

The Ego Erosion Model:

Evaluating Mindfulness Practice Considering Religious and Neuropsychological Evidence

Joshua Abramson

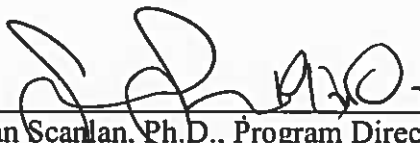
A Clinical Research Project presented to the faculty of the Hawai'i School of Professional Psychology at Chaminade University of Honolulu in partial fulfillment of the requirements for the degree of Doctor of Psychology in Clinical Psychology.

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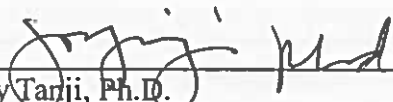
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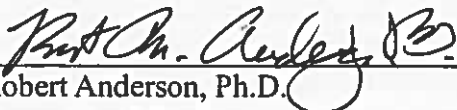
Evaluating Mindfulness Practice Considering Religious and Neuropsychological Evidence

This Clinical Research Project by Joshua Abramson, directed and approved by the candidate's Clinical Research Project Committee, was approved by the faculty of the Hawai'i School of Professional Psychology at Chaminade University of Honolulu in partial fulfillment of the requirements of the degree of Doctor of Psychology in Clinical Psychology.

  
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## The Ego Erosion Model:

### Evaluating Mindfulness Practice Considering Religious and Neuropsychological Evidence

Joshua Abramson

Hawai'i School of Professional Psychology at Chaminade University of Honolulu – 2019

This research project contains an evaluation of the modern use of mindfulness practices in clinical psychology, in light of a new model that is presented, called the *Ego Erosion Model*. As part of this project, information has been sourced from several bodies of literature. Traditional religious ideologies, from which mindfulness practices have evolved, were reviewed. Also, empirical clinical and neuropsychological research on mindfulness practice was reviewed. A comparison was made between (1) the traditional religious contexts out of which common mindfulness practices have evolved, (2) neuropsychological research evidence on the effects on mindfulness practice on large-scale brain networks, and (3) current clinical research and attitudes regarding mindfulness. Certain key disparities were noted between clinical attitudes and research on mindfulness (which tend to be focused on the reduction of pathological psychological symptoms), and traditional religious contexts of mindfulness practice (which focus on the effect of religious practice on a person's overall worldview and experience). Also, key consistencies were noted between traditional religious contexts of mindfulness practice that focus on an abolishment of the self-referencing paradigm of thought, and neuropsychological research showing that mindfulness practice effects lasting and significant lessening of self-referencing thought. Resultingly, a new model is presented that can potentially explain what is perhaps a primary mechanism of change behind the reduction of pathological psychological symptoms as a

result of mindfulness practice. In light of the Ego Erosion Model, new ethical and practical considerations regarding the clinical use of mindfulness practice are discussed, and recommendations are made.

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## **CHAPTER I. INTRODUCTION**

A literature review examines the existing literature base related to the topic of the proposed study. Such a review informs the reader as to how the study being proposed fits into the preexisting knowledge base; expanding upon current research, filling a void in the research base, or adding a new perspective to preexisting research. The relation of the proposed study to preexisting research provides a basis to evaluate the necessity or utility of the proposed study.

In this project, spiritual literature is examined that describes the self/ego-negating paradigm found in the Buddhist tradition, as well as spiritual sects from India. Such a review establishes how an ego-negating paradigm may pervade individuals' worldview and lived experience within these traditions. This ego-negating paradigm is then explored as it has been researched in the existing scientific literature base in relation to mindfulness practices. From these two sources of information (religious literature and scientific research), a model is derived that is used to offer a contrasting view compared to how mindfulness practice is currently being conceived of in Western clinical psychology. The model is used as the basis for developing a critical discussion surrounding current clinical practices regarding mindfulness as a treatment modality. Recommendations for revised clinical practices are made as a result of the model. Additionally, the model is used to make recommendations for continued research and discussion in the area of mindfulness practice as it is used in clinical psychology.

### **Rationale for the Study**

The rationale for a study establishes the importance or need for the study, based on current literature and research. Mindfulness practice in more widely recognized forms has emerged from Eastern religious traditions that carry specific ideologies. As mindfulness practice has been appropriated for use within Western culture as part of a vastly different ideological

platform, goals ascribed to the use of mindfulness within Western culture vary widely compared to the original religious context of mindfulness. As a result of this ideological shift, certain features of mindfulness practice have taken precedence in the West. In particular, mindfulness' effect of reducing clinical symptoms seems to be a primary focus in the field. Other elements of mindfulness that are emphasized within a religious context, however, seem to receive far less attention in a non-religious Western context of practice, as seen within the field of clinical psychology.

Comparing the original religious context of mindfulness with current trends in Western research on the topic, both agreements as well as disparities can be observed that are consequential regarding the use of mindfulness with clinical populations. A comparison between these religious and scientific/clinical ideologies and a review of related research and literature can be used to offer a new model of perspective that is currently largely absent in the field of clinical psychology in relation to mindfulness practices. Such an alternative perspective can be used to help better inform the use of mindfulness with clinical populations. The model that is presented in this project, which is based on relevant research that is reviewed, can be used to create additional discussion, and to provide some basic scaffolding to increase the ethical use of mindfulness with clinical applications.

### **Purpose of the Study**

The purpose of this study is to review religious and research literature related to mindfulness, and to present a new model that is based on the synthesis of these two sources of material. The new theoretical perspective that emerges as part of this model is then used to evaluate current practices related to mindfulness in clinical psychology. The model presented in this project is also used to open new forms of discussion, suggestions for further research, and

specific clinical approaches that can potentially be put into practice regarding the use of mindfulness as a part of psychological treatment.

### **Research Questions**

Research questions serve to clearly identify the area and perimeter of content that the researcher would like to explore. These questions help to establish the focus of the theoretical model.

- 1) What are some predominant religious ideological themes found in some of the primary traditions out of which mindfulness practice has originated?
- 2) What observations have been made in modern science in relation to mindfulness practice that correspond with primary religious ideological themes related to mindfulness practice?
- 3) How does the conceptualization of mindfulness in modern clinical psychology contrast with traditional religious ideologies surrounding mindfulness, as well as with any research evidence that may offer empirical support of such religious ideologies?
- 4) How can identifying contrasting elements between more common clinical ideology surrounding mindfulness, and empirically-supported religious ideology behind mindfulness practice help to inform competent and ethical clinical practice of mindfulness techniques?

### **Significance of the Study**

Two groups that may have a significant interest in this project are clinicians who are concerned with ethical practice in general, as well as clinicians who are interested in educating themselves in order to have a more rigorously informed background regarding the use of mindfulness with clinical populations. Additionally, the model that is proposed in this project can be used to inform other individuals in the field of clinical psychology who may have an interest in the systemic changes that can be attributed to mindfulness practice for the purpose of

gaining an additional perspective on the basic nature of human consciousness, personality structure, and human potential. Primarily, however, given the preponderance of the use of mindfulness that can currently be observed in the field of clinical psychology, as well as the relatively recent gaining of popularity of using such techniques, this project and the model proposed in it can be used to address best practices for clinicians related to using mindfulness techniques with patients.

## **CHAPTER II. REVIEW OF LITERATURE**

### **Introduction to Buddhist and Vedantic Philosophy and Practice**

Mysticism, spirituality, and religion are undoubtedly a very important part of the human experience, and these types of traditions are well-known to date far back into time, when the lives of humanity's ancestors bore little to no resemblance compared to those led in modern times. By neuro-anatomical means, what makes humans unique is the ability to employ a meta-analysis of our experiences; that is, using unique brains equipped with the prefrontal cortex, humans have an advanced capacity to reflect on ourselves, the outside reality, and the relationship between the inner and outer worlds.

The unique ability to theorize about or adopt beliefs regarding the nature of things has led to many unique conclusions and lines of thought, and the beliefs of humankind undoubtedly can have a significant effects on behavior, mental, and physical health. While the field of science continues to explore the empirical nature of matter and phenomena, spirituality and spiritual philosophy can be seen as going a step further, engaging with questions such as the meaning of life, that science seems far less capable of grappling with head-on. In fact, as the following work reveals, in the realm of spirituality and religion the fundamental paradigm of reality that science portrays can be rejected completely in different systems of belief.

Given the profound power that spiritual belief can have in shaping people's lives, the purpose of this work is to explore the realm of spiritual philosophy and spiritual practice in order to provide insight into how certain shaping effects are structured. Particular emphasis is placed on the Eastern traditions of Buddhism and Hinduism—two traditions that contain models of distinctly altered consciousness in the individual achievement of enlightened or exalted states of being. With the transmigration to the West of Eastern practices such as Yoga and Tantra, the

traditional context and meaning of these practices can be all but lost. Similarly, in the realm of Western psychology (including scholarly institutions), the altered states that are the goal of many Eastern spiritual practices are generally not studied in an in-depth fashion. Yet, many Eastern mystical traditions contain states that are distinctly classified as representing the pinnacle of human achievement in the realm of consciousness and behavior. As such, these traditions present a body of information that is highly relevant for exploration in a field that is focused on the workings of the psyche and the cultivation of mental health. Therefore, in the spirit of considering philosophies and states of being that are very different from those commonly expressed in the Western world (albeit decreasingly rare with the melding of culture in modern times), the mechanical workings of various mystical traditions are looked at to expand the catalogue of consideration for possibilities in the realm of human consciousness and attending behavior.

### **Spiritual Philosophy and the Nature of Reality**

It is a good viewpoint to see the world as a dream. When you have something like a nightmare, you will wake up and tell yourself that it was only a dream. It is said that the world we live in is not a bit different from this. (Tsunetomo, 2012, Chapter 2, para. 63)

For most people, daily life includes a massive variety of conceptual thoughts. Whether applied to the universe as a whole, the smallest sub-atomic particle known to exist, or anything in between, concepts can be used to classify any aspect of our lives. However, even concepts that are widely accepted as being true such as *we live on earth*, are the product of human thought, and as such are subjectively, but not necessarily objectively true.

The lack of objective truth to the manifold variety of projections humans place on this reality does not escape the discerning mind. For instance, two men can observe the same woman



as she walks away from them; while one man sees his intimate partner, whom he loves dearly, walking back to his and her home, the other man sees a wicked temptress leaving his life forever. Same woman, same place, and same time—how can it be said that these two differing perceptions are ultimately true? They are only relatively true perceptions; products of subjective interpretation.

## **Buddhism**

### **The Roots of Buddhism**

After Buddha became enlightened, he began a 45-year teaching career, and he called the tradition he founded *Dhamma-vinaya* or *the doctrine and discipline* ("What is Theravada," 2005). Around his doctrine and discipline teachings a community of men and women formed who were eager to devote their lives to the newly founded tradition, and these people were called the *Sangha* (translates as *group* or *assembly*) ("What is Theravada," 2005). Buddha entrusted these monks and nuns to carry on his body of teachings, and shortly after his death in ca. 480 BCE, a group of 500 senior monks from the Sangha convened to crystallize their accounts of the Buddha's sermons ("What is Theravada," 2005). These teachings were transmitted orally until ca. 100 BCE, when they were recorded by Sri Lankan scribe-monks ("What is Theravada," 2005).

In Buddha's first sermon, he spoke of what became known as the Four Noble Truths:

- 1) *Dukkha*: suffering, unsatisfactoriness, discontent, stress
- 2) *The cause of dukkha*: the cause of this dissatisfaction is craving (*tanha*) for sensuality, for states of becoming, and states of no becoming
- 3) *The cessation of dukkha*: the relinquishment of that craving

- 4) *The path of practice leading to the cessation of dukkha*: the Noble Eightfold Path of right view, right resolve, right speech, right action, right livelihood, right effort, right mindfulness, and right concentration (“What is Theravada,” 2005)

With the Four Noble Truths, a concise appraisal of the human condition was made, and an explicit path was outlined to enable people to find release from lives plagued with suffering (“What is Theravada,” 2005). Since the act of desiring creates a reaction that yields either happiness or despair, by continuing on in this way, individuals are bound to experience alternating waves of joy and pain (“What is Theravada,” 2005). However, when craving ends, a person is able to transcend these dual experiences, put an end to the mechanism of cause and effect, and enjoy unceasing bliss (“What is Theravada,” 2005). Such a soul also would not be born again (Buddha embraced reincarnation), having found the craving-less way of living that does not create more future karma (effects of past actions) that, to be experienced, necessitates future births v. The Four Noble Truths, regarded as the foundation of Buddha's teachings, can thus be appreciated as a very practical approach to the human condition that does not involve much in the way of metaphysical doctrine (“What is Theravada,” 2005).

