to how people understand, describe, and reflect on their understanding – which occurs verbally. These early levels include stages called: sensorimotor (undifferentiated with no real sense of self; 0-6months), and emotional-relational (still not yet differentiated from emotions and is unable to tell the difference between the emotions of self and others; 6 to 24 months).

The majority of adults will pass through the initial stages of pre-personal development although there are those adults with arrested levels due to profound developmental issues such as severe autism, mental retardation, and social neglect who will remain at those early levels.

*1.0/Impulsive (concrete-individual-receptive; also "Magical"; onset 2-4 years of age; <5% of adult population).*⁷ The self is very elementary in functioning, and is operating from a first-person perspective. Piagetian pre-operational thinking is applied to the self and the central development is the ability to use imaginal and word symbols cognitively to represent objects in the inner and outer world. The birth of the symbolic self marks emergence of mental self. However, this mental self is not fully differentiated from emotional or physical world. This leads to magical thinking, wherein a child believes that thoughts and feelings directly interact with the world, and assumes intimate causal and undifferentiated connection between mental, emotional, and physical worlds. Due to this lack of differentiation with the world there is a strong unconscious focus on separation between self and the world with the use of the words "no", "me," and "mine" being common.

The self is still fused with impulses and others are only seen as source of gratification. At this level the self can struggle with the lack of capacity for suppression and exhibit acting out behaviors due to the inability to delay gratification and take responsibility for actions. At this point of development the self is also beginning to have the capacity to actively submerge uncomfortable semantic meanings, experiences, emotions and somatic sensations that can lead to psychoneurosis.

1.5/Opportunistic (concrete-individual-active; also "Self Protective"; onset age: older children; 5% adult population). Here the self makes use of a combination of preoperational and early concrete operations to reflect upon itself in such a way that it develops a simple concrete conception of itself. At this level the self still lacks insight into itself however it has gained control over the driving impulses from the prior level of development and as such now has the ability to control itself and is often on guard to control external situations. The Impulsive has the concrete cognitive understanding necessary to know that society has rules that it needs to follow. However, the morality of this self-system is expedience: the self is only bad if caught, and even then is unlikely to express regret or remorse, just anger

The motivation of the Impulsive self is towards its self-serving needs and desires, whether legal or criminal. The self-system is opportunistic and to that end develops a persona to manipulate others and protect its fragile sense of self. It is no longer impulsive yet doesn't yet understand causality, and therefore lacks planning and an ability to just act with considerable courage. In relationship to others empathy is not well developed in persons at this level of development, so interactions tend to be based on the desires for control, competing for goods, space, power, and the need for self-respect. Feelings are externalized, friendships blow up easily, yet others are to blame and anger is directed against world.

2.0/2.5 (concrete-collective-active and -passive; also "Mythic-Conformist"; onset age: older children, early adolescents, 10% adult population). For convenience we here combine two of the STAGES "second person perspective" levels, following the Loevinger model. This is the first

⁷ Approximate ages of the levels are from Cook-Greuter (2007).

personal stage in that the self is using mature concrete-operations to reflect upon itself and is better able to identify with social norms and images than libidinal drives. In having differentiated from its own drives the self-system now has the opportunity to really connect for the first time to others and to sense belonging to a group, which is strengthened by following the rules and roles of the community. As a member of a group rules now become important as significant psychic structures of identity and are understood as being a priori self-existent or mythically preordained. Having aligned the self with the membership of a group, a simplistic second person perspective – “either you are in or out” – now dominates.”

The self-system does its best to look, act, appear, and talk “right” to maintain membership with the group and thus reject those appearances and behavior not of the group. At this stage the self gains acceptance through following the rules and takes comfort in the sameness of others, easily internalizing norms without question and not wanting to stand out from the group. The self-sense has several basic internal states and those that are negative and do not align with the group are repressed and avoided.

3.0/Expert (subtle-individual-receptive; also "Conventional-Interpersonal" or "self-aware"; onset age: older adolescents, young and older adults, 37% adult population). At this stage the self reflects upon itself using a mixture of mature concrete cognition and early formal abstract operations. At this stage, finally, the self is able to take itself as an object, and take a third person perspective on its own experience. Capable of introspection and self-understanding persons at this stage are able to recognize in themselves ways that they stand out from the group. As such, the ability to see themselves adds more complex nuance to their self-reflection and there is an appreciation of their uniqueness. At *Expert* the sense of uniqueness allows the self to stand apart from the group, bringing a sense of self-consciousness and sometimes also a preoccupation with how others will judge one's differences. These new capacities lead to the ability to appreciate difference in others, and this leads to an increased level of complexity in relationships. This is the first stage where people describe relationships in terms of the inner world of feeling and emotion.

Kegan (1995) describes how this stage fulfills the developmental expectations for adults in traditional pre-modern societies. A person now has a capacity for foresight, the ability to adjust to changing circumstances, and understand notions of adult accountability and responsibility. However, the *Expert* self-system has not yet caught up to the level of self-determination needed to navigate modern society and struggles with finding integrity between self and the membership group.

3.5/Achiever (subtle-individual-active; also "Rational-Self Authoring" or "Conscientious"; onset age: older adolescents, young and older adults; 30% adult population). This is the target level for our culture at the present time. At this level of development, the self-system is able to reflect upon itself using formal operational cognition. Rational-Self Authoring self-systems add linear time to their rational thought processes thinking forward and backward in time and expanding their social context to include those outside their ethno-national membership group to include others across time and culture who share their ideals and aspirations. They are willing and able to work for the betterment of all. The ability to reason, to have metacognitive thinking about thinking, and reflect upon the conditioning symbols, scripts, norms and conventions of prior levels leads to a more introspective ego, and a concern with the cultivation of a stronger clear sense of individuality free from external authority. Living life by one's own internal

authority and chosen standards can cause guilt if not lived up to. At this stage there is a belief in the objective scientific method, in rationality, as well as in empiricism and positivism to uncover the truth about the world. This is accompanied by belief in the perfectibility of mankind.

4.0/Pluralist (subtle-collective-reciprocal; also "Relativistic-Sensitive"; 10% adult population). This cognitive level has been the leading edge of Western culture for the last 40 years and is developed by the integration of mature formal operational and systemic thinking within the self-system. This is the beginning of general systems thinking described by Koplowitz (1984) with variables that are interdependent, causality that is cyclical, and boundaries between objects that are open and flexible. This 4th person perspectival capacity is characterized by the ability to be aware of the contexts within which the contents of experience arise. This ability leads to a greater interest in self-understanding and deep questioning. The self may be experienced as a multiplicity of voices such as described in the Internal Family Systems model (Schwartz, 1997).

Here it is understood that subject/object distinctiveness is not absolute, and the idea of the participant-observer is understood as the subject/object boundary become permeable. Whilst this stage maintains a capacity for awareness of past and future, the *Pluralist* self-system is more interested in the present moment fed by interest in such things as eastern wisdom traditions, self-help books, and therapies emphasizing the present moment. There is a heightened differentiation of self from the group membership and a willingness to pursue personal counterculture life goals if need be. The ability to see the relativity of truth leads to a deep pluralistic sensitivity towards those perspectives marginalized by mainstream society, with a greater recognition and celebration of individual and cultural diversity.

4.5/Strategist (subtle-collective-interpenetrative; also "Integrated-Multiperspectival"; 5% adult population). This is the level of development that Kegan (1994) calls the "honors track" of the cultural curriculum, and the level that Wilber increasingly emphasized in his writing on Integral Theory. The self-system at this level has metasystemic cognitive capacity (cognitive stage 6) and is able to apply those cognitions onto the self-system. Whilst *Pluralist* self-systems can struggle with the cacophony of self-parts, the *Strategist* self-system is able to integrate the self into a whole system integrating mind and body, reason and emotion, intuition and rationality. Preoccupation orientates towards personal development and the actualization of potential. Distressing emotions are more tolerated and paradoxical elements can be integrated into a system of logic. This frees up more energy, as the self is no longer defending itself against disavowed psychological material.

At *Strategist* one's life work is motivated by becoming all one can be, and, for persons in this stage, wanting to help others grow is one of their strongest motivations. *Strategist* self-systems are attracted to work as psychologists, coaches, consultant, and executive leadership positions. *Integrated-multiperspectival* selves can see life as an open-ended journey with no predetermined end, giving the full responsibility to each individual for his or her fulfillment.

5.0/Construct-Aware (Metaware, Individual, Passive, Receptive; 1% adult population). As the self moves into the metaware tier the person develops the capacity to discern the nuances of awareness itself. At the initial recognition of the 5.0 the direction of the attention is external and the witnessing ego arises with more focus on the objects arising in awareness. These individuals

have the capacity to take perspective on perspectives so much so that they begin to see what is tantamount to a hall of mirrors. They are able to take perspectives on perspectives at will. Some experience this as a capacity to envision multiple meaning loops; others become aware of their feelings looping (feeling a feeling about a feeling, or feeling a feeling). With a witnessing awareness activated the person becomes aware of projections arising in the moment. The subtle ego is recognized and conceptions that were once concrete are now recognized as constructs generated by the subtle mind and are experienced as empty and impermanent. This gives rise to the experience of groundlessness; that there is no concreteness in reality is a realization that can bring about an acute existential angst in some.

The cognitive capacity to be aware in the moment of multiple generations of stories and constructions arises, and with it the ability to experience the self, as a multi-generational impermanent process. Awareness of space increases to include the larger Cosmos. As the 5.0 individual matures his or her perspective shifts from external cognition to internal and the focus is more on awareness of awareness itself, which brings a lucid emptiness to every object that arises within it. In the awe of such a larger vision a concern about hubris and spiritual arrogance needs to be transformed by a genuine humility.

Behavioral cues of 5.0 include a difficulty in speaking coherently due to the constant witnessing of the observing awareness over the perceived limited communicative capacity of the self-system. Since there are not many individuals operating at this level of development they can feel isolated and question their own sanity.

As development proceeds at this stage, emptiness and silence of awareness moves towards undergirding the entirety of ordinary experience as individuals at this level of meta-cognitive development begin to settle into their new identity as awareness, the witnessing awareness of full and empty, concrete and subtle objects.

5.5/Transpersonal (Metaware, Individual, Active, Active; <0.5% adult population). As the capacity for witnessing awareness developed at 5.0 becomes familiar, constant, and ordinary, with awareness of awareness being brought into complex interactions and understandings of the world, the self-system discovers a greater sense of freedom. There is a continued development of one's own awareness of awareness of objects but this capacity is still polarized with awareness of the objects themselves. So that the 5.5 system may switch into a mode of immanent integration of body and mind, heart and head, inner and outer, or conversely operate from a decentered transpersonal perspective of an observing ego. However, they are not yet able to carry out both operations simultaneously.

At 5.5 the self-system begins to recognize that certain conceptual constructs and narratives are more useful than others depending on the circumstances and the effect these operations have on others and the specific situations involved. In activity individuals at this level have the capacity and mental pliancy to synthesize multiple perspectives.^[1] These conceptions themselves might not be unique, but the complexity is multi-dimensional which often leaves 5.5 feeling unseen, misunderstood, and often lonely.