Buddhism is undoubtedly a tradition that contains a number of philosophical points. However, at this, the outset of a description that is to follow regarding Buddhist Philosophy, it is worth noting certain distinct aspects of the Buddhist approach to philosophy. Through his teachings, Buddha laid out a clear path to breaking free from suffering in human life (Mazumdar, n.d.). He described the root cause of suffering, the way to alleviate suffering, and the end goal (Anonymous, 2005). However, regarding the metaphysical aspects of philosophy such as the existence of a soul, the existence or nature of God, etc., Buddha did not condone speculation and discussion because such metaphysical topics were considered by him to be of lesser importance

(Mazumdar, n.d.). Buddha is said to have used an analogy of a person with an arrow in their chest to describe the human condition of suffering (Mazumdar, n.d.). As the Buddha related, for one so afflicted it is of primary importance to remove the arrow, and of no significance to know details such as the arrow's length or material composition, which he likened to metaphysical speculation in the realm of spirituality and religion (Mazumdar, n.d.). Such an attitude towards metaphysical philosophy led to the creation of 62 banned metaphysical questions that Buddha forbade to be asked—the questions considered to be a harmful distraction for sincere aspirants to engage with (Mazumdar, n.d.).

### **Mahayana, Theravada, and Vajrayana Buddhism: An Introduction**

Despite the absence of certain metaphysical beliefs in Buddhism, philosophy is certainly engaged in. While there are a number of different sects of Buddhism with their own philosophies, two: *Theravada* and *Mahayana*, are considered to be the primary schools of Buddhist thought and practice (Mazumdar, n.d.). The word *Theravada* actually means “doctrine of the elders” (“What is Theravada,” 2005, n.p.). This title is used because Theravada Buddhism is the original school of Buddhism and considered to be the most orthodox (Mazumdar, n.d.). Theravada scriptures are limited to those in the Pali language, which Buddha himself taught in, and is the language in which the earliest written accounts of Buddha's teachings were made (Mazumdar, n.d.; “What is Theravada,” 2005). The Pali scriptures are regarded by adherents as the word of the Buddha himself (Crosby, 2013, p. 1). In early Theravada it was believed that only monks or nuns could attain buddhahood (i.e., enlightenment or nirvana), and practitioners' focus was on their own personal development (Doan, 2003).

The other major Buddhist sect, *Mahayana*, means “big raft” (Doan, 2003, n.p.). The origin of this name comes from an aspect of Buddha's life that he had interwoven into his

teachings (Doan, 2003). Having lived in a land that included many rivers and canals, ferries and rafts were commonly used modes of transport (Doan, 2003). Therefore it was natural for Buddha to use the concept of a raft as an analogy to describe the type of transformational vehicle that spiritual philosophy can be on a person's journey towards enlightenment (Doan, 2003). He stated:

...my teaching is like a raft which can help you cross to the other shore beyond birth and death. Use the raft to cross to the other shore, but don't hang onto it as your property. Do not become caught in the teaching. You must let it go. (Doan, 2003, "Mahayana Buddhism" section)

Exercising their freedom to not cleave to particular teachings or practices, Mahayanists reformed the way Buddhism was being practiced by early Theravadins (Doan, 2003). In addition to accepting all of the teachings found in the Theravada canon, sacred texts in Mahayana were expanded to include other doctrines (Epstein, 1999). Also, the Mahayana tradition placed more emphasis on compassionate action than attainment of wisdom as in the Theravada tradition (Doan, 2003). The Mahayana approach also allowed all individuals to pursue enlightenment, and so the denotation *big raft* was used to describe the increased accessibility of the Mahayana path to all people—not just monks, nuns, or those who have spent at least some time in the monastic lifestyle as in the Theravada path (Doan, 2003). Accordingly, the term *Hinayana* or *small raft* was used to describe the orthodox Theravada path due to the smaller number of individuals prepared to commit to a monastic lifestyle (the term *Hinayana* later became incorrectly used in a pejorative fashion to denote the Theravada path as lesser) (Epstein, 1999).

Not as widely practiced as either Mahayana or Theravada Buddhism is a sect known as *Vajrayana* Buddhism (Mazumdar, n.d.). Though it was derived from Mahayana Buddhism,

Vajrayana is considered to be the most esoteric of the various Buddhist schools; including concepts and practices that depart so sharply from more traditional schools that Vajrayana is not even considered to be an authentic school of Buddhism by many people in Southeast Asia (where Theravada is predominantly practiced) (Lieberman & Lieberman, 2003). Also called *Tantric Buddhism*, Vajrayana is the result of certain Mahayanists having been influenced by tantric concepts and practices found in India and practiced in certain sects of Hinduism (Lieberman & Lieberman, 2003).

### **The Two Sub-schools of Mahayana**

**Madhyamaka Buddhism.** In approximately the sixth century BCE, Siddhartha Gautama lived in India (Thakchoe, 2016). In his life, it is said, he came to realize the meaning of what Buddhists call *the two truths*, and as a direct result of this realization Siddhartha Gautama became an *awakened one*, or *buddha* (Thakchoe, 2016). The doctrine of the two truths has been interpreted differently by the various schools of Buddhist philosophy and practice that emerged after Buddha's death (Thakchoe, 2016). However, there is agreement amongst these schools in regards to the two truths doctrine being of the utmost importance in Buddha's philosophy (Thakchoe, 2016).

The current (14th) Dalai Lama endorses the Madhyamaka view, which in Tibet is considered to be the peak of Buddhist philosophy (Houshmand, Livingston, & Wallace, 1999, p. 155). Expounding the Madhyamaka view, the Dalai Lama (2004) explains how the two truths, *conventional* and *ultimate*, represent two paradigms of the nature of reality (p. 21). According to him, all objects, events, relationships—*everything*—can be conceived of in accordance with either of these two truths (with no third option being available), depending on an individual's perceptual orientation (Dalai Lama, 2004, p. 21). Whereas ultimate truth is the actual nature of

reality, conventional truth is how aspects of reality are mistakenly interpreted by the mind; analogous to a mirage in the desert (Shantideva, 2006, p. 21). Shantideva, a highly revered Buddhist monk who lived in the 8th century, elucidates further:

Relative and ultimate,

These the two truths are declared to be.

The ultimate is not within the reach of the intellect,

For intellect is said to be the relative. (Shantideva, 2006, p. 21)

Translators of the above poem (originally written in Sanskrit) explain that in Madhyamaka Buddhism, Shantideva's proclamation is taken to mean that knowledge of the ultimate truth is non-dual, non-conceptual, and transcendental to the realm of thought (Shantideva, 2006, p. 22). Contrastingly, conventional truth (denoted as *relative* in the above quotation) is experienced, through the use of mental concepts, as multiplicity; various names, forms, events, and so on (Shantideva, 2006, p. 21). Shantideva's view was derived from Buddha's own proclamations that, "...the Tathagata [enlightened one]...is free from all theories" (Warren, 2005, p. 125), and "The view that everything exists is...one extreme; that it does not exist is another. Not accepting the two extremes, the Tathagata [enlightened one] proclaims the truth from the middle position" (Shantideva, 2006, p. 21).

Essentially, within the Madhyamaka school of Buddhism it is purported that there is a singular, ultimate truth to reality, and humans mistakenly superimpose various concepts onto this ultimate truth (Shantideva, 2006, p. 21). These superimposed concepts are thought to be false because their veracity can always be refuted (Shantideva, 2006, p. 22). A particular line of reasoning based on the concept of *dependent co-arising* is used to refute the appearance of things as having the stable, independent existence they are so often conceptualized as having (Nagao,

1989, p. 5). Using this logic, the Dalai Lama (2003) gives an example of a wood table, the existence of which is dependent on a number of factors including the tree that was used to make it, along with the builder who constructed it (p. 144). The table did not simply manifest in its final form out of nowhere; it is the result of a number of objects and events coming together. Examining the dependent nature of objects' arousal, the idea of things as having independent existences and identities begins to melt into a soup of interdependent phenomenon, with descriptions of its various parts seeming both arbitrary and inadequate.

Logically reducing any conceptual interpretation of reality to an insufficient and untenable position (not only by application of dependent co-arising, but by general logical scrutiny as well) is of key importance in the Madhyamaka tradition (Shantideva, 2006, p. 22). *Nagarajuna*, a man regarded as a chief representative of Madhyamaka, made extensive use of such reasoning to refute all metaphysical systems known to him; both Buddhist and Non-Buddhist (Copleston, 1892 , p. 21). *Reductio ad absurdum* is the name given to the line of reasoning whereby logical tenets are scrutinized in such a way as to reveal their being ultimately untenable. In the realm of beliefs, particularly those of a metaphysical nature that cannot be shown empirically, *reductio ad absurdum* can be used to dismantle a great number of beliefs. For example, should one hold the belief that meditation brings them closer to God, the questions could be posed, "Where is God located?" and should the answer be "God is transcendental and lives in an eternal abode," the additional question, "How can this be known to be true?" might be asked. Should one respond, "By the authorities known as the great seers who through enlightened states have seen things as they are," additional questioning as to how such authority could be proven could be pursued—reducing beliefs systematically as being ultimately unprovable.

In the wake of a process of scrutiny as leveling as *reduction ad absurdum* it may seem as if the true nature of all things is completely unknowable. However, while the mind is definitely described as being inadequate in its ability to interpret ultimate truth conceptually, the ultimate truth is stated to be knowable through a type of direct experience (Shantideva, 2006, p. 22). The word given to this phenomenon is *prajna*, and it is described as a type of intuitive knowing or insight into the ultimate truth that happens when a person transcends thought (Shantideva, 2006, p. 22). While it may seem as if the concept of *prajna* could also be logically refuted, there is undoubtedly an element of sheer simplicity and elegance to such an experience that does not hinge upon beliefs (including the existence of a God or elaborate metaphysical theory), the veracity of which cannot be proved objectively. Instead, *prajna* seems to be based on the simple fact that reality exists, and people are a part of reality. Accordingly, the best and only way to experience the truth of reality is to simply *be it*, without projecting any kind of belief, the veracity of which can always be questioned and refuted.

As has been described here, the philosophy of the Madhyamaka school of Buddhism rejects the existence of things as they are conceptualized by the rational mind, and also rejects the nihilist construction that there is no ultimate truth to anything at all. The rejection of these two extremes can be traced back to the Buddha, who declared the stance of *knowing ultimate truth through non-conceptual means* as a type of middle-way that stands between the two extremes of conceptualized reality and nihilism (Shantideva, 2006, p. 21). It is from Buddha's proclamation of this middle-path that Madhyamaka (literally *middle way*) arose (Shantideva, 2006, p. 21).

**Practice.** In order to develop the perspective in which concepts are not attached to phenomena, *vipassana*, or *insight meditation* is one of the main practices utilized (Ward, 1994,



p. 163). Vipassana means *to see things as they really are*, and is a technique taught by Buddha as a remedy for universal ills (Goenka, n.d.). Traditionally done in a comfortable seated posture, mental objects and bodily sensations are labeled using general terms; for example *thinking*, *imagining*, *visualizing*, *warmth*, *pressure*, etc. (Pandita, 2004). This process, which induces a meta-analytical perspective on the mind-body experience, allows for the basic qualities that compose one's experience to be observed (Pandita, 2004). Also, immersion into the content of the thoughts or feelings is prevented since they are more or less cut at the root as a result of being given a generalized label (Pandita, 2004). The practice is typically done for one hour but can be varied according to the practitioner, and this type of mental process can be carried on throughout the day without sitting (Pandita, 2004). As discussed, the core premise of Madhyamaka is the illusory nature of conceptuality; therefore, it may perhaps seem counterintuitive that the vipassana practice employs the use of conceptual labels to classify experience. However, it is important to note that the labels are much less personalized forms of thought than people typically engage in, and this more detached perspective on one's behavior allows for insight into how individuals condition the realm of matter with the use of mental concepts (Pandita, 2004). From an outsider's perspective, the labeling process seems to be a kind of thought-pruning, where anything other than non-conceptual awareness is given a gross categorization and dropped rather than being indulged with further lines of thought.