Often persons with a 5.5 self-system do not take feedback well if they sense that the other does not understand the complexity that they are basing their perceptions on. The 5.5 can be

recognized by their fluent complex, vivid, and playful language style displaying a remarkable and yet ephemeral intelligence. They have a capacity to hold virtually anyone with a depth of compassion and concern, and an ability to speak often with a “stream of consciousness” quality. They can come across as arrogant in that they are sure of their choices, often willing to yield and yet surprisingly rigid in their personal perspective. At 5.5 the self-system is able to recognize the metaware capacities of others, but not yet cognizant that others might also be able to perceive their metacognitive capacities in return.

6.0/Universal (Metaware, Collective, Passive, Reciprocal; <0.05% adult population). At the Universal 6.0 stage the metaware collective is in the foreground of experience. This collective contains the entire manifestation of concrete, subtle, and metaware objects. The 6.0 self-system exhibits the ability to let go of the 5.5 complexities even whilst functioning within it, and has the capacity to integrate both poles of immanence and transcendence, form and emptiness into an integrated both/and perspective, able to recognize the recognition of awareness whilst involved in day-to-day activities. Their mode of operation has a deep acceptance of life without the compulsive need to change self or others.

At this stage a new sense of the collective arises, a sense of the formless ‘we’ arising within the field of awareness. This is a non-hierarchical stage where everything arises together simultaneously within awareness. The experience of time and space becomes infinite, with occasional spontaneous eruptions of “all at once” knowingness, non-duality without a center of psychological operations, and without casual operations of knowing. There is a general experience of universal interconnection and inter-being integrated into the everydayness of life. What may have once been a state experience of universality has become an ordinary experience of operation and there arises a direct understanding of the evolutionary process of the Whole. With the experience of “everything perfect as it is” the 6.0 self-system no longer has the pressured complexity often common at 5.5 and language can become more poetic, unique and vivid to communicate the paradox of simultaneous time/timelessness and specificity/infinity.

6.5/Illumined (Metaware, Collective, Active, Interpenetrative). In the polarity of active/passive development the Illumined stage is the active fruition of the metaware tier as such there is a greater degree of integrating active functioning into the non-duality of immanent form and empty transcendence. Non-dual states continue to increase as the inherent natural dynamism of growth continues with the projection of one’s metaware interior knowingness and exterior unboundedness into the world and the introjection of the world into oneself, the precursor of the non-dual tier.

In turn, recognition of deep patterns akin to those experienced at the 5.5 stage reappear. The self-system looks forward and backward throughout all developmental history and across the various fields of knowledge in consciousness, science, culture, and social systems within the larger expanse of all space and time. The Illumined is able to spontaneously recognize the deep patterning of humanity. The patterns differ from those at 5.5 in that whilst simple they are holographic and simultaneously include the whole. Illuminatives are likely to experience this process as a flow of information that comes through them, that they are simple transducers of information.

Unitive/Non-dual Tier: 7.0, 7.5, 8.0, 8.5. O'Fallon notes that all the stages through 6.5 operate under the function of the categorizing, distinction making, and perspective taking mind. A signal of moving into a hypothesized 4th Non-dual tier is the recognition of this perspective-making mind by a centerless nondual awareness (O'Fallon, 2013).

Appendix 2: Metacognition

Fundamentals of Metacognition

Metacognitive Theories. Simply put, metacognition is *cognition about cognition* (Flavell 1979). This has often been simplified in the literature as “thinking about thinking,” however, metacognition does not have to rely upon thought, and can be non-conceptual in the form of *metacognitive insight* (Teasdale et al., 2002). As such, the word *cognition*, “the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses” (Oxford, 2007), is more appropriate than the word *thought*. This is particularly important in the more advanced forms of metacognition that rely upon metacognitive awareness and not just metacognitive thinking. For instance, the metacognitive tracking of one’s basis of operation, the psychological location of identity, is non-conceptual and does not involve the use of thought, but rather maintaining an awareness of how information is being processed.

Writings on metacognition in Western civilization date as far back as the *De Anima* and *Parva Naturalia* by the Greek philosopher Aristotle (Colman, 2015). In America, metacognition or *introspection* as it was known, was first popularized in the writings of William James (1890) as his fundamental method of psychological inquiry. Tarricone (2011) identifies the main theorists in the modern field of metacognition theory as Flavell, Brown, Borkowski and Pressley, and Kuhn. Flavell (1977) explored the role of reflection in *self-regulation* for (individual) *learning* and *problem solving* (Brown, 1987). Flavell’s model has three fundamental components, metacognitive knowledge (including meta-memory), metacognitive experience (in-the-moment processing), and metacognitive skills (for the evaluation and regulation of cognitive processing). *Critical thinking* involves asking good questions and considering alternative possibilities which, according to Richard Paul (Paul & Elder, 2008), requires metacognition to effectively mobilize the elements of thought (purposiveness, perspective taking, outcome analysis, bias bracketing, interpretation, and information gathering), and to monitor the standards of thought (clarity, accuracy, relevance, precision, significance, completeness, fairness, and depth) (Paul & Elder, 2008).

Much of the work in metacognition has focused on *self-understanding* and *self-regulation*. Brown’s (1975) model includes knowing (comprehension), knowing how to know (inquiring and learning strategies), and knowing about knowing (*metacomprehension*). Kuhn’s (2000) metacognitive theory of metaknowing adds, among other things, a clearer differentiation between declarative (know-that) and procedural (know-how) aspects of metacognition.

Brown (2006) takes a quasi-developmental approach to divide metacognitive skills into basic, intermediate, and advanced – in a system that anticipates the more advanced forms applied in the contemplative essence practices. The *basic* skills include the development of awareness of mind of self or other, monitoring the accuracy of state of mind, awareness of one’s influence on the other’s state or behavior (and vice versa), becoming aware of one’s state of mind in such a way that it has a regulatory effect on the state, awareness of one’s own or another’s action plans and goal directedness, and meaning making. The *intermediate* metacognitive skills to be developed include the recognition of how the past and the projection of the future shapes one’s experience, appreciating the relativity of states of mind, seeing into the underlying assumptions and

expectancies related to information, optimizing action plans in the face of accurate awareness of limitations, fostering sensitivity to contextual effects on behavior, and perspective taking, the ability to consider something from another's point of view. The *advanced* metacognitive skills include taking a wider, super systemic perspective, developing metacognitive awareness of past/present, self/other or child/adult orientations, awareness of the degree of organization or coherence of one's mind, recognition of interdependence, articulation of ultimate concerns, the direct, non-representational awareness of a wider reality, and refined meditative metacognitive skills.

Borkowski and Pressley's (2000) model adds, among other things, the importance of self-efficacy, self-esteem, and motivation in meta-cognitive processes – emphasizing the interplay of *emotional* with cognitive processing. According to Lai (2001), several researchers have emphasized how motivation is an integral component of metacognitive experience, providing the capacity for the enjoyment of learning, curiosity, persistence in the face of challenge, and management of affective states (Cross & Paris, 1988; Martinez, 2006; Paris & Winograd (1990)).⁸ Below we also discuss CBT therapy, which emphasizes *acceptance* of the contents of the mind.

The Soviet psychologist, Lev Vygotsky (1978) explained the importance of explicit verbalization during *social* cognitive interaction. Hearing others reflect about us, or about themselves, becomes internalized as an inner dialogue about ourselves, which is a foundation for metacognitive reflection. This intersubjective (intrapsychic) component of metacognition is a key factor in attachment theory and various approaches to psychopathology. Below we explore this more under "Attachment Therapy."

Aspects of metacognition. These are at least few hundreds of researchers and theoreticians who have considered metacognition. Historically, "metacognition is not only a monster of obscure parentage, but a many-headed monster at that" (Brown, 1987, p. 105). Yet we will attempt to sketch the overall contours of this convolutedly textured field as follows. Early work in metacognition differentiated primary (first order) from second order cognition, where primary cognition refers to the *contents* of thought, feeling, or perception. Second order cognition is often described as thinking about thinking, but it can also include: thinking about feeling, thinking about perception; and *sensing into* (i.e. feeling/perceiving) the experiential nature of one's thinking, feeling, or perception. An additional complication is that this second order "thinking" can relate to its subject (content) in many ways, including: assessing its features and contours, evaluating its quality or value according to some standard or goal, manipulating (directing, subduing, or transforming) it, and anticipating or planning how it will or should manifest in the future. To make matters even more complicated, metacognition might include thinking about one's memory, attention, intentions, skills, beliefs, personality, learning style, or meaning-making (which could include how one understands knowledge and knowing (epistemological belief system), and how one weaves narratives/stories from given information). Different theorists have

⁸ According to Schraw et al. (2006) metacognitive motivation has two subcomponents: self-efficacy and epistemology. Self-efficacy relates to the confidence level a learner brings to accomplish a specific task or goal, and epistemological beliefs relate to the beliefs a learner has about the origin, nature, and epistemological paradigm of knowledge (absolutist, scientific, relativistic, etc.).

different terms for many of these sub-types, and many use restrictive meanings for "metacognition" that don't include all of these things.

There are a number of domains of psychological and cognitive research in which metacognition is fundamental, where again, the relationships between terms becomes quite fuzzy or diverse. These include: cognitive psychology (metamemory, abstraction, memory storage and retrieval), neuropsychology (executive functioning), educational psychology (self-regulated learning, inquiry), developmental psychology (theory of mind, self-awareness, meaning-making), clinical psychology (mentalization, self-understanding, identity), and problem solving (reflective thinking, critical thinking, creativity, "higher order thinking").

Though we will not attempt to create a new order or synthesis out of this tangled set of phenomena (Brown's "monster"), we can offer some distinctions that will simplify things enough to allow us to apply the field to contemplative practice.

First, we can differentiate meta-knowledge (knowing about knowing) into things one knows about *oneself* vs. more general principles that one believes apply to human thinking and knowing in general. In this study of contemplative psychology we focus on the former, on insight gained through self-observation (though of course more general knowledge obtains through both meditation instruction and in how one infers that others' minds work like ones' own mind).

Second, some operations build upon others by definition, adding a bit of structure to the quagmire. For example, one must be able to observe something (awareness) before one can monitor it or reflect upon it verbally; and one must be able to monitor/reflect upon something in order to engage in more sophisticated tasks such as predicting, controlling, or transforming it. This begins to add the developmental lens.

Third, we can observe that some of the confusion or theoretical diversity in this field is due to the limiting nature of the concept "meta" (as in metacognition, metamemory, etc.). That fact is, the metacognition that operates upon some content can become the *content* for a higher level of metacognition. For example, many would say that "problem solving" or "critical thinking" require metacognition, and thus thinking about one's problem solving or critical thinking would be meta-meta-cognition. We can see that terms meta-meta, meta-meta-meta, etc. quickly become untenable and confusing designators.

Modern developmental theories allow for greater precision in this regard. The 12-16 levels defined by theories of hierarchical complexity begin with the lowest levels of sensorimotor processing (some start even lower at logical operations executed at the information processing level of neurons – see Commons & Richards, 1984). Each level "operates upon" the prior level, where "operating upon" is a "meta" move that can take any form – e.g. to observe or monitor, to assess, to compare or differentiate, to coordinate or synthesize, to manipulate or control, etc. (IBID; Fisher 1980). Advanced levels of metacognition, such as the monitoring of the psychological basis of operation, or the metacognitive insight into the constructed nature of

sensory and psychological information, can be considered post-formal (dialectical third order) cognitive operations, where different perspectives on metacognition itself can be taken.⁹

Therefor we will usually use "metacognition" to refer to thought or perception that operates upon *some content*, to differentiate the content from the meta-content in that context (even though in another context the meta-level might become the content level). When we need to be more precise we will often refer to specific developmental levels. We will also try to be clear in each context what type of "meta-move" or operation we are referring to. For example, ego development is largely driven by the "subject to object" meta-move, in which some invisible aspect of the unconscious mind that influences thought or behavior (i.e. we are subject to it) becomes seen, so that we can reflect upon it (as object). Establishing a "view" is yet another type of move, as we will discuss.

Meta-knowing, meta-sensing, and meta-thinking. Finally (fourth), and critically for our treatment, we can combine Brown's and Flavell's models to differentiate *meta-knowing*, *meta-sensing*, and *meta-thinking*. All three forms of metacognition can operate upon *any* of the types of content mentioned (feelings, memory, thinking, etc.). Meta-knowing (including meta-comprehension, meta-memory, and meta-skills) refers to *stored* knowledge about how cognition works, and stored strategies used to guide any of the metacognitive processes (e.g. procedures specifying what/when/how/why to apply, or improve each metacognitive sub-process). Meta-knowing includes procedural skills designed to monitor cognitive progress through the use of strategic metacognitive regulation, or executive control (Brown, 1987). These skills include knowledge about orientation, planning, regulation, monitoring, and evaluation strategies used to control cognitive activity in order to achieve a cognitive goal. Metacognitive skills allow a learner to oversee a learning or problems solving process in reference to internal or external standards.

Meta-thinking and meta-sensing are both *in-the moment* processes (vs. meta-knowledge, which is information or procedural skill retrieved from memory). Meta-thinking involves reflective (explicit conceptual) thought (including evaluation and strategizing). Meta-sensing is non-conceptual, perceptual, and experiential. One can access (recall) stored meta-knowledge (i.e. information or procedures) like a "program" in memory, and then "execute" this procedure, i.e. actual *do* what it specifies, to then have an in-the-moment experience of meta-thinking or meta-sensing. Though meta-thinking is the primary focus of metacognitive scholarship, including its use in critical thinking, problem solving, and self-directed learning, *meta-sensing* is as, or more, important in contemplative psychology.

Meta-sensing (or "metacognitive experience") consists of direct conscious cognitive and affective *states* involving awareness, thoughts, intuitions, perceptions, feelings, and judgments appreciative or responsive to in-the-moment experience (Tarricone, 2011). Meta-sensing is perceptual, non-conceptual, and non-reflective, and is constituted by the felt-sense of being in any moment and context. "Felt sense" is a term used to hold both the perceptual aspect (as in Davie Bohm's (1980) "proprioceptive thought") and the feeling (affective) aspect. Such feelings

⁹ This relates to Jankowski and Holas's model of mindfulness (2014), which proposes that there might be the possibility of numerous metacognitive levels, with each level being both a meta-level for the previous and an object level for the next one.

include the feeling of knowing something, feeling of familiarity, feeling of confidence, feeling of difficulty, feeling of knowledge saturation, feeling of boredom, and feeling of satisfaction.¹⁰ Meta-sensing provides the internal feedback mechanism about the current progress, degree of comprehension, and future expectation of success or failure associated with a given task, and thus usually are framed in terms of the goals, constraints, demands, and challenges of a task (Efklides, 2008, p. 279; Tarricone, 2011). Yet, while it provides information for meta-thinking (and meta-knowing), meta-sensing *in itself* involves a more open and peripheral awareness *without* specific goals – it often operates in a context that includes parallel processes that set and monitor goals).

Meta-sensing is similar to the Awareness of Transient Information (ATI) component of Grossenbacher and Quaglia's (2017) model of Contemplative Cognition. ATI refers to the basic cognitive process of being aware of the *transient objects* of experience such as sensory information, affect, memory, imagery, and thought. ATI is the central feature of those meditations designed to cultivate moment-by-moment choiceless awareness of the ongoing stream of consciousness such as the choiceless awareness of Zen shikantaza (just sitting) meditation. We will return to meta-sensing in our discussion of View in mahamudra practice.

Metacognition and Psychotherapy

Clinical psychology, in particular psychotherapy, is an activity that includes making revisions to interpretations of experience, and has been conceptualized by some as a form of *learning* (Bandura, 1961, Mahoney, 1977, Rose, Loewenthal, & Greenwood, 2005). Metacognition is a central aspect of learning, “the process of making a new or revised interpretation of the meaning of an experience which guides subsequent understanding, appreciation and action” (Mezirow, 1990, p. 1). The understanding of psychotherapy as an educational process goes all the way back to Sigmund Freud, the pioneer of the psychodynamic approach to psychoanalytic treatment, which he justly described as a kind of “after-education” (Freud, 1977, p. 504). Carl Rogers (1969), a pioneer of the humanistic approach to psychology, likewise described psychotherapy as a form of “*significant learning*” (Rogers, 1959, p. 280).

Metacognition is critical to many psychoanalytic processes, including the analysis of the transference projection, the monitoring of emotional activity in emotion-focused therapy, and the differentiation and recognition of the voices of internal systemic parts in internal family systems therapy. Below we will describe more specifically how it applies to two contemporary models, Cognitive Behavioral Therapy (and its derivatives: CBT, MBCT, and ACT) and Attachment Therapy.

CBT, MBCT, and ACT. Cognitive behavioral therapy (CBT) is defined by Hofmann, Asmundson and Beck (2013) as a family of interventions founded on rational emotive behavior

¹⁰ The evidence that there is an affective nature of metacognitive experiences has been supported by neuropsychological research showing the location of metacognitive monitoring in the anterior cingulate cortex (Fernandez-Duque et al., 2000). The anterior cingulate cortex is connected to both affective and cognitive regulatory loops. Two affective loops have been suggested involving this cortex. The first detects the discrepancy from the goal set and generates negative affect in response to discrepancy, and the second monitors the rate of discrepancy reduction as one progresses towards the goal and can generate both negative and positive affect in response to the progress towards task completion (Efklides, 2006).

therapy, cognitive therapy, stress inoculation therapy, problem-solving therapy, schema therapy, and acceptance and commitment therapy (Dobson, 2010). Meta-analyses of the efficacy of CBT have shown large effect sizes for unipolar depression, generalized anxiety disorder, panic disorder with or without agoraphobia, social phobia, posttraumatic stress disorder, and childhood depressive and anxiety disorders (Butler, Chapman, Forman, & Beck, 2006).

While it is true that metacognitive strategies have always been a part of CBT (Wells, & Purdon, 1999), metacognitive awareness in these forms of therapy is generally in the service of *changing* the contents of the dysfunctional cognitive behavioral patterns into more adaptive patterns (Dobson, 2013). In recent years there has been the development of a "third wave" in CBT, with an explicit shift to more advanced metacognitive or contextual approaches to treatment (Hayes, Villatte, & Hildebrandt, 2011). These approaches focus on the recognition and *acceptance* of the content of the mind (beliefs, thoughts, emotions, and sensations) rather than changing them. Acceptance has been implicitly a central feature of many psychotherapeutic approaches, for example Freud's psychoanalysis, Rogerian client-centered treatment (Rogers, 1995), and Gendlin's focusing (Gendlin, 2012). Third wave CBT approaches, such as mindfulness based cognitive therapy (MBCT), and acceptance and commitment therapy (ACT), have, however, made explicit the psychological *acceptance* of experience as a central mechanism of therapeutic transformation.

MBCT is defined as an intervention primarily designed to increase metacognitive awareness by changing the patient's relationship to negative thoughts and feelings without any direct conscious attempt to change belief in the content of negative thoughts or underlying assumptions (though change in assumptions or thought patterns are often an indirect outcome) (Teasdale, et al., 2002). Teasdale emphasizes that it is the metacognitive *awareness* into the unfolding mental content in the direct experience of the *present moment* (what we termed meta-sensing) and not conceptual metacognitive knowledge (meta-knowing and meta-thinking) that is the therapeutic agent of change, and that it is a deficit of a specific kind of metacognitive monitoring into that leads to depression (Teasdale, 1999). Similarly, ACT focuses on changing the client's relationships to thought through *cognitive defusion*, "the creation of nonliteral, non-evaluative contexts that diminish the unnecessary regulatory function of cognitive events" (Hayes, et al., 2013 p.4). ACT and MBCT teach the client to come into direct experiential contact with the present moment (rather than being dominated by conceptualizations of the past and future) and, rather than attempting to alter the form, frequency, or intensity of cognitive experience (experiential avoidance), learn to accept it and be curious about it (Hayes et al., 1996).

ACT goes further than MBCT in articulating that through the repetition of metacognitive disembedding from cognitive fusion and accepting the present moment, there is a shift in psychological operation from *self as content* (i.e. from fusion with a conceptualized narrative of self) to *self as context*, in which one operates psychologically as the observing self (Deikman, 1982), and comes to notice a transcendent sense of self (Hayes et al., 2013). The ACT process of metacognitive defusion parallels concepts in psychological literature referred to as reperceiving (Shapiro & Carlson, 2009), decentering (Safran & Segal, 1990), deautomatization (Deikman, 1982), and detachment (Bohart, 1983). Such processes support a shift in perspective that leads to an experience of self beyond conceptual construction. This shift in operation happens by making the prior subject of experience (the narrative-content self) an object. It is this process of making *the subject the object* (Kegan, 1982). However, western therapies such as ACT do not have the

means to make self-as-context a stable trait. This is the goal of Buddhist contemplative psychology (discussed later).

Attachment Therapy. The physical and psychological attachment of the child to its caregiver is fundamental to the development and stabilization of the capacity for self-regulation, self-recognition, self-monitoring, and the development of a theory of mind (i.e. an understanding of people's minds work). Without first learning about internal regulation by being (externally) regulated by the loving presence of a mother or caregiver it is difficult for a person to develop affect regulation, an unfortunate result such as is seen in borderline character injury (Fonagy et al., 2000). Without first learning about the self through having care-givers direct their interest to realizing the uniqueness of the child, it is difficult for the self to develop capacity for self-reflection, such as is seen in narcissistic character injury (Bennett, 2006). Psychological attachment is fundamental to the development and functioning of a healthy self-structure.

In *Attachment Disturbances in adults*, Brown (2016) surveys the history of this field. John Flavell's (1979) appearance-reality distinction was an early influence. Following Flavell, Mary Main included a "Metacognitive Monitoring scale" in her adult Attachment Interview, which she used in research that discovered that those children with insecure attachment were more cognitively fused with their thoughts, beliefs, and mental models of reality, were less able to take them as mental representations, and were thus prone to distortion (Main, 1991).

Semerari, Dimaggio, and Liotti and their associates developed a highly refined modular perspective on metacognition. By separating it into six independent sub-functions (identification, relating variables, differentiation, integration de-centration, and mastery) they were able to differentiate specific deficiencies in borderline, narcissistic, and dissociative disorders (Semerari et al., 2003). Their Metacognitive Assessment Scale (MAS) allows the therapist to identify and work on developing a patient's specific deficient metacognitive sub-function. Brown and associates' psychotherapeutic model (2016) integrate several prior schools of thought and adds a more advanced set of post-formal metacognitive skills, as explained above (in his division of metacognitive skills into basic, intermediate, and advanced).

In sum, metacognition is the central feature of the psychological therapeutic process in many schools. In the disembedding from identification with dysfunctional experience such as maladaptive thoughts, negative beliefs, reactive emotions, and traumatic sensations, the client is able to develop perspective on their experience that allows for transformation.