Sayadaw (2009) describes the noting or labeling process in Vipassana as a type of *right effort* and *right mindfulness*, both of which are part of the Noble Eightfold Path that Buddha outlined as the path leading to Nirvana. A fundamental part of the Madhyamaka path, elaboration on the Noble Eightfold Path can be quite extensive, but the various points are explained in brevity here:

*Right view.* Includes an understanding of the Law of Karma (or cause and effect) (San, 2006, p. 54). Right view also includes an intellectual understanding of the true nature of mental and physical processes, and extends further, being described as the outlook one has when they have attained what are known as the Four Stages of Sainthood (San, 2006, p. 54). As San (2006) describes, right view is developed by the application of two of the other Noble Truths:

*Right mindfulness.* In making efforts to overcome wrong view and arouse right view, one practices *right effort*. In overcoming wrong view with attentive mind and dwelling with attentive mind in the possession of right view, one practices *right mindfulness*.

*Right thought* includes thought free from lust, ill-will, and cruelty.

*Right speech* is considered speech that does not include falsity, slander, harsh words and abusive language, frivolous talk or vain talk.

*Right action* is considered action that does not involve killing or injuring living beings; not taking what is not given; not engaging in wrong conduct in regards to sensory (sexual) pleasures, intoxicants, or gambling.

*Right livelihood* is considered to be the avoidance of being involved in the following types of merchandising: weapons, living beings, meat, intoxicants, and poisons.

*Right concentration* can be considered to be a more temporary result that comes from practicing insight meditation (Vipassana), or right concentration can also describe a more equanimous state of one-pointedness, considered to be a supramundane attainment (San, 2006, pp. 54-56, 60-62).

**The Yogacara sub-school.** Several centuries after Buddha's death, the Buddhist tradition is described as having become much more monastic and institutionalized (Dharma Fellowship of

His Holiness the Gyalwa Karmapa, 2015). Previously, many individuals had set out to do their own spiritual practice in solitude, seeking quiet places in nature to practice according to Buddha's precepts (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). However, with the passage of time the tradition became much more intellectual and scholarly, or monastically oriented, and individuals were honored for participation and achievements in these realms (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). The Yogacara, or *practice tradition* of Buddhism arose in response to overly scholastic institutions as well as non-contemplative monastic Buddhism, and instead sought to engage in the mystical path of direct-practice that Buddha himself had originally followed and subsequently condoned (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015).

Developing after the Madhyamaka sub-school, the Yogacara sub-school has a significant level of doctrinal unanimity with Madhyamaka Buddhism (King, 1994, p. 659). Both schools consider the ideal state of spiritual attainment to be that of buddhahood (an enlightened state equal to that experienced by the founder of Buddhism), however, whereas in Madhyamaka the emphasis is placed on wisdom and discernment, in Yogacara, formal meditation is the primary focus for making spiritual progress (Lynch, 2013). Also in the Yogacara tradition, the detailed inner workings of things like karma are delved into and explained with a greater degree of exactingness than in other sects (Lynch, 2013). For example, the idea of a *storehouse consciousness* that exists behind the conscious mind is used to explain the actual mechanism of karma, which, as previously mentioned, hinges on an individual's craving (Lynch, 2013). So such karmic seeds are thought to be stored in the consciousness in such a way that they can mature and fructify depending on the degree to which an individual remains attached to mental constructs (i.e. conceptual life) (Lynch, 2013).

In Yogacara, *The Three Natures* describe three distinct levels of consciousness that exist (Lynch, 2013). The first is described as ordinary, conceptual experience (i.e., conventional truth); the second state is when a person understands, conceptually, that all phenomena are interdependent and impermanent; and the third state is characterized by a type of emptiness that occurs when concepts are no longer being entertained by the mind (Lynch, 2013). In the third state (the experience of which is also denoted as *thusness*) existence is unalloyed by mental concepts, and even the subject/object distinction is absent (Lynch, 2013). The third state, also called *Absolutely Accomplished*, is regarded as the final state of spiritual attainment, experienced only by Buddhas, and is quite consistent with the goal of Madhyamaka (Lynch, 2013). What makes both Mahayana sub-schools distinct is that they propagate the ideal that upon reaching the threshold of attaining nirvana, the most virtuous thing to do is to prolong moving forward; remaining just short of final enlightenment in order to continue being reborn on Earth for the sake helping the unenlightened (Doan, 2003). It is unclear the degree to which Buddha endorsed the ideal of a Bodhisattva, who delays their own attainment of nirvana out of supreme compassion for others.

***Practice.*** A fundamental text of the Yogacara method is *The Stages of Spiritual Evolution (Bhavanakrama II)* written in the 8th century by the Buddhist monk Kamalashila (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). The teaching is that before even undertaking meditation, one should develop the proper outlook towards others and the world, and derive motivation to meditate from a keen sense of compassion and desire to better the world around them (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Mentally, one should let go of interpersonal preferences and aversions towards various individuals, and in doing so one can cultivate a preliminary form of even-mindedness (Dharma Fellowship of His

Holiness the Gyalwa Karmapa, 2015). The practitioner is also warned that neurotic defilements having to do with moral ethics, hatreds, obsessions, etc. must first be addressed before one sets out on the path of meditation (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015).

Additional prerequisites are mentioned including a conducive environment, wholesome conduct, positive self-regard, and forgiveness of one's past actions, before the practitioner is advised to begin what is called *Calm-abiding* or *Samatha* meditation (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). After the aspirant takes a particular seated bodily posture, the author-monk Kamalashila relates that they should do the following:

[The aspirant] may fix his mind on one or other of mental and physical complex, as an object that investigates phenomena. He may fix his mind on a Buddha-image.... Or he may choose the inhalation-exhalation of the breath as an object. Or let him fix his mind on whatever object he might choose. Once having fixed his mind on the meditation-object (*alambana*) of his choice, he should observe to see whether the attention remains focused on the object or not. (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015, n.p.)

The aspirant is instructed to catch the mind should it become distracted, bringing it back to the object of focus (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Advice is also given that a restless mind can be dealt with by contemplating the frightful condition of suffering in the form of pain, disease, and death that may come at any time, and such thought will renew one's vigor to pursue the path of liberation (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Following the prescribed course of meditation faithfully, the meditator (male or female) can enter into a blissful state of deep absorption called *Entrance Samadhi* (*Upacara Samadhi*) (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Continuing in this

absorption, one can eventually break through to *Full Samadhi (Arapana Samadhi)* (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). When the meditator enters into the ecstatic, blissful trance of Full Samadhi, where the observer is fully immersed in the object being observed so the observer-observed duality disappears, they are ready to begin *Applied-insight* or *Vipassana* meditation (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015).

Apart from first having reached the aim of Calm-abiding meditation, prerequisites for continuing on to Applied-insight meditation include: relying on holy persons for guidance and support, prior philosophical study of Buddhist teachings, and extensive time spent contemplating the teachings (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Monk Kamalashila noted that the cultivation of a nondual and pristine awareness cannot be developed with Calm-abiding meditation alone (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Instead, the accomplished state attained in Calm-abiding should be used as a platform on which to flash wisdom teachings that can enable one to penetrate the meaning of reality (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). However, application of wisdom teachings in meditation is not to be done as a type of reasoning process (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). For those practitioners who have made a devoted, in-depth study of Buddhist philosophy and have deeply internalized the teachings, the peaceful foundation achieved with Calm-abiding meditation provides the perfect springboard for realization of the nondual states that the philosophy points to as being the most accurate way to experience reality (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015).

### **Theravada Buddhism**

The *Pali Canon*, a collection of texts that would equal thousands of printed pages in English, serves as the foundation for Theravada Buddhism (Access to Insight, 2013). The Pali

word for these texts, *Tipitaka*, translates as “three baskets”—having to do with the way the texts were originally organized into three categories: rules of conduct for ordained monks and nuns; accounts of discourses delivered by Buddha and a few of his honored disciples; and additional philosophical works that focus on the nature of matter and the mind (Access to Insight, 2013, n.p.). In Theravada, emphasis is placed on individual effort to achieve full enlightenment through expedient means, a sharp contrast to the previously mentioned Mahayana schools where enlightenment is intentionally postponed for the benefit of others (Dasgupta, 1922, p. 126).

For Theravadins, the ultimate goal is not to become just like Buddha, who they believe to be a special incarnation that was superhuman (Crosby, 2013, p. 2). Instead, the perfected ideal is that of the *arahat*, a person marked by the absence of a self-referencing experiential paradigm (Collins, 1990, p. 94). Translated from the Pali texts, the word *conceit* is used to describe the condition where a person is habitually caught in a web of experience, the paradigm of which is the chronic conceptualization of thoughts and events as they pertain to the one thinking about and experiencing them (Collins, 1990, p. 94). In such a paradigm (which most people are undoubtedly intimately familiar with), life is more or less a constellation that revolves around the concept of a separate individual self; the core concept of *I am* as a separate, individual being. With the dissolution of the *I am* orientation (an orientation also called *personality belief*) an individual is regarded as having attained *right view* in regards to reality (Collins, 1990, pp. 93-94).

The philosophy behind the journey towards the ultimate negation of self is rooted in the belief in the impermanence of all things (Dasgupta, 1922, p. 126). Regarding impermanence Buddha stated:

Material form, feeling, perception, mental formations and consciousness, monks, are impermanent (*anicca*). Whatever causes and conditions there are for the arising of these aggregates, they, too, are impermanent. How monks, could aggregates arisen from what is impermanent, be permanent? (Thera, n.d.)

On a similar note, a personal friend once had an interesting experience when he went to see the Dalai Lama. Upon meeting, the Dalai Lama commented on the man's long beard, to which the man replied that he had had the beard for many years. The Dalai Lama then replied in turn, asking the man if it was the *same* beard that he had had for so long. Because hair will only grow to be a certain length before falling out (to be replaced by new growth), the beard, though it may have the appearance of a static thing, is nevertheless always changing. So the Dalai Lama's simple remark actually sums up what is a cornerstone of the Buddhist philosophy; nothing is static—everything is constantly in flux, and as such it is a mistake to assign concepts of permanence to a fundamentally impermanent reality (Thera, n.d.). Translated to the notion of a static conceptualization of self that individuals tend to have about their overall identity (the *I am* notion), it can be understood how such a static concept could be renounced in light of the view that static notions do not accurately describe the ever-changing nature of phenomena.

Commenting on the application of Buddhist teachings on impermanence, Copleston (1892) wrote:

The man who desires to be free must not love life : he must fix his mind on the idea of dissolution, transitoriness : he must convince himself that he need not, and in some sense does not, exist. Then when he breaks up, there will be nothing left : no fuel will remain, not even the least tinder of desire, for the flame of life to catch upon : he will go out altogether. (p. 115)



Pivoting around the idea of the absolutely transitory nature of reality, the conceptual lens through which human experience is seen becomes regarded as an obscuration; since, as the Buddha described, there is no real separate essence to material forms, feelings, perceptions, or thoughts (Thera, n.d.). Thus, logic dictates that when the solid grasp of conceptuality becomes loosed, the mechanism behind desire falls apart; for, how can any object or thing be desired, when the mind refuses to endorse their very existence? This is what Copleston (1892, as cited in Harris, 2006) so poignantly described using his perfect analogy of fuel to fire. So, the philosophy of absolute impermanence has direct implications on the elimination of craving that Buddha so clearly defined as being the root cause for suffering in his Four Noble Truths ("What is Theravada," 2005).

In summary, the philosophy described in this section on Theravada comprises what are known as the three characteristic marks of Theravada Buddhism: *anicca* (impermanence), *anatta* (non-soul or no self), and *dukkhu* (suffering) (Kit, 2002, p. 7). The final state of nirvana [that, when achieved, qualifies one as an *arahat* (perfected being)] comes when suffering is eliminated by the application of the philosophy of impermanence, which deconstructs the solidity of concepts—including the concept of the individual self or soul (Copleston, 1892, as cited in Harris, 2006). As is believed in other schools of Buddhism, within the Theravada tradition it is believed that the continuous cycle of death and rebirth is broken when one has achieved a state of spiritual perfection (Copleston, 1892, as cited in Harris, 2006). This is so because desire, the factor responsible for continuous rebirths according to Buddha's second Noble Truth, is cut at the root when one's experience becomes non-conceptual (Copleston, 1892, as cited in Harris, 2006).

**Practice.** As with the previously mentioned forms of Buddhist practice, both shamatha and vipassana meditation are practiced within Theravada Buddhism (Sayadaw, n.d.). Examining

the Pali Canon, the only source of sacred scripture honored in the Theravada tradition, it is interesting to note the original meaning of the terms *shamatha* and *vipassana*. The terms can be found mentioned in Buddha's discourses, where they refer to qualities of mind rather than specific meditation techniques (Bhikkhu, 1997). In the *Samadhi Sutta*, for example, Buddha describes how *shamatha* (internal tranquility of awareness) and *vipassana* (insight into phenomena through heightened discernment) are both important attainments for the spiritual aspirant ("Samadhi Sutta," 2006). To elucidate the relationship between these two factors, an analogy can be made to a candle that is being used to help a person navigate in the dark; the flame (*vipassana* or insight) is necessary to see phenomenon clearly, and balance (*shamatha* or tranquility) is also required to keep the flame steady. So while initially *shamatha* and *vipassana* were regarded as qualities rather than particular techniques, over time practices were developed as tools to invoke the qualities, the names of which now are associated predominantly with the meditative techniques alone (Bhikkhu, 1997).

### **Vajrayana Buddhism**

The rise of tantric practices in Buddhist universities located in eastern India can be traced back to the eighth century A.D., though it is possible that the occurrence happened hundreds of years earlier (Lieberman & Lieberman, 2003). The general concepts and practices originated with practitioners of Shaivism (individuals who worship the Hindu god Shiva), and these practices were adopted by Buddhists studying in monastic universities (Lieberman & Lieberman, 2003). While Tibetan Buddhism is not synonymous with Vajrayana Buddhism, the two share a lot in common, and Tibetan art often contains portrayals of sexual union, which symbolize the tantric spiritual path (Lieberman & Lieberman, 2003).

In some ways a significant departure from other forms of Buddhism, the Vajrayana tradition (also known as Tantrism) contains a core premise that all people have two innate polarities or qualities: emptiness, and compassion (Khenpo Kanthar Rinpoche, 2019). While these qualities are believed to be found as inherent aspects of every individual, they are also seen as being outwardly observable in empirical reality in a more gross form as the male-female polarity (i.e., the two genders). The goal of the Vajrayana practitioner is to train themselves to experience a merging of the two polarities, either by specific internal visualizations, or through sexual union (Khenpo Kanthar Rinpoche, 2019). These various techniques are conducted with the specific intention to create a spiritual reintegration, the final achievement of which is not dependent on the techniques (Bhaskar, 2009, p. 146). As such, the reintegration techniques are not necessarily an end in themselves, but rather an expedient means or shortcut that enable practitioners to more quickly experience and cultivate powerful, rarified states of spiritual integration (Bhaskar, 2009, p. 146). The end result of the union of the internal polarities (achieved through correct use of either the internally or externally oriented practices) is a very blissful state that is bereft of subject-object duality (Khenpo Kanthar Rinpoche, 2019). This state is also conceptualized as the attainment of buddhahood; an enlightened stature equal to that attained by Buddhism's founder (Bhaskar, 2009, p. 146). Whereas it is believed that when practicing within earlier, more traditional schools of Buddhism it may take an individual multiple lifetimes to achieve Nirvana, the accelerated Vajrayana practices are thought to enable adherents to achieve Nirvana in only one lifetime (Bhaskar, 2009, p. 146).

This blissful goal of Vajrayana; called the *great seal*, and also *the clear light nature of mind*, is characterized by a type of emptiness of conceptuality—the factor that allows for the dissolution of the subject-object duality in the experiencer (Leaman, 2001, p. 335). This

emptiness, experienced in the blissful exalted state that is the goal of the tradition, sits perfectly in-line with Vajrayana beliefs that the essential nature of phenomenon is not able to be defined with the use of concepts (Kane, 2019; Khenpo Kanthar Rinpoche, 2019). Such a conclusion is arrived at by examining the *dependent origination* of all things, just like the *dependent co-arising* line of reasoning found in the Madhyamaka philosophy (Kane, 2019).

The dependent origination line of reasoning can be traced back to Buddha, who, explaining the logic, used the example of the flame of an oil lamp, which is dependent on both the oil and the wick (Buddha Dharma Education Association, n.d.). Another example is a sprout, the existence of which is dependent on seed, earth, water, air, and sunlight (Buddha Dharma Education Association, n.d.). As the existence of everything is viewed as being intimately dependent on other factors (which are in-turn dependent on still more factors) the notion of entities as being independent and acutely definable becomes lost in a web of endlessly interrelated phenomena. As such, it can be understood how with such a philosophy, objects and things can be seen as devoid of an essence that can be absolutely defined with static and independent concepts.

Though it may seem that the relatively unconventional practices of Vajrayana decisively set the tradition apart from other Buddhist sects, this is not the case (Bhaskar, 2009, p. 146). Instead, the Vajrayana tradition is based on the same common fundamental aspects of Buddhism (e.g., dependent origination) as are found in the Theravada and Mahayana traditions (Bhaskar, 2009, p. 146). However, the methods and practices called upon to work towards the goal are unique in that they are meant to skillfully harness the body's natural energies (such as inclination towards sensory pleasure) to cultivate spiritual development (Kane, 2019). In light of such practices, the name Vajrayana, which translates as *lightning-bolt vehicle*, seems very fitting as it

is a vehicle that is both expedient as well as potentially dangerous and not easily controlled. (Brooks, 1990, pp. 68-69).

**Practice.** The preliminary phase of Vajrayana practice, *utpatti-krama*, requires the aspirant to first enter a state of emptiness or nonconceptuality (White, 2000, p. 588). From there a visualization is made of an ideal universe that contains various deities (White, 2000, p. 588). These deities signify fundamental aspects of the aspirant's personality in their purified form; the state that personality components exist in when one becomes rid of the illusion of conceptuality (White, 2000, p. 588). As such, the visualization, or *mandala*, represents a constellation of the personality that has been transformed from mundane and illusory to a state of perfection and emptiness (White, 2000, p. 588). This practice engrains the experience of phenomena, including one's own self, as being empty of independent, inherent existence—and there is a direct instilment of the sense that such independent concepts arise from mental fabrication only (White, 2000, p. 588). Imagining that certain perfected qualities have been achieved is a critical preparatory step before the phase of actually achieving them (Henning, 2013). As such, the visualization generation phase contains aspects of purification and (in a most extreme sense) exercises positive affirmation in developing the necessary components for the next stage; that of perfection (Henning, 2013).

The second phase of practice, *utpannakrama*, translates as the “perfection stage” (English, 2002, p. 172). In the perfection stage the aspirant cultivates the experience of their innate nature, which is always present, yet is obscured by conceptions of things as having separate, finite existences (English, 2002, p. 172). The innate essence of all things is already present, and the mechanism for tuning into this innateness is by inducing blissful sensations, primarily through various types of sexual unions: imaginary, symbolic, and actual union with the

opposite sex (English, 2002, p. 172). By certain means, the bliss derived through these unions is allowed to spread throughout the body, and from there the aspirant imagines the bliss as pervading the entire universe (English, 2002, p. 173). The perfection stage, despite the name, is still described as a means of practice, albeit an accelerated one, that induces advanced forms of consciousness through formulaic methods (English, 2002, p. 173). Through the use of these methods the practitioner is continually exposed to states of consciousness that purify the mind, and is believed to eventually become fully purified and experience buddhahood (White, 2000, p. 590). Though significantly simplified here, the tantric methods are quite elaborate; for instance, the sexual practices involve an ornate series of energetic channels believed to exist in the human body (English, 2002, p. 175). Within the tradition, clear and subtle teachings describe exactly how these channels and methods are believed to operate, however, for the purpose of this writing such elaborate detail is excluded (English, 2002, p. 175).

### **Vedantic Philosophy**

*Vedanta* is one of six orthodox systems of Indian philosophy, and forms the basis of most modern schools of Hinduism ("Vedanta," n.d.). The word *Vedanta* is derived from the *Vedas* which are a collection of some of the oldest sacred texts in India's history ("Vedanta," n.d.). Accordingly, Vedanta is based off of these sacred texts and within Vedanta there are multiple schools of philosophy with varying interpretations of the texts' meanings ("Vedanta," n.d.).

The three primary sub-schools of Vedanta are principally distinguished by the way in which God is conceptualized (Nikhilananda, n.d.). In the Dualistic perspective, God is regarded as being an Intelligent Governor who is independent from His creation, which He also maintains and destroys (Shivananda, n.d.). This God, *Vishnu*, is believed to live in a celestial abode with his consort, Goddess *Lakshmi* (Shivananda, n.d.). Contrastingly, the Non-Dualistic perspective

holds that God exists *as* creation, and all that exists is completely divine and homogenous (Shivananda, n.d.). From this non-dual perspective, the notion of any type of distinction within reality is regarded as illusion only (Shivananda, n.d.). The third primary sub-school of Vedanta is a mixture of the other two schools in that God alone is believed to exist as creation, yet this God is described as having various modes or attributes (Shivananda, n.d.). This belief is called *qualified non-dualism* because a unified creation is recognized as being the direct manifestation of God, however, plurality in the form of various souls and matter are recognized as being constituent parts of the overall unity (Shivananda, n.d.). An analogy of the qualified non-dual perspective could be made to a human body. While a doctor could point out various aspects of an individual Pat's anatomy and describe their specialized function and characteristics, the doctor would still hold that all such constituent elements are, on a more absolute scale, only Pat. In comparison, the more orthodox non-dual perspective would not recognize separate systems or attributes whatsoever, and as such no acts of distinguishing would be made; every part of Pat, no matter how small, would still be seen only through the absolute lens of being Pat only.

**Advaita Vedanta.** *Advaita Vedanta* or *non-dual* Vedantic philosophy is the oldest school of Vedanta, founded by Sri Shankara who is reported to have been born in the year 788 A.D. (Shivananda, n.d.). The philosophy did not originate with Shankara, but rather with his Guru (teacher) and his Guru's Guru (Shivananda, n.d.). However, it is Shankara who is regarded as having clarified the perspective of the teachers in his lineage to an extent that made his presentation of the philosophy premier (Shivananda, n.d.). Shankara wrote various commentaries on India's oldest and most sacred spiritual texts in which he expounded the Advaita view (Shivananda, n.d.). Since Shankara's time there have been many highly regarded teachers who have propounded the philosophy of non-duality.

Shankara, founder of Advaita Vedanta, did not originate the idea of a completely non-dual divine reality (pantheism), but rather attributed the origination of this concept to the Vedas (Vyas, 1995). One such example is found in the *Rig Veda*, where the statement is made, "...truth is one, but the learned refer to it in different names" (Vyas, 1995, p. 277). What is clear, however, is that it was Shankara who did much work to elucidate the relationship between the one homogenous reality indicated in the Vedas, and the phenomenal world that is commonly conceptualized with a vast multitude of names and forms (Vyas, 1995, p. 277). Key to explaining the relationship between these two fundamentally conflicting views of reality is Shankara's concept of *vivarta* which clearly describes how the world (and all of phenomenal creation) is God only, but it appears as something other than God (Vyas, 1995, p. 277). To help describe how God is misperceived, Shankara used analogies such as a rope that appears to be snake, or bubbles that appear to be something other than water, yet fundamentally are water alone (Vyas, 1995, p. 277).

In Shankara's work, *Aparokshanubhuti*, he gives a clear and concise account of the kinds of attributes and inquisitiveness a person must possess should they truly wish to approach and attain self-realization (a term often used synonymously with enlightenment or spiritual liberation) (Shankaracharya, n.d.). He states that mistaken notions of one's true identity, as well as mistaken notions regarding all other aspects of phenomenal creation, are but a result of ignorance regarding the unified truth of reality (Shankaracharya, n.d.). He vehemently denies any truth to conceptualizing of himself as being limited to a physical body (or still more subtle, as a combination of material elements), and he fully embraces complete oneness of identity with everything; God, the manifestation of which is called *Brahman* (or *Atman* as Shankara states) (Shankaracharya, n.d.). Shankara explicitly states that his argument on the non-existence of



separateness, or of existence outside of God, is based on statements made in the sacred Vedic text, the *Purusha Sukta* (Shankaracharya, n.d.).

The *Purusha Sukta* is regarded as one of the holiest hymns from the Vedas. It contains a very concise account of Vedic theosophy. The hymn is found in the *Rig Veda*, a Vedic text that focuses on core philosophical constructs as opposed to other matters such as simpler songs, mantras, and prayers (Brians, n.d.). An ancient series of texts, the Vedas are believed to have arrived in their present form some time between 1500 BCE and 1000 BCE. (Brians, n.d.). Authors of the Vedas are known as *rishis*, a term that translates as *seers*, and their works are believed to be divinely inspired channelings (Brians, n.d.).

*Purusha* means *Supreme Being* or *God*, and *sukta* means *hymn* (Rishi Narayana, 1898, pp. 2, 13). Accordingly, the *Purusha Sukta* begins with the following description of God:

The Supreme Being hath a thousand heads, a thousand eyes, a thousand feet; pervading the universe on all sides....All this Universe that *is*, all that has been and will be— everything is the Supreme Being alone. (Rishi Narayana, 1898, pp. 11-12)

In this passage, God and the universe are identified as being the same, and the description of God as having countless heads, eyes, and limbs describes in very real terms how God is thought of as immanent; embodied as all flesh, blood, this world, and all else.