Metacognition and Meditation

The construct of metacognition (in its various forms) has been used by a number of theorists to explain the mechanisms of contemplative practice. These treatments of metacognition have a very different flavor vs. theories developed in the traditional context of problem solving, self-mastery, and self-regulated learning. There is more overlap between contemplative and *psychotherapeutic* treatments of metacognition. This is in part because contemplative practices (and psychotherapy) are largely about deconstructive or *disembedding* processes that free the self from prior conditioning to open up new fields of awareness and freedom, while problem solving etc. are more concerned with *building up* capacities to achieve goals. The sub-domain of contemplative practice called "mindfulness" actually sits in between these two goals, as it has a

skill-building outcome of sharpening focused attention (i.e. concentration) that is a first step in many contemplative models; while focused attention is also an important capacity in many intellectual domains such as problems solving and learning.

Mindfulness. Mindfulness was polarized by Jon Kabat-Zinn (2009) through his mindfulness-based stress reduction framework (MBSR). MBSR was developed to address chronic pain, it has come to play a central role in a number of psychotherapies and self-improvement modalities including mindfulness based cognitive therapy (MBCT), dialectical behavioral therapy (DBT), acceptance and commitment therapy (ACT), and somatic experiencing. Kabat-Zinn (2009, p. 4) defined mindfulness as “paying attention in a particular way: on purpose, in the present moment, and non-judgmentally.”¹¹

Beyond Mindfulness. As mentioned, in contemplative essence psychology mindfulness is only a preliminary step (along with establishing a foundation in ethics and right motivation/intention). Churchill (2018 – the dissertation upon which this paper is based) surveys a number of cognitive models of contemplative practice in detail, including: Jankowski and Holas' and model of metacognition and mindfulness, which is developmental/hierarchical (2014); Yates' (2017) two-tiered metacognitive model of mindfulness; Grossenbacher and Quaglia's model of Contemplative Cognition (2017); and Dorjee's (2016) contemplative science framework which includes metacognitive self-regulatory capacity (MSRC) and the associated modes of existential awareness (MEA).

These models draw on many of the elements of metacognition (and executive functioning) described above. For example, Dorjee's (2016) model includes the term "metacognitive self-regulatory capacity" of the mind (MSRC), to describe contemplative processes. As one could predict, contemplative practice methods and the attainment of various levels of contemplative capacity involve meta-*knowledge*, meta-*skills*, and meta-*sensing*; and include *affective* elements including motivation, self-confidence, and humility. As described from metacognition in general, contemplative metacognition includes components that sense, monitor, evaluate, and manage/control/regulate various cognitive processes including thought, perception, intention, attention, goals, values, beliefs, habits, and identity (sense of self) etc.

Metacognitive levels. Each of these models suggests stacked hierarchical structures illustrating which processes are meta for (i.e. operate upon) others. As we indicated above, the limitations of the concept of meta means that each theory breaks up the space in a different way. One issue is that certain processes that set the context for meditative practice, such as motivations/intentions/goals, attitudes of acceptance, and meta-knowledge about how the mind works, might be said to be foundational assumptions (bottom-up influence) or control processes (top-down influence) in these quasi-linear models, when in fact most sub-processes operate in

¹¹ A more refined definition developed by Bishop et. al. (2004) can be summarized as follows: mindfulness is the self-regulation of attention on immediate experience, maintained by sustained attention, attentional switching, and the inhibition of secondary elaborative thought processes, that allows for the increased recognition of mental events characterized by a curious, open and accepting orientation towards present experience, leading to insight into the nature of cognitive experience, the adoption of a decentered perspective on subjectivity, and the transience of sensation, emotion and thought. In short, mindfulness is form of metacognition.

tandem in a co-creational system of feedback/feed-forward relationships (this idea is an application of the Buddhist principle of dependent origination; a truth that implies that component-based models of cognitive processes will always be substantial simplifications of the reality).

Advanced metacognition. Another thing that distinguishes models of contemplative metacognition from other models of metacognition is that many of the former are interested in *advanced* skills achieved by contemplative adepts with decades of training, as opposed to models used to guide academic learning, problem solving success, or self-improvement for "anybody." Thus they are more likely to include multiple stages or levels, and are more likely to form a bridge to developmental theories (which have many levels).¹²

For example, Yates (2017) notes that following the fundamental practice of attention to breathing etc., as metacognitive decentralized awareness comes online, it can lead to personal insights of phenomena described in Buddhist psychology, including insights into impermanence, no-self, and reactivity (*dukkha*). The highest (meta-meta) level of Jankowski and Holas' (2014) model includes the meta-awareness of decentration and experiential acceptance. This model differentiates *controlling* vs. *inhibiting* processes, where mid-level metacognition controls perception, thought, emotion, etc., while higher level metacognition inhibits beliefs and thought-habits that impede the process-level goals. According to Jankowski and Holas (2014), the person who achieves this higher level of meditation then starts to become aware of clarity (fundamental awareness), the most fundamental and basic form of reflexive non-conceptual cognition that makes all other types of cognition feasible and forms the central feature of consciousness itself,

Awareness, attention, and intention. Grossenbacher and Quaglia's model (2017) elaborates on the developmental ratcheting relationship between awareness, attention, and intention. *Awareness*, or "Awareness of transient information" (ATI), refers to the basic cognitive process of being aware of the transient objects of experience such as sensory information, affect, memory, imagery, and thought. ATI is the central feature of those meditations designed to cultivate moment-by-moment choiceless awareness of the ongoing stream of consciousness such as the choiceless awareness of Zen *shikantaza* (just sitting) meditation. Choiceless awareness, *without* focused attention or specific intention, is difficult to achieve, and many contemplative models *include* modes of intention and attention that deconstruct or disembed layers of cognitive processing that impeded choiceless awareness.

Grossenbacher and Quaglia's model includes "intended attention" (IA), i.e. processes and practices designed to develop *attentional* stability. One has an intention to focus on a particular type of cognitive phenomena, and eventually achieves stable attention upon it. IA is the central feature of those meditations designed to develop attentional stability such as Indo-Tibetan calm/staying practice. From this concentration something is learned about that object of awareness and its conditioned nature, and one's understanding and processing habits begin to shift toward freedom from that form of conditioning.

¹² Note however that developmental theories are theories of learned traits, i.e. skills, and while a skills can build layer upon layer through many levels simply through reflective practice over time (given the right conditions), in-the-moment metacognitive processes may be more limited in the number of layers in simultaneous operation.

From this new basis, new insights may emerge (or previously obscure meditation instructions may become comprehensible) leading to a new *intention* to focus attention on a different object (or different layer of mental processing). Using this "attention to intention" (AI), the meditator monitors, assesses, and adapts the higher-level goals (intentions) of the contemplative process. Grossenbacher and Quaglia define AI as the "attentional modulation and/or monitoring of an intention whether through facilitation of a selected intention, inhibition of competing intentions, sustaining an already operating intention, or reengaging one that has waned" (2017, p. 15). While AI monitors and adapts the processes of intending in the present, IA attends to the more global meta-process of adjusting the AI process itself. The model shows has awareness (ATI), attention (IA), and intention (AI) reciprocally strengthen each other.

As mentioned above, contemplative practice usually involves multiple goals/intentions operating in parallel at different levels. For example, while at the local level one may have an intention of focusing on bodily sensations, at a more general level one may be mediating to cultivated strong altruistic motivation to benefit the field of all interconnected beings, a central feature in the Indo-Tibetan bodhicitta practices.

Grossenbacher and Quaglia (2017) are clearer than other theorists that the practice of meditation is not sufficient to cause the development of this metacognitive contemplative cognition. In order for mature contemplative cognition to develop the practitioner needs to consciously understand, activate, and integrate the functions of ATI, IA and AI beyond the context of formal meditation practice. This perspective is shared by the Buddhist essence traditions of mahamudra and rdzogchen where the informal, pathwalking practice of integrating meditative awareness into everyday living is fundamental to the understanding of the contemplative path.

Views: Modes of Existential Awareness. None of the models described above contains an elaborated explanation of the system of "views" described in mahamudra practice, the levels of the non-conceptual awareness (i.e. meta-sensing, of what arises in the mind moment-by-moment, Grossenbacher and Quaglia's "Awareness of Transient Information"). Dorjee's model explicitly acknowledges the need to better articulate this progression of views, which they call "modes of existential awareness" (MEA), come from the increasing degrees of de-reification achievable with contemplative practice (what Wilber calls "state stages", 2014). Again, developmental theory can be useful here, because it does not become daunted in trying to articulate multiple iterations of meta-levels, but takes the transcend-and-include process of hierarchical complexity for granted in its articulation of levels.

In summary, metacognition is an important construct and field of study for the investigation into mapping the contemplative essence psychology of Indo-Tibetan Buddhism in terms of mature adult cognitive and ego development. Through the process of complex adult cognition, metacognition facilitates ego development, and, as discussed above, metacognition also facilitates transformation through the stages of insight in contemplative psychology. As a construct and mental function it is engaged in both the constructive processes of structural ego growth and in the Indo-Tibetan tradition, the deconstructive processes of transcending identification through de-reification with those structures, which then allows a transformation in the fundamental identity of an individual whilst maintaining the optimal functioning of the self-structure.

Appendix 3: Three Phases of Buddhist Contemplative Psychology

The tradition of Buddhist contemplative psychology originates with the great Indian sage Siddhartha Gautama (known as Shakyamuni Buddha), born around 563 B.C.E. Through the view of the Indo-Tibetan Tradition, Buddhism has evolved through three major stages of evolution, or turnings of the wheel of the dharma. Similar to fundamental paradigm shifts seen in other forms of science (Kuhn & Hawkins, 1963), this evolutionary process, here into the causes of human existential unhappiness, is easiest understood as a progression of understanding with each stage supported by the cognitive and metacognitive findings of the prior stage.¹³ The growth of Buddhist psychology was dependent upon the development of what the cognitive psychologist Jean Piaget referred to as the psychological capacity for formal operational thinking. The formal operational stage of cognition allows for the capacity for abstract thought: the use of hypothetical and deductive reasoning to reflect upon situations that are not present in concrete reality (Piaget, 1971). This stage of cognition includes the ability to problem solve in a logical and methodical way, and metacognition: the important psychological capacity to monitor and think about one's own thought processes. With the capacity for causal analysis and self-reflection available at this level of cognitive complexity, teachings could be developed that focused on understanding the cause and effect of the pervasive reactivity characteristic of the undeveloped mind. With a foundation in causal analysis, Buddhist contemplative thought then evolved from a reductionistic perspective on human suffering (abhidharma, higher teaching), to a systems perspective (madhyamaka/middle-way), and then to a later metasystemic perspective (buddha nature) (Guenther, 1989; Wilber 2014; D. Brown, personal communication, 2017). Each phase of the teaching is an expression of a cognitive paradigmatic shift in understanding human suffering and happiness and its causes, a turning of the wheel.^[13] As we will see later, these shifts map well to our modern understanding of cognitive development.