As the *Purusha Sukta* advances, it is explained that the changing reality we witness as the universe-in-flux is but one-quarter of God's manifestation (Rishi Narayana, 1898, p. 20). The other three-quarters, it is stated, remain in a fixed and changeless state, resplendent for infinity (Rishi Narayana, 1898, p. 20). An analogy for this conceptualization of God could be made to a movie theater that, for the sake of this example, would not be subject to any type of material decay and would not entertain customers. So the actual structure itself: the walls, seats,

tapestries, screen, etc. of the Cosmic Theater would remain completely fixed, and on the screen there would be the movie of the changing phenomenal aspect of creation. In this eternal Cosmic Theater, the *movie* of phenomenal creation is played and after coming to an end there is a period of rest, after which the movie starts all over again (Rishi Narayana, 1898, p. 23). It is explained that in consecutive iterations of phenomenal creation there is a carryover effect where souls from the previous creation come back into existence and take forms as determined by their former deeds (Rishi Narayana, 1898, pp. 29-30). The notion of continual reifications of the material universe bears striking resemblance to the big-bang/big-crunch theory that is commonly known; where the universe is believed to cyclically condense to a tiny point of matter and energy, and then explode outward as material manifestation.

Coming back to Shankara, he references the aforementioned Purusha Sukta with eloquent simplicity, stating, "Again the Shruti has declared in the Purusha Sukta that 'All this is verily the Purusha [i.e., Supreme Being].' So how can this body be Purusha?" (Shankaracharya, n.d.). The notion of a physical human body, taking up only a minute piece of space, is totally contradictory to the description of the *Purusha* or Supreme Being as found in the Purusha Sukta; described as all that exists and regarded as totally unified and all-pervasive. By pointing out the fundamental discrepancy between the characteristics of the Purusha with those of a finite object such as the human body, Shankara swiftly dismisses the reality of such a thing as a human body. Indeed, with such a simple comparison Shankara dismisses with great prejudice the existence of *anything* outside of the Purusha, since nothing else can possibly possess the criteria on which true realness is contingent (i.e., homogenous all-pervasiveness) according to the Vedas.

In Shankara's *Aparokshanubhuti*, he not only proclaims what *is not*, but he goes into detail relating what the characteristics are of what *is* (Shankaracharya, n.d.). He describes the

qualities of a homogenous reality as: equanimous, quiescent, free from all blemish and decay, not subject to disease, beyond all comprehension, eternal, ever-free, holy, blissful, etc.

(Shankaracharya, n.d.). The homogenous reality is also described as "Existence, Knowledge, and Bliss" (Shankaracharya, n.d.). In Vedic philosophy, these three aspects are grouped together and represent a very concise description of the fundamental qualities of ultimate reality (Chinmoy, 2004, p. 32). The Sanskrit word-sequence is *sat-chit-ananda*, with *sat* meaning *being* - all that exists; *chit* meaning *consciousness*—the awareness that existence possesses; and *ananda* meaning *bliss*—the quality of that awareness/existence (Chinmoy, 2004, p. 32).

Having established that in Advaita Vedanta everything that exists is considered to be the one unified Supreme Being, the primary attributes of which are being, consciousness, and bliss, how then are very non-blissful human experiences explained? Shankara puts forth that Brahman (the Supreme Being) has a specific power, *maya*, that creates the illusion that the multiplicitous phenomenal world is real (Verma, 2007, p. 651). This quality of *maya* whereby people do not see things as they truly are is believed to be the source of spiritual bondage (Shankaracharya, n.d.). Shankara also states that when ignorance is dispelled, and the intellect no longer superimposes false concepts onto the Supreme Being, Brahman is realized as knowledge and absolute bliss (Shankaracharya, n.d.). It is important to clarify that the knowledge Shankara refers to is non-conceptual knowledge, where the essential nature of Brahman is known experientially in the absence of the intellect and its concomitant conceptuality (Sharma, 2000, p. 280).

***Ramana Maharishi.*** Ramana Maharishi is a highly honored and well-known spiritual adept and teacher who lived in India from 1879-1950. He is regarded as a great teacher and practitioner of the traditional Advaita philosophy (Maharishi, 1997, p. 11). In Ramana's 17th year, he had a deeply transformational experience where he developed a firm understanding that

his identity did not properly belong to his physical form only, but instead to the deathless all-pervasive Spirit that transcends the body (Maharishi, 1997, p. 8). This understanding dawned upon Ramana while he was lying motionless on the ground, simulating what it would be like if his body were dead and being taken to the funeral grounds (Maharishi, 1997, p. 8). In his simulation, Ramana found that his consciousness remained despite his body being deceased, and this experience of consciousness existing separately from his body opened the doorway for a new way to experience consciousness that was no longer tied to a limited human form, but was instead unconditioned and free from the limitations of that paradigm (i.e., having one's sense of identity revolve around their physical body) (Maharishi, 1997, p. 8). Ramana would later describe that in the time after his profound realization, he remained absorbed in a sense of self distinguished from his physical form, and he did so in an unbroken fashion (Maharishi, 1997, p. 8). He stated, "Whether the body was engaged in talking, reading, or anything else, I was still centered on 'I'" (Maharishi, 1997, p. 8).

The transformation that Ramana underwent has been described as spiritual liberation in that he was able to completely denounce identification with his physical body in favor of identification with Spirit or Brahman (Maharishi, 1997, p. 9). After this transformative experience, Ramana lost interest in worldly activities; for example, no longer caring what he ate he would simply accept whatever was offered to him, and he became detached and disinterested with school and various other activities boys of his age participated in (Maharishi, 1997, p. 9). Ramana soon left his family and retreated to one of the most holy sites in India where he continued his absorption in Spirit, and where, eventually, an entire Ashram (spiritual community center) was built around him by those drawn by his spiritual magnetism (Maharishi, 1997, p. 10).

Ramana remained there for over fifty years, teaching and remaining absorbed in Spirit (Maharishi, 1997, p. 10).

Like other Advaitins, Ramana's teaching about God and reality can be summed up rather easily. He himself stated, "The world is illusory; Brahman alone is real; Brahman is the world" (Grof, 2000, p. 241). A serious practitioner who very much lived the non-dual philosophy of Advaita, Ramana expressed a sense of fortunateness for not having taken up spiritual philosophy, which he said would most likely have led him nowhere (Maharishi, 1996, p. 15). For Ramana, the inquiry *who am I?* was enough to lead him away from identifying with the limited body, and it is this basic self-inquiry that he promoted as infallible means by which individuals can become aware of their true identification as the Absolute Being, or Brahman (Maharishi, 1996, p. 123). Ramana explained that the inquiry *who am I?* is not a mental questioning to be answered with some type of conceptual theory (Maharishi, 1996, p. 123). Rather, it is a prompting to inquire deeply into the nature of one's being by staying poised in pure, unconditioned awareness; simply being, and exploring the nature of that essence experientially (Maharishi, 1996, p. 123).

***Nisargadatta Maharaj.*** Another well-known teacher in the Advaita tradition is Nisargadatta Maharaj. Born in 1897, Nisargadatta had a life-changing experience in his early thirties as a result of meeting his Guru (spiritual teacher) (Realization, 2017, "Biography" section). Nisargadatta was instructed to focus on the sense of *I am* and to not give attention to other issues (Realization, 2017, "Biography" section). He followed these simple instructions steadfastly and made great progress, as a result of which he was eventually appointed to be his Guru's successor (Realization, 2017, "Biography" section). Not his birth name, *Nisargadatta* means *the one who dwells in the natural state*, and this name was adopted by Nisargadatta after he became firmly established on the spiritual path (Realization, 2017, "Biography" section).

Similar to other teachers in traditional Advaita, Nisargadatta taught that the primary aim for the spiritual aspirant should be to give up identification with their physical body in favor of identifying with Brahman, the manifest Supreme Principle (Maharaj, 2003, p. 93). He stated, "Do not use your identity with the body, but by all means use the body" (Maharaj, 2003, p. 94). Regarding the arbitrary, subjective, and untrue nature of the concepts people place on reality, on at least one occasion Nisargadatta used the example of food, the state of which is fundamentally the same as it is consumed by individuals of various faiths (Maharaj, 2003, p. 94). However, Nisargadatta pointed out, immediately after food is eaten and before it is even digested, the food is given a religious status by individuals of various faiths—a truly strange activity according to him (Maharaj, 2003, p. 94). The example serves to illustrate how accustomed people are to conditioning aspects of reality, and accepting such concepts as truth. Nisargadatta similarly pointed out how it is understandable that individuals be named in order to distinguish themselves from others, yet, rather than treat such labels as a purely functional custom, individuals actually identify with their names as if such labels indicate some type of deeper truth (Maharaj, 2003, p. 94). Again, Nisargadatta pointed out how strange it is that individuals take such arbitrary superficial designations as having some type of absolute truth to them (Maharaj, 2003, p. 94).

During one of many impromptu discussions that occurred between Nisargadatta Maharaj and those eager to glean some type of understanding from him, Nisargadatta Maharaj (2001) made an important clarification on the nature of consciousness:

When one talks of consciousness, one is likely to think in terms of an individual. But understand that it is not really the individual that has consciousness, but it is the consciousness that assumes innumerable forms. (p. 102)

This point is important when considering the Advaita view on God and reality. From Nisargadatta Maharaj's description, in addition to the previously espoused consciousness that the totality, Brahman, possesses in the Advaita system, a clearer view of God as immanent emerges. As noted, consciousness is regarded as a fully pervasive element with a blissful quality. However, as has been stated here, humans habitually place conditions on this consciousness through the use of labels and concepts, which are regarded as a manifestation of delusion in Advaita. As one can see by examining the works of great teachers like Nisargadatta Maharaj and Ramana Maharishi, they are continuously instructing individuals to explore the realm beyond conceptuality, whereby one's true nature (as unalloyed consciousness) can be experienced, and consciousness can once again be experienced in its unconditioned, blissful form.

**Qualified nondualism.** In the centuries after Shankara established Advaita Vedanta, a number of individuals were highly critical of Shankara's philosophy, declaring his view to be stark and similar enough to non-theistic Buddhist philosophy that Shankara should have taken to Buddhism rather than inject such ideas into Hindu thought (Torwesten, 1994, p. 153). With *Qualified Nondualism*, allowance was made for plurality of concepts to exist without such preponderance being regarded as blasphemous (as is done in the more orthodox Advaita) (Adams, 1993, p. 23). This variation of the Advaita philosophy is supported by varying interpretations of some of the same Vedic texts Advaita is based on (Adams, 1993, p. 23). Adams (1993) also indicates that the Qualified Nondualism school offered an important integration of the highly logical and absolutist Advaita school with popular expressive religious traditions based on a dualistic relationship between God and humans (Adams, 1993, p. 23).

Ramanuja, who lived from approximately 1017 to 1127, is regarded as the foremost proponent of the school of Qualified Nondualism (Adams, 1993, p. 23). As explained by him,

Qualified Nondualism is pantheistic in that all of reality is considered to be the manifestation of God (Adams, 1993, p. 23). However, unlike traditional nondualism (*Advaita*), in Qualified Nondualism differences within the overarching unity are recognized; for example, between God as the totality, sentient beings within that totality, and non-sentient matter also as a part of the overall totality (Adams, 1993, p. 23). As previously explained in this work, the Advaita view made no such allowances and summarily dismissed the existence of any concept or form aside from God.

Ramanuja used the analogy of *body* and *soul* to describe God's nature, and he noted that while people may be part of God's *body*, they are distinct from the *soul* of God (Adams, 1993, p. 24). A similar comparison, it seems, could be made to a human being; that is, when in a state of deep-sleep or unconsciousness, an individual's body is still functioning, however their personality is absent. Therefore, it could be stated that the body and the active, conscious aspect of the personality are not inseparable, but rather distinct as the body can exist in the complete absence of a personality. Likewise, according to Ramanuja, people can live their lives as part of God's body, but never experience God's distinct personality or spirit (Adams, 1993, p. 24). Just as it could be stated that the human personality occupies the same space as the body yet is distinct from it, Ramanuja put forth that God's soul is not separate from the universe spatially, yet is nevertheless distinct from the body aspect (Adams, 1993, p. 24).