The First Turning of the Teaching: The Lesser Vehicle

The first phase, known as the Hinayana, or Lesser vehicle, due to the focus on individual well-being, was formalized at the third Buddhist council under the patronage of the Indian emperor Ashoka around 250 BCE. The teaching addresses the cause of existential suffering in the form of *dukkha*, the suffering of cyclic reactivity, caused by the ordinary mind's conditioned response to mental events. *Dukkha* is the result of *samsara*, conditioned reactive cyclic existence, the cycles of repetition compulsion that are caused by ignorance into the nature of awareness and the resulting reactivity that leads to compulsive activity.

The four noble truths. The Buddha's analysis of the cause and cure for suffering, the four noble truths, began with the observation that there is a human disease, *dukkha*, cyclic reactivity. It does not mean, as early western translations and interpretations would assert, that all life is suffering. The root of the word *dukkha* is etymologically related in Sanskrit to the prefix *du* meaning bad, and the word *kha*, the original word for axle hole in the ancient language of the nomadic Aryans. The word *dukkha* literally means the uncomfortable experience of riding in a

¹³ Whilst the tradition maintains that Shakyamuni (c480 BCE – 400 BCE) taught all three turnings during his lifetime, and that a minority who had a greater capacity for a more sophisticated path initially practiced the latter two phases of the teaching, it is believed that understanding of the later turnings evolved as the cultural environment became more open to their innovations.

wagon when the wheel is off the central axis rather than aligned (Tirch, 2015). Shakyamuni was pointing to the fact that human life involves some experience of reactivity, traumatic stress, dissatisfaction, and imbalance, no matter how good one has it.

The second of the four noble truths is that the cause of dukkha is the mind's conditioning (karma) to reactive craving (tanha). This addictive grasping of the mind is, according to the Buddhist psychology of information processing (abhidharma), driven by the mind's conditioned reactivity to move towards events to create more experience (clinging), to move away from experience to avoid it (aversion), or to lapse into a loss of awareness through fusion with experience (ignorance or confusion). These three compulsive mental activities are said to dominate the normal reactive mind, obscuring the mind's natural condition of openness, clarity, and peace (Brown, 2006). The traditional Buddhist belief is that this cycle of compulsive mental and emotional activity is driven by cause and effect (karma) in a multi-life process. Buddhist psychology sees the cycle of psychological reactivity as driven by conditioning inherited from past human and animal lives since *beginningless* time.

Reincarnation aside, Shakyamuni's understanding can be interpreted as a naturalistic analysis of suffering describing the conditioning elements of both nature and nurture, the epigenetic transmission of trauma (Yehuda et al. 2005), "the reincarnation of former ego-structures" (Freud, 1923, p. 48), and the intergenerational transmission of behavior (Loizzo, 2011). The idea presented by the Buddha that prior traumatic conditioning is at the root of the individual's bodymind is now being affirmed by the discoveries of science, through mechanisms including epigenetic conditioning of trauma (Kapoor et al., 2006; Miller, 2014).

The cycle of dependent origination. The abhidharma are the systems of Buddhist cognitive psychology that each tradition follows. The Indo-Tibetan tradition draws its abhidharma particularly from the Abhidharmasamuccaya by 4th century Indian Asanga. In the abhidharmic analysis of the causal workings of the mind it reveals that when fully understood there is no solid permanent self but a complex mind-body system of sensations, instincts, emotions, thoughts and perceptual processes known as the five skandhas. When disturbed by traumatic conditioning this system creates the illusion of a permanent self (Tsering, 2010).

This sense of a permanent self-existent self is activated due to reactivity caused by cycles of cognitive grasping, aversion and confusion that form a hidden 12-fold cycle, seen below in Figure A2, at the heart of Buddhist psychology. This cycle of traumatic repetition is known as the cycle of dependent origination (pratityasamutpada). From the perspective of Buddhist psychology this is the cycle that drives our ordinary unhappiness.

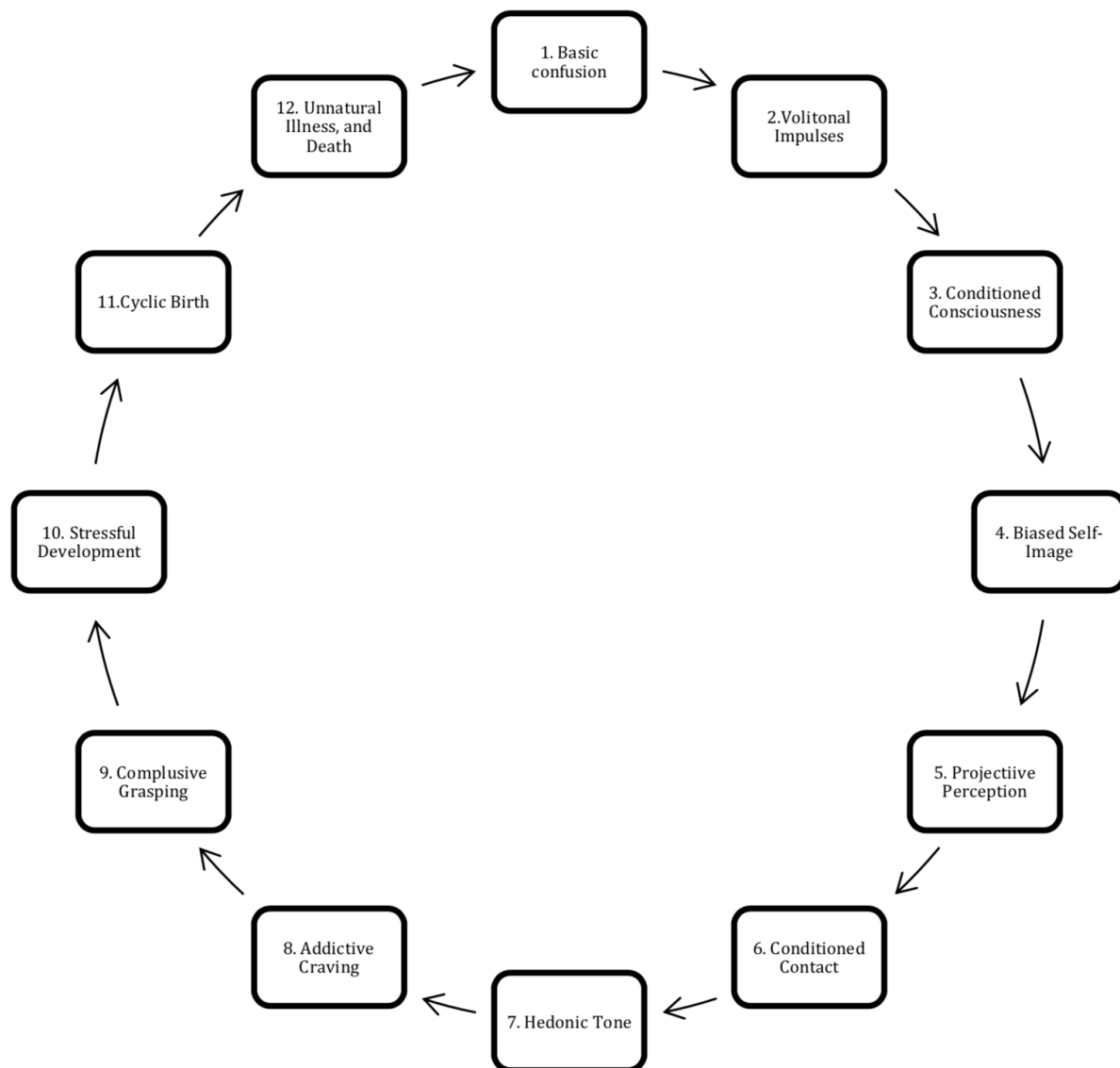


Figure A2. The 12-Link Cycle of Dependent Origination.

Figure A2 illustrates: 1. Basic Confusion (ignorance of any aspect of how the mind works, as exists at birth); 2. Volitional Impulses (automatic or unreflective reactions that further condition the mind to be reactive) > 3. Conditioned Consciousness (the resulting default "operating system" of consciousness, conditioned by reactive-stress and self-protection) > 4. Reified-Self Image (creation of an illusory reified self-image) > 5. Projective Perception (distortion of the sense perceptions, now further biased towards threat, distrust, and disconnection) > 6. Conditioned Contact (contact with the world is this distorted and contaminated with chronic reactivity) > 7. Hedonic Tone (bare sense perception is given a hedonic tone, i.e. is labeled as pleasant, unpleasant or neutral) > 8. Addictive Craving (the bodymind either moves away or towards further experience, in obsessive grasping or aversion) > 11. Cyclic Birth (reactive choices of the traumatized-self further condition the mind into a life-style of dissatisfaction) > 12. Illness and Death (the conditioning of unnatural traumatic stress leads to dysfunctional manifestations of aging and dying processes. and created the conditions for the related trauma and conditioning to

be passed on to future beings, continuation of the cycle of dependent origination). (For a more in-depth explanation, see Churchill, 2018.)

The understanding of the 12 links is fundamental to understanding how all the different aspects of the Buddhist treatment strategy, the eightfold path, synthesize into an effective path to extinguishing reactive suffering and unfold the human potential for happiness, altruistic activity and evolution. Modern science, including research into default mode network of the human brain (Brewer et al., 2013) and studies of addiction (Witkiewitz et al, 2013) and trauma recovery (Tsering, 2010), supports this model of the cycle of reactivity, traumatic repetition and compulsive activity. The third noble truth, which indicates that psychological and biological cycle of reactive grasping, caused by the fundamental confusion of awareness with its conditioned contents can be suppressed, is also increasingly supported by such research. The suppression or removal of this cognitive pattern is called nirvana in Buddhism, which literally means cessation or extinction.

Fourth Noble Truth: Treatment path. The fourth Noble Truth is the Buddhist equivalent of a treatment approach, a holistic treatment plan of contemplative lifelong healing addressing an accurate view of experience, wholesome intentions, truthful speech, appropriate action, socially beneficial livelihood, consistent effort, and the practices of mindfulness and meditative concentration (Hanh, 1999) (Tsering, 2005). The treatment path leads to: 1.) The development of insight into the three characteristics (impermanence, reactive suffering, and true identity as awareness); 2.) The understanding of mental cause and effect as indicated in the cycle of dependent origination, and its relationship to unhappy and happy mental states; 3.) The threefold development of ethics, meditative concentration, and psychological insight leading to; and 4.) Nirvana, the extinction of the addictive emotional and psychological defilements that cause personal suffering (Loizzo, 2012).

The training associated with the turning of the first wheel addresses the problems of personal traumatic conditioning, and, as such, is often referred to as the Hinayana, or personal vehicle, since its focus is the individual rather than the greater community of sentient beings. From the mind perspective, the reactivity causes mental distractibility, and a discontinuity of awareness. *Mind* here refers to awareness, the basic capability for non-conceptual knowing, and attention, the ability of the mind to hold to a particular mental event. Mental events in Buddhist psychology refer not just to the experience of sensory information (visual, auditory, kinesthetic etc.), but also the processes of thought, memory, and imagination.

The goal of treatment/practice is to reduce the causes of reactivity, distractibility, disorganization, and constant mental elaboration, and to increase mental equanimity, the continuity of awareness, the capacity to stay on an intended object-of-focus, to increase organization of mind, and to silence mental activity when needed. The training consists of behavioral modification (ethical precepts), psychoeducation, basic mindfulness and attentional control. Behavioral modifications are designed to interrupt the cycle of dependent origination by not allowing the development of a lifestyle driven by compulsive grasping and traumatic repetition. Training in the conceptual understanding of the mind (abidharma psychology) helps support an accurate view of the mind and experience to understand the 12 links of dependent origination. Basic mindfulness is practiced to reduce reactivity to unpleasant hedonic experience at the 7th stage. The mindful practice of accepting experience and no longer avoiding unpleasant

sensations cuts off the cause for the 8th stage of compulsive grasping. The practice of attentional stability (calm/staying concentration meditation) reconditions the default attentional system at the 3rd stage.

The Second Turning of the Teaching: The Great Vehicle

According to the Tibetan tradition, the second phase of the teaching was presented on Vulture Peak Mountain near Rajagriha, when the Buddha was said to have taught on the empty uncompounded nature of all phenomena (Skt: shunyata) and on compassion (Skt: karuna) (Hanh, 1999). These two elements form the heart of the Mahayana, the Great Vehicle, or second turning of the wheel. Historically, the approach is philosophically grounded in the madhyamaka school founded in the second century CE by Nagarjuna, the abbot of Nalanda University. The Mahayana includes the first turning insights into the reactivity and impermanence of human experience, but deepens the understanding of the deconstruction of the ego (no-self) and impermanence with a more sophisticated understanding that the concepts such as self, suffering, and the freedom from suffering, are themselves empty of an essential nature. In the Mahayana view the entire cycle of dependent origination reviewed earlier is caused by mistaken reification. The fundamental psychological problem with reification (Link 1) is that it causes *self grab*, which obscures the natural equanimity of awareness. It is the recognition of the lack of thing-in-itself-ness, the entitylessness, and constructed nature of all phenomena, whether psychological or physical, that is known by the term shunyata, translated as emptiness, but perhaps better served by the term *openness* to ensure that it is not interpreted as a nihilistic vision of human experience when in fact it is the opposite.

Emptiness/openness. In the contemplative approach of the madhyamaka, the mind trained through prior concentration practice (stabilization of Link 3) is used to direct a high-speed non-conceptual search through on-going mental experience and the psychological constructions of external reality, to see if any self-existent substantiality can be found (Brown, 1986). This search leads to the experience of the unfindability, unlocatability, and insubstantiality of mental experience, the hallmark of the realization of openness (Hixon, 1993). This is the realization of non-entitiness, that the self, its experience, and all external reality are experienced as merely constructs without a substantial self-existent nature (Brown, 2006). “Deep examination of the essence of mind through wisdom will reveal the mind in an ultimate sense to possess neither intrinsic nor extrinsic reality; it is without structure” (Namgyal, 2006, p.64).

Following the realization of the emptiness of self and external reality, the contemplative investigation in the second turning of the wheel deepens into examination of the unconscious conditioning of the 1st, 2nd and 3rd links. This is accomplished through the practice of recognizing that time, the temporal unfolding experience of reality, is also a mere construct (Brown, 2006). The realization of this contemplative insight leads to the disembedding of the observing ego from the construct of time, and the experience of a timeless, unchanging awareness. Brown quotes Tashi Namgyal, the author of the Moonlight mahamudra meditation manual: “the way the realized mind stays (like space) is that there is no elaboration of the three units of time (arising, staying, ceasing, nor any dualities, (eternalism/nihilism, coming/going)” (2006, p. 345). The realization of the mind’s timelessness opens the meditator to the experience of the simultaneous interconnectedness of all potential events. This realization in the Mahayana is what matures into the realization of compassion and the importance of the transformation of society, as all beings

are intimately and simultaneously interconnected. This important aspect of the path is central to the teaching on the Bodhisattva path, and career of compassionate non-dual service that leads to the awakening of not just the individual but the collective.

The Third Turning of the Teaching: The Buddha Nature Vehicle

It is believed in the Tibetan tradition that the third turning was taught by the historical Buddha to an audience of Bodhisattvas at a number of locations in India. Historically, the philosophical foundations are found in the yogachara school, originating in the fourth century with Asanga guided by his visionary experiences of Maitreya, the mythic Buddha of the future. Whilst the madhyamaka school asserts the fundamental unconstructed nature of human experience, the yogachara school asserts that the mind, awareness, has a primordial reality, and that this mind essence, or buddha nature (Skt: tathagatagarbha) is ultimately real and the source of all positivity and goodness in the human mind. Later Indian masters from Nalanda University integrated the madhyamaka and the yogachara view into the yogacara-svatantrika-madhyamaka. This position held the madhyamaka position that reality is essentially empty but that the methodology of the yogachara school helped students progress along the path to that realization (Mipham, 2005). Whilst the Indo-Tibetan tradition has multiple lineages with slightly differing approaches, in essence they address the same issue.¹⁴

The yogachara terminology is used by the Tibetan *essence of mind traditions* to explain their most refined practices, the generation and completion stage (tantra), great seal, (Skt: mahamudra) and great completion (Tbt: rdzog chen) traditions. Whilst the three approaches of tantra, mahamudra, and rdzogchen have differing terminology and methodology in realizing the buddha nature, they generally agree that the fundamental basis of awareness is a non-dual union of openness/spaciousness/mother consciousness and the clear-light awareness/lucid knowing/infant consciousness, the union of which is also known as the dharmakaya, the body of truth. It is the recognition of this fundamental awareness at the 1st link that cuts the entire traumatic repetition of dependent origination.

The mother, openness, is the phenomenological open basis, ground, and foundation of all experience. The Bon rdzogchen lineage of Zhan Zhung Nyan Gyud, describes it as the *space of the nature of phenomena* with nine qualities: boundlessness, omnipervasiveness, and unlimited expansiveness, without top or bottom, immeasurableness, uncontractedness, great vastness, everlasting and immutable (Wangyal, 2000). This open phenomenological space is described as *the Mother* because it is the mother of all phenomenological existence, freedom and conditionality, matter and mind, good and bad, truth and illusion. Thus, this openness is not an inert void, “is not some abstracted and lifeless emptiness, but an utter fullness that.... is vibrant with energy” (Guenther, 1989 p. 203). In a similar way the open field of outer space is full of the

¹⁴ From the point of view of individually ascribed names, there are numerous traditions, such as those of the simultaneously arising as merged, the amulet box, possessing five, the six spheres of equal taste, the four syllables, the pacifier, the object to be cut off, rdzogchen, the discursive madhyamaka view, and so on. Nevertheless, when scrutinized by a yogi, learned in scripture and logic and experienced (in meditation), their definitive meanings are all seen to come to the same intended point. (The First Panchen Lama, Lozang-chokyi-gyeltsen, (Berzin translator), 1997, p.98).

fecundity of galaxies, stars, and solar systems. It is not an abstract void – instead a field full of life.

On the other hand, the *infant consciousness* is the primordial, lucid nature of the mind, an awareness that is brilliantly awake, referenceless, pristinely non-conceptual, and the most basic form of cognition or knowing. At the deepest fundamental levels of the human mind the unbounded openness is inseparable from this referenceless clear knowing.

In the Indo-Tibetan tradition the first turning of the wheel focuses on treating traumatic reactivity and suffering through understanding the cycle of dependent origination that conditions experience, the ethical practice of behavioral modification (links 9,10,11), mindfulness meditation (link 7), and the attentional development of calm/staying (link 3). In the second turning treatment focus is on practicing recognizing the fundamental openness of experience to liberate the mind from the human habit to reify all experience of self, other, and the world. This matures into the understanding that the entire cyclic nature of suffering is caused by the failure to recognize the fundamental openness of the mother which results in ensuing reactive reification and the obscuration of the clear light of the infant consciousness. In the third turning of wheel it is understood that suffering is due to basic confusion and ignorance, (Skt: avidya, Tbt: marigpa) as to the true nature of the buddha mind that is always already right here (link1). The recognition of the buddha nature is obscured by the ordinary operations of consciousness, including even the activity of meditation itself. The aim of treatment of this cognitive dis-ease in the mahamudra and rdzogchen traditions is of a similar nature, but the methods differ slightly.

Appendix 4: Buddhist Essence Psychology: mahamudra and rdzogchen

As mentioned above the Buddhist tradition of contemplative psychology can be divided into three developmental stages (lesser, greater, and buddha/essence vehicles), and this section investigates the contemplative psychology of the third paradigm, the essence traditions of mahamudra and rdzogchen, and how these teachings have their foundation in the fundamental insights of the first and second turnings, but also expands upon them by exploring the nature of mind: the clear light spacious nature of awareness itself.

Within the Indo-Tibetan tradition there arose in the 19th century, in response to the authoritarianism of the ruling Gelugpa order, an ecumenical movement known as the rime (all-embracing, unlimited, impartial (Schaik, 2011). This universal approach to contemplative practice respected the separate lineages and yet was able to draw upon the best elements of the five schools. This movement continues today and is best personified in His Holiness the 14th Dalai Lama, who studied with many great masters across the tradition, and took His Holiness Menri Trizin, the leader of the indigenous Bon tradition, as one of his mentors in rdzogchen (great completion) practice.

An outcome of this non-sectarian movement was the synthesis of the mahamudra and rdzogchen traditions. Meditation masters such as the 3rd Karmapa, 5th, 13th and the 14th Dalai Lama worked with both mahamudra and rdzogchen practice.¹⁵

History of Mahamudra

Mahamudra (phyag chen), the *great seal*, *great embrace*, or *great symbol* is a tradition of concepts and practices within the Indo-Tibetan Buddhist tradition. Maha means great in the sense of a great openness beyond limitations, and mudra refers to the expressive nature of phenomenal experience as viewed from the awakened mind (Ray, 2002).

Mahamudra is divided into sutra, tantra, and essence approaches. Sutra mahamudra is based on the Buddha Nature teachings of the third turning of the uttaratantra shastra of Maitreya (Gyatso, 2000) and outlines a path to realization attained through the practice of the six paramitas as the bodhisattva aspirant journeys five paths and ten stages to buddhahood). Tantra mahamudra is based on the anuttarayoga tantras (unsurpassable union process) of the New Translation school and outlines a path of practice based on the transformation of the self-image, inner narrative, neurochemistry and energy system of the individual through visualization and yogic exercise (Loizzo, 2012). Essence mahamudra refers to the approach of direct investigation into the nature of mind and it is comparable to the rdzogchen teachings of the rNing ma and Bon traditions (Ringu, 2017).

The essence tradition of mahamudra originates with the great adept Saraha, who it is believed lived in India in the first millennium CE. He is regarded by the Tibetan tradition to have been the

¹⁵ For example the text *Buddhahood in the Palm of the Hand, The Union of Mahamudra and rDzogchen* by the 17th century master karma chags-med (Chagme, 2000) outlines a path of practice using mahamudra to recognize and stabilize the realization of buddha nature, and then the use of rdzogchen practice to bring that realization to fruition.

teacher of the philosopher and abbot of Nalanda monastery, Nagarjuna, and the mountain hermit Savaripa. Maitripa (986-1063), received visionary instruction from Savaripa, and outlined in his written works the doctrine of ‘not taking to mind’ (amanisakara), mentioned below.

In Tibet there are numerable lineages of mahamudra practice in the Kagyu, Sakya and Gelug traditions of the new translation school. Important to the lineage of mahamudra practice described in this section is the Tibetan translator, Mar pa Chos kyi bLo gros (1012-97) who studied essence mahamudra with Maitripa, and tantra mahamudra with the ex-abbot of Nalanda, Naropa (d. 1040). The new approach to mahamudra outlined in sGam po pa’s *Explanation of the Sole Path of Mahamudra* outlines the practices in a four yoga model comprising preliminary practices to prepare the mind and body, ordinary calm/staying practice to calm the events of the mind and develop attentional stability, ordinary special insight practices to recognize the empty lucid nature of awareness, and the extraordinary practices to recognize the non-duality of appearance/awareness-emptiness, and to effortlessly mature the realization (Brown, 2006).