In Ramanuja's model, it is not up to humans to simply dispel the illusion that they are anything other than God as is the case in Advaita (traditional nondualism) (Adams, 1993, p. 27). Instead, Ramanuja posits there is a relationship between humans and God whereby people's steady devotional remembrance of God can lead to finding favor with God, as a result of which God grants people spiritual liberation (Adams, 1993, p. 27). Therefore it is clear that Ramanuja's



model of Qualified Nondualism allows not only for a type of subtle differentiation between God and humans, but also for a manner of interactive relationship between these two elements.

**Dualism.** *Dvaita* or *Dualism* is a philosophy in which the material universe is not considered to be God or a part of God's direct manifestation (Shivananda, n.d.). Madhva, who lived in the 13th century, is regarded as the primary proponent of Dualism (Etter, 2006, p. 59). In his earlier years at a monastery, Madhva studied in-depth the works of Advaita (Nondualism), however he eventually rejected non-dual philosophy and went on to spearhead what would become one of the three main Vedic philosophies (Etter, 2006, p. 59). In Madhva's time, Nondualism was the preeminent Vedic philosophy, and while Ramanuja's doctrine of Qualified Nondualism had directly challenged that of Nondualism, for Madhva it was still insufficient in describing (amongst other things) the relationship between God and creation (Sharma, 2008, p. xv). Interestingly enough, Madhva's philosophy was also based on some of the same Vedic texts as were both Nondualism and Qualified Nondualism (Sharma, 2008, p. xvi).

Despite unifying Vedic declarations such as *ayam atma brahma*, or *this self is brahma*, Madhva's philosophy of plurality came from the application of a later sacred work, the Bhagavad Gita (Paramahansa, n.d., p. 21; Werner, 2005, p. 68). In the Bhagavad Gita, *Krishna* (an incarnation of God believed to have been born on Earth in the body of a man) states, "'But distinct from these is the Supreme Purusha, called the Highest Self, the indestructible Lord, who pervades and sustains the three worlds'" (Nirliptananda, 2008, p. 150). In the Gita, Krishna also states, "*Vedaih sarvah aham eva vedyah*"—that God is knowable by the Vedas (Nirliptananda, 2008, n.p.). Thus, Madhva's entire interpretation of the Vedas is distinct from other schools of Vedic philosophy because he based everything on the understanding that God and the world are entirely distinct (Paramahansa, n.d., p. 21). Since Madhva's system did not negate the ordinary

tendency towards perceiving multiplicity, he and his followers called their system *tattvavada*, or *the realist viewpoint* (Stoker, n.d.).

Madhva's philosophy of dualism is based on the belief in one Supreme God, considered to be a completely independent and sovereign entity, and God's creation, the material universe, believed to be separate from, yet completely dependent on God (Ballal, n.d.; Shivananda, n.d.). In fact, Madhva made five important distinctions that form the cornerstone of his philosophy:

- 1) The distinction between God and the individual soul
- 2) The distinction between God and matter
- 3) The distinction between the individual soul and matter
- 4) The distinction between one soul and another soul
- 5) The distinction between one material thing and another (Stoker, n.d.).

Regarding the dependent nature of people's relationship with God, Madhva clearly believed that everyone is under the direct control of God, who alone is the primary factor in determining people's degree of spiritual bondage or liberation (Ballal, n.d.). For Madhva, this absolute power alone is the governing factor, and he explicitly denounced factors such as spiritual ignorance and good or bad past actions as being significantly less important (Ballal, n.d.). Madhva referenced sacred scripture to support his claim that the one, independent God alone controls the universe (both living and non-living things) in every way (Ballal, n.d.).

Madhva was adamant about the existence of only one true God (Ballal, n.d.). However, he did recognize a type of gradation of souls beneath God, some of whom he considered worthy of worship (Ballal, n.d.). He described the existence of some more minor Gods, and also saints and angels, but he was clear that even the minor Gods should be considered as infinitely lesser,

and themselves dependent on the Supreme God. He instead described the minor Gods and great souls as types of guides capable of helping people approach the one true God (Ballal, n.d.).

Similar to Ramanuja's Qualified Nondualism philosophy, Madhva put forth that God (called *Vishnu*), lives in an eternal, celestial abode along with His consort, *Lakshmi*, who embodies the feminine aspect of divinity (Ballal, n.d.). Lakshmi, however, is not to be considered on par with Vishnu; she is instead regarded as the most powerful entity beneath him (Ballal, n.d.). While she is eternally free from sorrow and pain, her existence is still dependent on Vishnu (Ballal, n.d.). This Divine Couple is believed to have two sons: Brahma and Vayu (Ballal, n.d.).

Madhva explained that individual souls, active in the bodies of various life-forms, are dependent on God's guidance (Ballal, n.d.). God, Madhva put forth, responds to the actions individuals make by opening up various possibilities for action depending on how a person chooses to conduct themselves (Ballal, n.d.). Until a soul becomes free from all kinds of spiritual impurities, they are bound to a material body, and also to continuously being reborn in a new physical form after their old one perishes (Ballal, n.d.). When a soul wins the grace of God and is spiritually liberated, they are believed to achieve a blissful state, but not one equal to the state God is in (Ballal, n.d.).

In Madhva's system, which includes a great deal of distinctions, even amongst liberated souls there is believed to be a type of gradation (Ballal, n.d.). Further, Madhva explained that because spiritually liberated souls attain salvation at a certain point in time, they cannot be equated to God, who is eternally in an exalted state (Dasgupta, 2000, p. 66). The souls who have not achieved liberation, it is believed, may either achieve it at some point, never be released from the continuous cycle of rebirths (and never achieve liberation), or end up in a hellish realm

(Ballal, n.d.). In regards to the non-conscious aspects of material nature, various distinctions are also made (Dasgupta, 2000, p. 66). For example, as previously mentioned, the Vedic texts are regarded as divinely inspired works, and as such, they and the wisdom they contain are considered to be eternal (Dasgupta, 2000, p. 66).

According to Madhva, devotional worship of the one God, *Vishnu*, is the only means to attain salvation (Ballal, n.d.). Examples of such worship include: *ankana*—marking one's body with symbols of God; *namakarana*—giving names of the Lord to one's children; *bhajana*—singing God's glories; and *smarana*—constant remembrance of God (Ballal, n.d.). Depending on the intensity of one's devotion to God, one of God's divine children, Vayu (who does not inhabit a human body), is the mediator who delivers God's grace to the devotee (Ballal, n.d.). In addition to the previously mentioned principles of devotion, activities like devotional fasting, rigorous study of the Vedas, upstanding moral conduct, control of the senses, and renunciation of egotistical thoughts and desires are all means by which God's grace can be won (Ballal, n.d.).

**Jayatirtha.** Jayatirtha was born in the year 1365 AD, and he lived a short life of only 23 years (Sharma, 2008, p. 245). He is reputed to have renounced the world at a very early age, and to have taken up strict adherence to the dualistic, devotional path outlined by Madhva the century before (Sharma, 2008, p. 245). Despite his very young age, Jayatirtha is regarded as a master of philosophical exposition who displayed excellent scholarship (Sharma, 2008, p. 245). Through his own works, Jayatirtha expanded and elaborated on Madhva's previous exposition of the dualistic path, and in doing so the popularity of Jayatirtha's work was instrumental in Madhva's works gaining significantly more widespread recognition (Sharma, 2008, p. 245).

Jayatirtha was particularly critical of the non-dual, Advaitin view; citing (amongst other issues) the impractical nature of not recognizing any type of differences in reality (Sharma, 2008,

p. 267). For example, it was argued that without the element of distinction, a person would be unable even to distinguish themselves from others, and this fundamental confusion would represent a significant impediment in maintaining one's life (Sharma, 2008, p. 245). Dualists like Jayatirtha believe that the perception of many separate things is both a natural and real way to interpret material creation (Madhvacarya, 2006, p. 15). Hence this philosophy has been described as *realism*, as opposed to the non-dual philosophy in which the existence of anything apart from Brahman (God) is regarded as unreal (Madhvacarya, 2006, p. 15).

Like other dualists, Jayatirtha described Brahman as the Divine *cause* of the world, rather than the Divine *as* the world (Madhvacarya, 2006, p. 15). Dualist philosophers have cited Vedic texts to support the belief of material creation as being distinct from God (Madhvacarya, 2006, p. 15). One such passage refers to Brahman as: "That from which the world is born," which dualists use to support their belief of God as being distinct from the world just as a mother is distinct from the child she bears (Madhvacarya, 2006, p. 15). As a side note, it is easy to see how the very same passage could be used by a non-dualist to support their own position. A non-dualist could convey the same passage as describing how the world is not born as a separate entity *per se*, but how the notion of the world as being separate is brought forth as an illusory superimposition on what is God alone. Thus, it can be seen how philosophical traditions with drastic differences can base their beliefs on the same sacred scriptures.

**Discussion.** As a result of enhanced communication and availability of information in modern times, Buddhist and Indian philosophy are becoming more accessible and well-known to those living in Western society. Still though, for a great number of people, exposure to Eastern traditions remains limited. Considering that these traditions propound states of being upheld to represent the pinnacle of human achievement (i.e., enlightenment, nirvana or self-realization),

consideration as to how these systems may inform the field of modern psychology seems highly relevant.

As modern psychology is making wide use of mindfulness practices that are derived from traditions such as Buddhism, closely examining the original context of such practices can help to inform modern therapists in such a way as to ensure responsible use of such techniques. For example, as outlined previously in this paper, the various schools of Buddhism are distinctly focused on dissociating from identification with the ego structure, and their practices were designed to invoke such dissociative states. However, the tradition is careful to make sure that practitioners are solidly grounded in regards to moral behavior, and psychological readiness (e.g., the lack of neurotic defilements mentioned as a prerequisite). This traditional context can be acknowledged by modern therapists who seek to use techniques with dissociative elements, to be aware of the potential dangers of using the techniques with patients who are mentally ill and may not be capable of incorporating dissociative practices into their lives in a healthy and balanced way.

The element of non-conceptuality is also a strong theme running through many of the philosophies outlined. It may be difficult for people very much devoted to a conceptual paradigm of experiencing the world to understand how one could live a life bereft of concepts. However, given the fact that these massive religions very much center around the experience of non-conceptual being, qualitative and quantitative research is well warranted to see how current models of psychological health may be informed in light of this unique way of experiencing the world.

## The Default Mode Network

**A brief history and introduction.** In the 1970s, Swedish brain physiologist David Ingvar was the first to coalesce neuroimager results from rest task states, where individuals are in a quiet state that does not demand focused cognitive effort (Buckner et al., 2008). In his research, he noted a pattern of activity in certain regions of the brain that were universal in the non-directed state of activity, including increased activity in the prefrontal cortex (Ingvar, 1974, as cited in Buckner et al., 2008). However, this area of research did not garner much attention until the 1990s, with advances in neuroimager technology and an increase in popularity of research studies that made use of this technology for a wide variety of purposes (Buckner et al., 2008).

Much of the early data used to describe the Default Mode Network (DMN) was collected inadvertently in studies that made use of positron emission tomography (PET), but were not specifically examining DMN activity (Buckner et al., 2008). Instead, the studies used neuroimager to compare brain activity between resting states, and task-directed states that were of interest (Buckner et al., 2008). Regions of the brain that were relatively more active in task-directed states compared to resting states were called *activations*, and brain regions that became relatively less active in task-directed states compared to resting states were correspondingly called *deactivations* (Buckner et al., 2008).

One common deactivation that was noted relatively early on in DMN research, was that of the unattended sensory modalities (Buckner et al., 1996, as cited in Buckner et al., 2008; Haxby et al., 1994, as cited in Buckner et al., 2008; Kawashima et al., 1994, as cited in Buckner et al., 2008). Also, a deactivation along the frontal and posterior midline was noted, but no explanations were given for these deactivations at the time (Baker et al., 1996, as cited in

Buckner et al., 2008; Ghatan et al., 1995, as cited in Buckner et al., 2008). In 2001, Raichle and Gusnard released three research papers that would have a lasting effect on DMN research (Buckner et al., 2008). Their work refined the emerging concept of the DMN, and addressed theoretical and empirical implications of defining baseline states (Buckner et al., 2008). Their reviews are credited as being seminal works in establishing the DMN (a term they coined) as a distinct neurobiological system (Buckner et al., 2008).

In addition to a growing body of research literature describing DMN activity, researchers have also observed a distinct anti-correlation of the DMN with a dorsal-attention or *task-positive* network that is engaged when individuals perform attention-demanding tasks based upon external stimuli (Fox et al., 2005, as cited in Buckner et al., 2008). The task-positive network includes a specific set of frontal and parietal cortical regions that have been associated with top-down modulation of attention as well as working memory (Fox et al., 2005, as cited in Buckner et al., 2008). As attentional demand for externally-oriented tasks increase, so does attenuation of the DMN, and vice-versa (Fox et al., 2005, as cited in Buckner et al., 2008).