A lucid, unceasing momentary awareness is the one-pointed stage of yoga. Understanding the essential nature of that awareness as nonarising emptiness that transcends conceptual modes or reality and unreality is the nondiscriminatory yoga. Understanding diverse appearances as being one from the standpoint of their intrinsic nature is the one-taste yoga. An unceasing realization of the union of appearance and its intrinsic emptiness is the great equipoise of nonmeditation yoga. (sGam po pa in Namgyal, 2006 p. 358)

The four yogas are also known by the names of shamatha, vipashyana, yugganaddha, and mahamudra.

View: The Path of Development in Mahamudra

In order to understand mahamudra it is necessary to understand the concept of *tawa* (Tbt.) or *dristi* (Skt.) which literally means, *view*, meaning the view from which one experiences phenomena. Brown (2017) explains that the view is dependent upon the basis of mental operation (spod yu), the loci of identity, level of awareness or vantage point from where the mind’s metacognition is operating. According to Ras chung, student of Mi la ras pa, there are four main bases of operation, see Table 2 below (awareness fused with thought and self-structure, awareness beyond self-structure, awareness beyond temporal processing, and awareness beyond the information processing system), with each level sequentially freer from the subtler and subtler reifications of unconscious psychological and perceptual structures. Each basis of operation has the capacity to view phenomena (take the event perspective) and self-recognition (the mind perspective). The event perspective refers to the perspective of mental objects perceived at that particular level of awareness i.e. concrete objects such as the thoughts and subtle objects such as abstract patterns. The mind perspective refers to the perspectival capacity to self-reflect and recognize the level of awareness from which the mind is operating i.e. to make awareness, the subject, the object of itself.

Indo-Tibetan psychology is based on an understanding of four levels of mind (four bases of operation); the coarse, subtle, very subtle and awakened. These are four levels of mental experience are always present in experience, but they are not necessarily conscious. Whether a level of mind is made conscious or not is dependent on the level of view, the basis of operation

from which identity is operating. Therefore, the basis of operation moves through the various levels of mind. In essence practice the meditations are less about meditating on something as they are about learning to operate from a new level of awareness, a new basis of operation, and from there to take a new perspective or view on experience.

The course level of mind is the level of day-to-day experience based in the linguistically created world of thought by the self. At this level of mind, the events we perceive are solid, a reified world of objects based on language. The next level of mind is the subtle level of mind that is perceived in information processing prior to naming of the coarse level. At this level the events are just the high-speed movement of perceptual information such as the abstract patterning of pure sensation, sound, and color. The mind at this level is functioning prior to thought, and the construction of self, and if the basis of operation is operating at this level it functions beyond the structure of self. The third level of mind is the very subtle level of mind. At this level the mind is a vast interconnected spacious field of very subtle energy and the basis of operation that perceives this is level of mind is a timeless, non-dual individual basis of operation. The fourth level of mind referred to earlier as the buddha nature, dharmakaya, is a non-dual unity of referenceless awareness (rigpa) and unbounded space (ma) where the field and the basis of operation perceiving the field are undivided. These four levels of mind and their perceived objects are shown below in Table 2.

Table 2. Levels of Mind, Basis of Operation & Event.

<u>Level of Mind</u>	<u>Basis of operation</u>	<u>Event Perspectives</u>
Coarse	Awareness fused with thought and self-structure	Solid object
Subtle	Awareness beyond self-structure	Energetic object
Very Subtle	Awareness beyond temporal processing	Interconnected field
Awakened	Awareness beyond information processing	Space

The table above shows a basic relationship between the level of mind, the event experienced at that level of mind, and the basis of identity operation at that particular level. The basis of operation shifts during meditation and initially this will be a brief *state* but as practice continues the state will become a *trait*, and a permanent developmental stage of identity. The levels of mind, basis of operation, and objects are also hierarchically nested, which means that when operating from awakened awareness beyond information processing that the awareness can cognize space, the interconnected field, energetic objects and solid objects. However, when

awareness is fused with thought and self-structure it will be unable to perceive the subtle, very subtle levels of mind.

sGam po pa's Four-Yoga Model

Churchill (2018) examines in detail the four-yoga model of sGam po pa's mahamudra, a practice that unfolds through the developmental sequence of disembedding awareness as basis of operation from subtler and subtler psychological structures. The meditator first calms the mind (shamatha), then by gaining insight (vipashyana) into the constructed nature of the self, time, and individuality recognizes awareness to be already beyond all structures to a basis of operation, buddha nature, without any reference points (Brown, 2006). The four methods are described as: One-pointed yoga (calm/staying; shamatha), Non-discriminatory yoga (insight; vipashyana), One taste yoga (union of calm staying & insight), and Non-meditation yoga (mahamudra), each summarized below.

One-pointed yoga: calm/staying (shamatha). The practice of calm/staying refers to the calming of mental events in the mind such as thought and conflicting emotions, and the staying of the attentional system on the chosen object of mediation. The basic cognitive skills to be developed are motivation, directing attention, intensifying the attentional interest to the object, and metacognitive awareness.

Motivation needs to be developed to get the practitioner to begin and continue the process of practice. "Steering" involves the repeated redirection of the wandered attention back to the meditation object. The practitioner learns to have volitional access of the attention, developing the capacity to shift from vague interest to admiration to fascination of the object by increasing the salience of the details presented whether that is the breath, sensations of the body, a visual object, thought (mantra), or visualization. This would be akin to zooming in to have a close look at an object under the microscope. Metacognition in the context of calm/staying meditation is related to the *non-conceptual* intelligence, or clarity of knowing what is arising within the experience of the meditator, and therefore being able to adjust the meditation accordingly. As students learn to develop calm staying, they sequentially work through the ability to steer, intensify the attention, and brighten metacognition.¹⁶

Non-discriminatory yoga: insight (vipashyana). Once the meditator develops the capacity for calm/staying he or she is ready to use the stable mind to gain insight into the constructed nature (emptiness) of psychological reality. The function of insight meditation is twofold. First, to come to understand that all psychological phenomena that arise in experience (perceptual, cognitive, affective, and physical) are psychologically constructed (i.e. "empty," or based on confusion/ignorance). This first stage of the practice is a negation of the thing-in-itself-ness of the

¹⁶ The tradition has a number of ways of breaking up the stages of calm/staying but essentially the meditation has two main phases: with support, and without support. Calm staying with support describes the development of continuous and complete staying on the meditation object where the object still appears to be permanent and therefore the mind is operating at the coarse level of operations. Calming staying without support refers to the development of the capacity to stay so close to the object that the meditator becomes aware of the impermanent nature of the meditation object as momentary perceptual pixels of information.

object. It leads to an experience of the psychological openness of experience that releases the 'grab' of the object over the attentional system, which in turn allows for the second stage, which is a clear recognition of the nature of the awareness that perceives the object.

The realization of the emptiness of self happens through a meditative search into the meditator's direct experience to see if the self can be discovered as a substantial independent entity. This culminates in the direct experience of the nonentityness of the self, the experience of emptiness. The realization of the emptiness of experience can then be generalized to all other psychological structures and experience such as thought, the body, emotional states, pain, etc.

Brown (2006) in his synthetic review of mahamudra through the structure of the four yogas breaks the phases of special insight into the emptiness of self, phenomena, and time. This last stage, the emptiness of time, sets up the basis of psychological operation needed at the beginning of the yoga of One Taste. Awareness of the emptiness of time deepens the contemplative analysis of experience via insight in meditation that the deepest substrate of awareness does not arise and pass away like temporal experience, but functions outside the psychological constructs of past, present, and future and is continuously operating even during waking, dreaming and deep sleep states (Mason, 2010).

One taste yoga: union of calm staying & insight. The basis of psychological operation for the one taste yoga (yugganaddha) is the very subtle, timeless level of awareness. This basis of operation is established by investigating that awareness itself is changeless and beyond the conventional coming and going of psychological time. Exploring the timelessness of the spacious phenomenological field of perception, and then recognizing the nature of the awareness that perceives such field can also establish timeless awareness. This is called *establishing the view*. The prior calm/staying training is needed for the stability and capacity to hold the perspective long enough for it to become established.

Tashi Namgyal explains that there are three things to be determined about the abiding nature of this very subtle mind: the essence of mind is empty, its self-nature is luminous clarity, and its aspects consist of the diverse display of experience appearance. The practitioner recognizes that this field of non-conceptual awareness and phenomenological space is inseparable and extends in all directions without boundary. Again quoting Namgyal (p. 216), "Whatever is the nature of space is the nature of awareness. Whatever is the nature of awareness is enlightenment. For this reason awareness, the expanse of space and the mind of enlightenment, are nondual and inseparable"

Once the view of the empty lucid nature of the very subtle level of mind is stable the practitioner learns *reverse samadhi*, to ease up on the relative activity of ordinary coarse level thinking, but to simultaneously maintain the view. Then whatever mental events arise moment-by-moment within the field of the very subtle level of mind is experienced as the non-dual expression of this field. Non-dual here means that the unbounded field of awareness-space and the objects in awareness arise together, and are *co-emergent* (Namgyal) and *simultaneously* (Brown, 2005) arising.

Tashi Namgyal (p. 225) lays out three stages to the actual identification of the spontaneous coemergence: identifying the mind co-emergence of the mind, which addresses the mind

perspective, and the cognitive co-emergence of mental activity and perceptual appearance, which address the event perspective. “When the meditator perceives the clarity of perceptive form and its unidentifiable emptiness as being the inseparable, denuded union of appearance and emptiness or emptiness and appearance, he has gained insight into the intrinsic coemergence of appearance” (Namgyal, p. 233). Brown (2005) calls these mind-simultaneous, cognition-simultaneous, and appearance-simultaneous.

The meditation on the simultaneous co-emergent mind is a process of deeper and deeper familiarization with the inseparability and one taste of the empty lucid awareness and the manifestations of appearance. Initially the student realizes the inseparable nondual nature of the simultaneous co-emergent mind with all cognition and appearance. As the meditation deepens the reactive identification with objects releases and then finally as it matures there is no distinction between awareness and its content.

Non-meditation yoga (amanisakara). At the heart of the mahamudra approach to addressing basic confusion, and associated with adepts Saraha, Maitripa, and Tilopa is the doctrine and practice of amanisakara. Amanisakara is the non-meditation discipline that follows the prior three yogas and provides the meditator with the conditions to realize the nature of mind. Amanisakara (Tibetan: Yi la mi byed pa) is translated as *non-mentation*, *non-egocentricity*, *not taking to mind*, and *non-particularization*. It is at the heart of the third turning approach to contemplative practice (Higgins, 2008; Brown, 2006).

In the psychology of the abhidharma, the manisakara is the last in a sequence of five omnipresent mental factors of information processing (contact, discernment, feeling, intention and attention) (Tashi, 2010) that are active in every moment of experience. Manisakara has numerous translations, *attention* (Tashi,) *ego centric demanding* (Guenther & Kawamura, 1975), *bringing to mind*, *setting one's mind upon*, *focus* (Higgins, 2006) *taking to mind*, *mental engagement*, *particularizing* (Brown, 2006), *paying attention*, or *taking to mind* (Berzin, 2017). Essentially, manisakara is the activity of the information processing system that engages with a mental event and in doing so simultaneously creates the experience of subject and object, the attention and the attended. If awareness is con-fused with this attentional movement, it then identifies itself solely as the attentional system and then the larger field of open phenomenological experience (Ground) will be obscured. Brown (2006, p. 438) refers to this attentional subject as *individual consciousness*.

In the term *amanisakara* the beginning *A* is a negative particle, and is referring to the negation of the information processing and attentional system (manisakara) of individual consciousness. This is achieved through orienting the nondual timeless awareness beyond identification with the artificial mental engagement of information processing, and towards any specific object towards the whole field of experience. Nonmeditation (sgom med) means precisely this: doing away with any artificial activity that can be considered meditation” (Brown, 2006, p 412).

When the mind does not move toward any seeming appearing object, and more specifically does-not-take-it to-mind, the most rudimentary basis for any discrimination falls away, and the practitioner completely transcends all false conceptualization. Mastery of not-taking-to-mind completely purifies the mind of any tendency to move toward or away from seeming

objects. Specifically, it eradicates any movement of the mind-perceiver and clears the way for undistracted awareness of the natural mind. Brown (2006, p. 415).

By perfecting this non-meditation, the meditator attains naked, unsupported awareness. This nondiscriminatory awareness is the meditation! By transcending the duality of meditation and meditator, external and internal realities, the meditating awareness dissolves itself into its luminous clarity.

rDzogchen

rDzogchen, or great completion practice, is the culmination of contemplative practice in the indigenous Bon tradition and the oldest Buddhist tradition in Tibet, the rNing ma. In both systems it is the apex of nine stages where each system is a practice path unto itself, and there are different paths of practice for different levels of understanding. In the Bon tradition the lower stages focus on shamanic practice while the rNing ma model addresses the foundational Buddhist practices of the Hinayana. Both traditions then progress through Bodhisattva teachings on emptiness and compassion, and then Tantric approaches using visualization and yogic techniques to culminate in rdzogchen.

rNing ma schools have classified the rdzogchen teaching into three series of teachings. The first is the *sems sde*, or *mind series*, which provides the most detailed step-by-step explanation and instruction in the path with an emphasis on non-conceptual awareness knowing. This approach is similar to the four-yoga model of sGam po pa described above. The second series is the *klong de*, or *space series*, where the approach is more direct, immediate and emphasizes non-conceptual space. The methods rely upon remaining within the meditative view through the use of sensation and other direct sensory experience. Particular postures, belts, and sticks are used as a support to create powerful sensory experience through which the practitioner can easily recognize directly the phenomenological unbounded openness of experience (Chogyam & Dechen, 2002). The third series is the *mengak de*, the *secret precept series*, which contains little instruction, just simple descriptions and methods on how to maintain the view.

The Bon A Khrid System of rDzogchen. Bon is the indigenous tradition of the Tibetan plateau that originated from an ancient empire, Zhang Zhung, that includes areas known today as Iran, Tajikistan Afghanistan, Tibet, Kashmir, Pakistan, and India (Reynolds, 2014; Brown, 2017). The founder of the tradition was a Buddha known as sTon pa gShen rab who predated the Indian Shakyamuni Buddha by many centuries. The Bon tradition is composed of both shamanic ritual practices for gaining benefit and prosperity in this life known as the causal Bon (rgyu'i bon), and those higher spiritual teachings of Tönpa Sherab, known as the fruitional Bon ('bras bu'i bon) which consist of sutra, tantra and rdzogchen practices akin to those found in the Buddhist lineages originating from India (Reynolds, 2014; Brown, 2017).

There are four transmission lineages of rdzogchen within Bon; the Zhang-zhung snyan rgyud (Oral transmission from Zhang Zhung), the rDzog chen yang rtse klong chen (The Great Perfection from the Highest Peak of the Great Vast Expanse), the Ye khri mtha sel (Removing Limitations from the Primordial State) and the A Khrid (the Guiding Explanation for the Primordial State) (Reynolds, 2005).

The ninth lineage folder of the A Khrid system Bru rGyal ba g.Yung drung (1242-1290) condensed the system to a 15-session manual which became the most popular version of the A Khrid teachings. As an example of the rdzogchen tradition this exploration will focus on the A Khrid system from Bon rdzogchen. It provides a systemized approach that parallels and expands upon the mahamudra four-yoga model.

Brown & Gurung (2017) in their translation of the A Khrid pith instructions reveal how the commentary of the A Khrid divides practice into three main phases: bringing the unripened mind stream to ripening, bringing the ripened mind stream to liberation, and bringing the liberated mind-stream to the completion of Buddhahood.

In the practices of "ripening the unripened mind stream" the unripened mind is brought to ripening through four sessions of practice: *Meditation on Impermanence, Setting the Intention and Taking Refuge, the Mandala Offering, and Guru Yoga (mentor bonding practice)*. These are explained more in Brown (2017) and Churchill (2018).

The practice of "Bringing the Ripened Mind-Stream to Liberation" the ripened mind is brought to liberation through six sessions. These sessions traverse the same psychological territory as the four yogas of mahamudra. Session five and six, *Concentration With and Without Attributes*, are devoted to calming the events of the mind and developing attentional stability. Through the seventh session, *Bringing Forth the Benefit*, the practitioner recognizes his or her basis of identity and psychological operation as being beyond the constructions of self, and time. Through the practice of mixing awareness into the visual perception of the outer open sky itself, and recognizing the perceptual non-duality between the awareness that is seeing the sky and the openness of the cloudless sky, one comes to recognize the spacious field of lucid, intense, and brilliantly awake awareness that is always present in each moment. The eighth session, *Pointing Out the Meaning of the Natural State*, relies upon the practice of breath retention (vase breathing) and meditation on the central channel.

The ninth session, *Getting Rid of the Stains Created by the Ordinary Mind*, is devoted to the stabilization of awakened awareness, through: "Setting Up the View" (to repeatedly shift the basis of operation to awakened awareness more often and for longer periods of time); "Dismantling the Ordinary Mind" (the dismantling of the individual consciousness, akin to sGam po pa's Non-Meditation); and "Automaticity: (awakened awareness is able to sustain itself automatically at all times and in all situations). This leads to the tenth session or stage *Taking Stainless Primordial Wisdom as the Path*, in which the meditator practices maintaining and integrating this basis of operation whilst engaging in systematically more difficult circumstances.

This tenth session (of the second, or liberation, phase of the A Khrid system) completes the process of liberation. At this point of development the meditator has developed the capacity to operate naturally from awakened awareness, the level of lucid, open non-dual awareness prior to the constructions of the information processing systems of perception, attention, temporal awareness, self-construct, emotion and cognition. Perhaps surprisingly to some readers, rDzogchen moves on from there.

The third phase of the A Khrid system moves from "liberation" to "Buddhahood" (i.e. "Bringing the liberated mind-stream to the completion of Buddhahood"). This third phase of

practice, also named, the *Practical Guide for Liberation, Reaching the End*, includes maintaining awakened awareness into deep sleep and dream yogas. According to the tradition (1) bringing awareness into the state of deep sleep is the transformation of the most ignorant substrate of consciousness, and parallels the capacity to maintain awareness throughout the dying process (Wangyal, 1998); and (2) the dream state is the most responsive state from which to transform the deep habitual karmic tendencies that have built up in the mind (Norbu & Katz, 1992; Wangyal, 2004). Though they are included in post the post-liberation (Buddhahood) phase of the A Khrid system, deep sleep and dream yogas are also practiced during the Liberation (second) phase to deepen the processes of dis-identification. The "fruition" processes ("dharmadhatu exhaustion ") introduced at this last phase is meant to cleans one of all past karmic imprints, to ultimately reach a stage of in which all negative mind states have been purified and all the positive qualities of mind have been developed (kindness, generosity, patience etc.). Though this tradition locates these purification processes after building the skills of liberation (the capacity to operate naturally from awakened awareness), other systems speak to the ongoing process of purification of conditioning (i.e. karma) that happens all along the path.

The final movements along this path include "Staying uninterruptedly in a state of one-pointedness (on the view of the inseparable pair of unbound space and awakened awareness) across the three gates of body, speech and mind, is concentrated evenness; conduct throughout the various activities and behavior is post-meditation" Druchen Gyalwa Yungdrung (Brown, 2017, p. 170); and "[not] even the slightest distinction between holding or not holding mindfulness, sleeping and waking, and being distracted or undistracted from the real nature of the mind" (Brown, 2017, p. 174).

This fruition manifests itself in realization of three dimensions: the realization of the "three enlightened bodies," the primordial wisdoms, and enlightened activity in the form of skillful means, great compassion/loving kindness, and omniscience. The three enlightened bodies, dharmakaya, samabhogakaya, and nirmanakya, (kaya) can also be translated as three fields or dimensions of the enlightened mind (the unbounded, unborn, uncreated open ground of reality akin to the purification of deep sleep; the field of light in the form of brilliant, primordial, lucid, lively awareness akin to the purification of the dreaming mind; and as radiant self-arising-self-liberating liveliness akin to the purification of the waking mind).

Finally, we will mention the rDzogchen system of "Five Primordial Wisdoms" describing the workings of the fully purified mind (i.e. Buddhahood) (Thrangu, 2011). It is described in terms of how the purification and transformation of each major defilement leads to an enlightened wisdom capacity. This model is a useful psychological tool for any location along the path to liberation.

The transformation of anger and default consciousness produces mirror-like clarity. The transformation of hedonic tone (likes, dislikes, grasping, pride) leads to perfect equanimity. The transformation of mental formations (and preference) from a self-seeking manipulation of reality leads to compassion and a discriminatory awareness as to what is ultimately good for the interconnected field. The transformation of the perceptual system (and jealousy) lead to a purified executive functioning that automatically translates understanding into energetic right action.

Looking at the underlying architecture of the mahamudra and rdzogchen systems presented a common pattern emerges. In the process of contemplative psychological development it is

necessary to first recognize, and then stabilize, a basis of operation before it can integrate the relative activity of body, speech and mind into a non-dual realization. For instance, in the mahamudra the practitioner realizes the very subtle timeless mind, and once that view is established as the basis of operation then the relative activity of mind is allowed to arise within that timeless very subtle spacious field. The four yoga mahamudra tradition has a greater differentiation of levels of metacognitive operation prior to awakened awareness than the A Khrid system. As such the four-yoga mahamudra articulates the process of establishing a basis of operation and its non-dual function at the subtle (emptiness of phenomena/dreamer and dream), very subtle (one taste reverse Samadhi), and the awakened level of mind.

What can be seen in the mahamudra and rdzogchen is a process intrinsic to human development. There is an orientation to a whole field (subtle, very subtle, awakened) that leads to the recognition of a metacognitive basis of operation. That new basis of operation then orients to the perceptual and cognitive expressions within the whole phenomenological field whilst simultaneously recognizing objects as an integrated expression of that field. When integrated, the intention shifts to establishing the next whole field as a basis of psychological operation. Because the whole fields are nested contexts (the awakened level includes, the very subtle, the subtle, and the coarse) this allows for the A Khrid system to cut through to the awakened level and in the non-dual integration of liveliness all prior levels of development are subsumed.