**Structure.** Buckner et al. (2008) evaluate three distinct approaches that have been used to identify the neuroanatomy of the DMN: functional connectivity analysis; event-related, task-induced deactivation; and comparative anatomy with primates. Between these approaches, the researchers showed "nearly complete convergence" across the data sets, identifying as core structures the medial prefrontal cortex (MPFC), posterior cingulate cortex/retrosplenial cortex (PCC/Rsp), and the inferior parietal lobule (IPL). Additionally, the researchers noted that the hippocampal formation (HF) shows as being active in the DMN, regardless of what detection approach is used (Buckner et al., 2008, p. 7). These separate cognitive areas work together in various ways that will be explored after a brief description of each DMN component is made.



***The hippocampal formation (HF).*** The HF has been well established as having a primary role in human learning and memory (Lupien et al., 1998). Further, studies have shown that the HF is involved in explicit memory formation rather than implicit memory formation (Squire, 1992). *Explicit memory* refers to when individuals voluntarily recall previous information, whereas implicit memory allows individuals to recall information automatically, such as how to ride a bicycle (Squire, 1992). Patients with amnesia as a result of HF dysfunction have shown normal memory retention at short delays, and impaired retention at longer delays (Scolville & Milner, 1956, as cited in Squire & Wixted, 2011).

***The medial prefrontal cortex (MPFC).*** Raichle (2015) describes how the Ventral Medial Prefrontal Cortex (VMPC) receives sensory information from the external environment as well as internal sensations, and relays the information to brain structures including the hypothalamus, amygdala, and periaqueductal gray matter of the midbrain. Correspondingly, research has shown the MPFC to be critical in the *extinction* process, whereby individuals downregulate a responses to a conditioned stimulus, when the stimulus continues to be presented without reinforcement (Absher & Cloutier, 2016). The MPFC is also active in the processing and regulation of affective information, as well as in the perception/consideration of other people (Absher & Cloutier, 2016). In the realm of neuropsychological research, distinct patterns of activity in the mPFC have been identified for bipolar disorder as well as schizophrenia:

The bipolar disorder group exhibited positive correlations between mPFC and insula, and between mPFC and VLPFC, whereas the control group exhibited anticorrelations between these regions. The schizophrenia group did not exhibit any resting-state correlation or anticorrelation between the mPFC and the VLPFC or insula...The decoupling of DLPFC with mPFC in bipolar disorder and schizophrenia is consistent

with the impaired executive function seen in these disorders. (Chai et al., 2011, “Connectivity Between MPFC and VLPFC, and Between MPFC and Insula” section)

The researchers concluded:

Functional connectivity between mPFC and insula/VLPFC distinguished bipolar disorder from schizophrenia, and may reflect differences in the affective disturbances typical of each illness. (Chai et al., 2011, “Discussion” section)

***Posterior cingulate cortex/retrosplenial cortex (PCC/Rsp).*** The PCC and Rsp are two associated locations found within the cingulate gyrus (Ross, 2006, p. 243). Maddock (1999) found that in a variety of studies, the Rsp was consistently active when emotional materials were processed and remembered. Recent studies have also supported the view that a general function of the retrosplenial cortex is evaluative, whereas a general function of the adjacent PCC is executive in nature (Ross, 2006, p. 243). The PCC also supports visuospatial processing (Ross, 2006, p. 243). Of interest is that the Rsp receives major inputs from areas of the brain that have been established as supporting the processing of autobiographical knowledge: the orbital and dorsolateral prefrontal cortex, the anterior cingulate cortex, parahippocampal cortex, superior temporal sulcus, precuneus, claustrum, and anterior and lateral thalamic nuclei (Maddock, 1999).

A key node in the DMN, the PCC has been shown to have increased activity when individuals are planning for the future or retrieving autobiographical memories (Leech & Sharp, 2014). Additional research suggests the role of the PCC may be highly heterogeneous, and it may be involved in more fundamental regulation of the focus of attention (Leech & Sharp, 2014). Abnormalities in PCC function have been observed in a number of clinical disorders such as: Alzheimer's disease, schizophrenia, autism, depression and attention deficit hyperactivity disorder, and ageing (Leech & Sharp, 2014).

***Inferior parietal lobule (IPL).*** Located adjacent to the occipital lobe, the IPL receives information from the visual as well as somatosensory cortexes, and is considered to be critical in the integration of these two areas (Andersen, 1987, p. 483). Lesions in this area do not produce deficits to primary aspects of vision or somatosensation (such as blindness or loss of tactile sensitivity), but instead cause deficits to more complex cortical functions such as spatial perception and visuomotor integration. About the IPL, Andersen (1987) states:

It differs from lower-order sensory areas in that it has strong connections with diverse cortical structures such as limbic cortical regions believed to be important for emotions and drives, ventral temporal lobe areas thought to play an important role in memory, and prefrontal cortical areas that may be involved in motor planning. (p. 483)

Soran et al. (2012), describe the IPL as being a cortical region with "marked functional heterogeneity, involved in visuospatial attention, memory, language and mathematical cognition" (p. 3219).

**Function.** Researchers Davey, Pujol, and Harrison (2016) note that, to date, the DMN has become almost synonymous with self-referential mental activity (Menon, 2011). In an effort to better understand whether the MPFC or PCC can be considered primary in self-referencing thought, they conducted an experiment comparing resting state fMRI data to both self-referential and non self-referential conditions (Davey, Pujol, & Harrison, 2016). Forty-six females and forty-two males, ages 15-25 (mean age 20.1 years) meeting the following criteria participated in the study: (i) without current or past diagnosis of mental illness, (ii) competent English speakers, (iii) not taking psychoactive medication, (iv) not pregnant, and (v) had no further contraindications to MRI (Davey et al., 2016). In order to test self-referential thought, participants were shown relatively neutral trait adjectives such as *lucky*, *skeptical*, and

*perfectionistic* and were then asked if they felt the word described them (Davey et al., 2016). For the external non self-referential condition, participants were shown random words and asked to evaluate the number of vowels (Davey et al., 2016). The resting-state condition did not include any external stimulation (Davey et al., 2016).

In direct contrast to activity-state fMRI, researchers confirmed a succinct overlapping of DMN activity during both the rest condition, as well as the self-referencing condition (Davey et al., 2016). This finding is supported by numerous other studies comparing self-referencing and rest conditions (D'Argembeau et al., 2005, as cited in Davey et al., 2016; Harrison et al., 2008, as cited in Davey et al., 2016; Whitfield-Gabrieli et al., 2011, as cited in Davey et al., 2016). Additionally, Davey et al. (2016) demonstrated that activity in the DMN (or *core-self* system as they also call it) was primarily driven by activity in the ventral PCC. Compared to the self-referencing state, individuals in resting-state showed greater activation in areas believed to support broader aspects of self-awareness including broad, low-level monitoring of the environment (Davey et al., 2016). Strengths of the study included a large sample size (n=88), however, the age range of participants (15-25, mean of 20.1) was relatively low. This may negatively impact the reliability of the study.

Supporting the findings of Davey et al.'s 2016 study, which indicated some variability in the amount of external environment monitoring when the DMN is activated, Buckner et al. (2008) presented two cohesive theories for DMN function: *The Sentinel Hypothesis* and *The Internal Mentation Hypothesis*. These theories of function are based on two sources of data: (1) an emerging evidence base of cerebral activations in the DMN when certain tasks are performed, and the shared properties of these distinct cognitive tasks can inform overall DMN

function; (2) the anatomy of the DMN restricts functionality, for example, due the lack of inclusion of components such as the primary sensory and motor areas (Buckner et al., 2008).

Theories are outlined and evaluated, below:

***The sentinel hypothesis.*** In the *Sentinel Hypothesis*, it is posited that a primary role of the DMN is to monitor the external environment for changes (Buckner et al., 2008). Whereas active tasks require focused attention, it is believed that the DMN represents an "exploratory state," alternatively called a state a "watchfulness," where attention is more broadly distributed across the environment (Buckner et al., 2008).

Hahn and colleagues (2007, as cited in Buckner et al. 2008) suggest that the DMN activity “may reflect, among other functions, the continuous provision of resources for spontaneous, broad, and exogenously driven information gathering” (p. 19). Buckner et al. (2008) present a variation of the Sentinel Hypothesis where they make the distinction that the gathering of information from the external environment represents an even more passively functioning system, that exists simultaneously with other, internally-directed cognitive tasks (Buckner et al., 2008, p. 20).

***The internal mentation hypothesis.*** Four paradigms of thought have been identified that activate the DMN: autobiographical memory, envisioning the future, theory of mind, and moral decision making (Buckner et al., 2008, p. 20). The first, *autobiographical memory*, are thoughts that conjure cognitive simulations of past events a person was involved in. Evidence for such thoughts activating the DMN comes from a number of neuroimager studies, as seen in a meta-analysis performed in 2006 examining 24 separate studies (Svoboda et al., 2006, as cited in Buckner et al., 2008). In each study, neuroimager data was collected while participants recalled experiences from their personal past (Svoboda et al., 2006, as cited in Buckner et al., 2008).

Researchers note the aggregate plot produced across the 24 studies is "remarkably similar to the default network including vMPFC, dMPFC, PCC/Rsp, IPL, LTC and the HF" (Buckner et al., 2008, p. 20).

Another paradigm of thought, *theory of mind*, refers to thinking about the beliefs and intentions of other people (Buckner et al., 2008, p. 20). Thoughts considering other people's perspective, actions, and/or intentions have been noted as activating the DMN consistently in research literature, beginning with Fletcher et al.'s 1995 research (as cited in Buckner et al., 2008, p. 20). Theory of mind imagery from Saxe and Kanwisher's 2003 research (as cited in Buckner et al., 2008, p. 21) indicates prominent DMN activations in the dMPFC, PCC/Rsp, and a region near IPL close to the temporo-parietal junction. Later researchers observed a lack of PCC activation when subjects considered stories about other people's physical appearances or bodily sensations (Saxe & Powell, 2006, as cited in Buckner et al., 2008). PCC activations were only observed when stories required conceiving another person's thoughts (Saxe & Powell, 2006, as cited in Buckner et al., 2008).

*Envisioning the future* is a paradigm of thought that activates systems relevant to memory, as well as those for simulating how recalled information could play into future possibilities (Schacter et al., 2008, as cited in Buckner et al., 2008). Research experiments designed to elicit this paradigm of thought typically involve giving subjects a word cue (e.g., a t-shirt) and asking them to imagine a possible future situation involving the cue (Buckner et al., 2008, p. 22). Neuroimagery from the research literature consistently reflects activation of the DMN when subjects imagine possible future scenarios they are involved in (Buckner et al., 2008, p. 22).

When examining *moral judgment*, researchers found that moral judgments involving personal moral dilemmas had the strongest activations within the DMN (Greene et al., 2001, as cited in Buckner et al., 2016). This type of mentation, researchers believe, involves the mental simulation of alternate possibilities (Moll et al., 2005, as cited in Buckner et al., 2008). Researchers note that the ability to simulate an alternative perspective to the present is a process that underlies each of the four paradigms of thought that elicit DMN activity (Buckner & Carroll, 2007, as cited in Buckner et al., 2008). This explains the close similarities noted between neuroimaging from the various thought paradigms (Buckner et al., 2008, p. 23).

**Conclusion.** Buckner et al. (2008) note that the two theories they propose for DMN function are not definitive in terms of possibilities. Given the 2016 research discussed earlier in this section, it is possible these two functions may exist together to varying degrees, representing a spectrum of emphasis that could be placed on each one simultaneously depending on circumstances. Citing Shulman et al.'s 1997 research, Davey and colleagues (2016) conclude:

These broader resting-state functions are consistent with the original contention of Shulman and colleagues that the DMN not only supports unconstrained verbally mediated thoughts but also monitoring of the external environment, body, and emotional state. (p. 390)

**Variations observed in the DMN.** Recent developments in neuropsychology have led to what has been called an emergent "paradigm shift" in the study of brain dysfunction (Menon, 2011). This shift is led by the findings that the brain is organized into coherent, large-scale functional networks, that interact with each other dynamically to regulate shifts in attention and access to domain-general and domain-specific cognitive resources (Menon, 2011). Out of a number of these stable intrinsic connectivity networks (ICNs) that have been identified, three

have been particularly important in understanding fundamental aspects of higher cognitive function, as well as dysfunction: the DMN, central executive network (CEN), and the salience network (SN) (Fox & Raichle, 2007; Krishnadas et al., 2014; Menon, 2011; Seeley et al., 2007).

Neuroimaging has indicated DMN abnormalities in nearly every major psychiatric disorder including dementia, schizophrenia, epilepsy, anxiety, depression, autism, and ADHD (Broyd et al., 2009). It has been found in epileptic patients, for example, loss of consciousness during seizure has been linked to functional connectivity deficits between the PCC and hippocampus (Liao et al., 2010). Hypoactivity in the PCC and mPFC has been noted in those with autism, documented in a 2009 meta-analysis of 24 neuroimaging studies (DiMartino et al., 2009). For depression, studies have found enhanced connectivity between the ventromedial prefrontal cortex (vmPFC) and other DMN nodes (congruent with excessive self-related rumination in depressives), whereas for those with Alzheimer's Disease, significantly reduced connectivity has been observed between the PCC and medial temporal lobe structures (Greicius et al., 2004). In addition to the disorders mentioned, significant variations in the DMN have been observed in association with meditative practices, covered in the next section.

**The DMN and meditation.** In 2011, researchers used functional MRI to assess the relationship between the DMN and three commonly used meditation practices (Brewer et al., 2011). In the first of these practices, *Concentration* meditation, the focus of one's awareness is brought to one particular item or sensation, such as the breath (Brewer et al., 2011). *Loving-Kindness* meditation was also examined, which is a practice that typically involves a phrase that is mentally repeated, such as "may [oneself or another person] be happy" (Brewer et al., 2011). The third type of meditation looked at in the study, termed *Choiceless Awareness*, involves the labeling of one's thoughts, emotions, or bodily sensations (Brewer et al., 2011). For instance,



should a thought come up about a certain item, the practitioner would note to themselves something like "thinking about that thing again" (Brewer et al., 2011). As such, *Choiceless Awareness* is an exercise in observing activity of the mind from a meta perspective, that encourages less engaged mental wandering from the present moment (Brewer et al., 2011).

To test the correlation between the meditation practices outlined, and DMN activity, Brewer and colleagues recruited two groups of twelve: a group of "very experienced" meditation practitioners, each with over 10 years of experience in all three meditation practices the study included; and a control group of individuals without experience meditating, who were case-matched with meditators for a number of demographic factors (Brewer et al., 2011). The groups were compared both during resting states, as well as during active meditation, which the control group was instructed in just before neuroimaging scans were taken (Brewer et al., 2011).

Researchers found:

As predicted, across all mindfulness meditation conditions, the two primary nodes of the DMN (the PCC and mPFC) were less active in meditators than controls. (Brewer et al., 2011, p. 20255)

Also observed were functional connectivity pattern differences between the groups, that were found to be consistent across the meditation conditions and the resting state (Brewer et al., 2011). This finding suggests underlying neural mechanism differences between meditators and non-meditators are associated with the observed differences in DMN activity between the groups (Brewer et al., 2011). Also, for the meditators, the consistency of connectivity observed both during meditation and at rest indicates "that meditation practice may transform the resting-state experience into one that resembles a meditative state, and as such, is a more present-centered default mode" (Brewer et al., 2011, p. 20255).

More specifically, the study found an increase in connectivity between PCC and task-positive regions in meditators compared to controls (Brewer et al., 2011). More pronounced in meditators, this type of coupling between primary nodes in the DMN and the task-positive network is unique (Brewer et al., 2011). Researchers think it could represent a new type of "default mode" where the PCC dampens attempts of the DMN to emerge during task-positive activities, given the PCC's temporal links to self-control regions of the brain (Brewer et al., 2011). This dampening effectively lessens interference experienced during task-positive activities, which may increase task-related effectiveness and performance (Brewer et al., 2011). Correspondingly, recent studies examining DMN connectivity in those with ADHD have found relative *decreases* in connectivity between the PCC and task-positive nodes. (Castellanos et al., as cited in Brewer, 2011).

Limitations of Brewer and colleagues' study include a moderately small sample size (n=12 for each group), which may negatively impact validity. However, researchers stated that they had deliberately chosen a smaller, more experienced group of meditators in a particular tradition to help reduce heterogeneity between meditation practices (Brewer et al., 2011). A direction of causality issue emerges when attempting to determine whether experienced meditators showed distinct functional connectivity differences compared to controls as a *result* of meditation, or whether such differences may have preceded experienced subjects' formal involvement in meditation. Another study by Jang et al. (as cited in Brewer et al., 2011) also found significant functional connectivity differences between a group of 35 meditation practitioners and 33 healthy controls during resting state. This finding provides additional support for functional connectivity differences in meditators as opposed to non-meditators.

While the issue of determining causality for functional connectivity differences between meditators and non-meditators remains, a third study published in 2011 lends support for meditation being the catalyst for differences (as opposed to meditators having some pre-existing neurological disposition) (Kilpatrick et al., 2011). Thirty-two healthy, meditation naive women ages 21-55 (with a mean age of 34.1) were selected as participants, seventeen of whom received training in an 8 week Mindfulness-Based Stress Reduction (MBSR) training course (Kilpatrick et al., 2011). The remaining fifteen volunteers were assigned to an 8 week waiting period (Kilpatrick et al., 2011). MBSR training included 8 weekly 150 minute group sessions, a day-long retreat in the sixth/seventh week, and daily practice at home (Kilpatrick et al., 2011). Group sessions consisted of:

...an instructor [leading] subjects in different guided meditations, awareness exercises, mindful movement, and group discussions, with the intent of fostering mindful awareness of how one responds to stress. (Kilpatrick et al., 2011, p. 291)

At the end of the 8-week training period, which coincided with the control group's 8 week waiting period, all participants received at-rest fMRI scans to determine functional connectivity differences between groups (Kilpatrick et al., 2011). Compared to controls, researchers found the MBSR group to have increased functional connectivity within auditory and visual networks; increased functional connectivity between auditory cortex and areas associated with attentional and self-referential processes; stronger anticorrelation between auditory and visual cortex; and stronger anticorrelation between visual cortex and areas associated with attentional and self-referential processes (Kilpatrick et al., 2011). They concluded:

These findings suggest that 8 weeks of mindfulness meditation training alters intrinsic functional connectivity in ways that may reflect a more consistent attentional focus,

enhanced sensory processing, and reflective awareness of sensory experience. (Kilpatrick et al., 2011, p. 297)

Participants in the MBSR course showed increased connectivity between mPFC and primary interoceptive awareness regions, including the posterior insula. However, increased connectivity between the mPFC and other DMN regions such as the PCC were not observed, as they had been in Brewer et al.'s study of very experienced meditators (Brewer et al., 2011; Kilpatrick et al., 2011). Possible explanations for this disparity include the brevity of training with the 8-week program, as well as meditative task instructions having an emphasis on awareness of sounds (Brewer et al., 2011).

### **CHAPTER III. THE EGO EROSION MODEL**

The Ego Erosion Model can be used to help address a perceived deficit in understanding in clinical psychology related to the use of mindfulness practices as an element of psychological treatment. The original cultural contexts of mindfulness practice are an integral part of various Eastern religious traditions. However, with mindfulness practice (MP) being adapted for use in the field of clinical psychology, the surrounding cultural context is now vastly different as compared to the traditional one. As has been reviewed in this project, mindfulness practice in its original religious context is steeped in different cultural understandings and religious ideologies. These aspects of the practice undoubtedly serve to help guide practitioners in their use of such mindfulness techniques, which have proved to have powerful transformational effects.

With mindfulness practices being taken out of their original context, it appears that a certain aspect of the traditional ideological perspective behind their use has not translated into predominant Western thought. In this project, the Ego Erosion model is used to highlight ideological differences between an Eastern religious context, and that of Western science and clinical psychology. The support of empirical research is added to provide an additional degree of fidelity to the comparison. In making such a comparison, the overall aim is to provide clinicians with a broader, more inclusive perspective as to how mindfulness practice can be used in a responsible way in clinical applications.

#### **Rationale for the Model**

Meta-studies have shown that in clinical psychological treatment, meditation and mindfulness techniques have objectively verifiable effects that are considered to be overwhelmingly favorable in nature (Dunning et al., 2018; Keng, Smoski, & Robins, 2011). In their review of empirical studies on mindfulness, Keng, Smoski, and Robins (2011) conclude

that "mindfulness brings about various positive psychological effects, including increased subjective well-being, reduced psychological symptoms and emotional reactivity, and improved behavioral regulation" ("Abstract" section). While empirical evidence may be abundant and very supportive of using mindfulness in clinical psychology, these authors, in their discussion, note that aside from some preliminary evidence, "Little is yet known regarding for whom and under what conditions mindfulness training is most effective" (Keng et al., 2011, "Specificity of Effects of Mindfulness Interventions" section). The researchers also clearly state that research of mindfulness is in its early stages of development, and more work needs to be done to determine the mechanisms of action behind the observable effects of mindfulness-oriented interventions (Keng et al., 2011). Similarly, Dunning et al. (2018) suggest that "Future RCT [randomized control trial] evaluations should incorporate scaled-up definitive trial designs to further evaluate the robustness of MBIs [mindfulness based interventions]...with an embedded focus on mechanisms of action" (p. 255).

This project is a response to a perceived deficit of understanding in professional psychology, of the psychological underpinnings responsible for the objectively observable effects of mindfulness practice (MP). While empirically observable effects undoubtedly have a prominent role in clinical psychology, theory and models to explain observable effects can be equally as important when evaluating treatment methods. Cohesive models that explain observable phenomenon can reveal ethical implications that are highly important, but are not necessarily evident in objectively-oriented, empirically-supported research. Additionally, a well-developed understanding of the methods of change of psychological interventions can be instrumental in informing clinicians as to what treatment populations may be recommended or counter-indicated. The model described in this project contains foundational elements to help

explain objectively-observed effects of MP, which can in turn be used for evaluating MP in various ways as an ethical or desirable form of treatment in clinical psychology. Additionally, the Ego Erosion Model can be used to provide additional specific direction for clinicians and researchers to continue to develop their work with MP.

### **Theoretical Foundations**

By itself, looking at how a practice like mindfulness affects the neurological functioning of practitioners does not necessarily provide insight into what is happening psychologically for those individuals. Mindfulness, a practice with deep cultural and religious roots, has a rich history of how it has been used in its traditional context by practitioners with very specific goals. In the creation of the model that is explained in this project, referencing two very different sources of information, those being neuroscience, and religious practice, a clear synthesis emerges between the original religious goals associated with these practices, and what modern science has been able to observe. Together, these two sources of information complement each other in describing, in detail, what mindfulness is meant to achieve in terms of its transformative effect on the human personality, and what that looks like neurologically. For this project, no disparity was found between the religious purposes of traditional mindfulness practice, and the observable effects of the practice that have been documented by modern scientific research. Rather, a clear, cohesive model is presented that has the potential to fill in gaps of understanding that very often occur when a cultural practice is removed from its original context, and placed into a drastically different environment.

Examining MP in its original religious context, it is apparent that the practice is not done in a self-serving manner, such as to help with psychological or personal issues. Rather, it is a practice that is part of a pervasive way of life that inherently does not endorse the existence of an

individual self or ego, and is completely aimed at annihilating the ego, rather than serving it.

There is a serious disparity between MPs as used in their original context, compared with how they are typically thought of in the West. The literature reviewed in this project details how MP, in their original religious context, are, simply put, ego-annihilation techniques.

The empirical neurological findings detailed in this project very much support the effectiveness of the original purpose that MP was designed to serve in the religious context reviewed in this project. Specifically, neurological literature details how the practice of meditative techniques dampens, or weakens activity seen in the Default Mode Network, which is the closest scientific equivalent there is to an active egoic self as represented by a well-defined, large-scale network of brain activity (Buckner et al., 2008). This effect of lessening self-referencing cognitive activity is entirely in accord with the religious goals found in the traditions these MPs originated in (Maharaj, 2003). Together, the religious intentions behind MP, and the neurological studies of the practice present a clear picture of how MP erodes the ego, or notion of having a unique, individual self that is separate from the surrounding world. The use of MP in Western culture is typically not thought of in terms of destroying the ego (or self-notion). Yet, that is a specific aim of the religious systems of practice that MP arose out of, and evidence supports that is what is happening in individuals who engage in MP (Brewer et al., 2011). The model being presented in this project, of MP as an ego-eroding practice, presents MP in a way that has various implications for the use of meditation in Western culture and in clinical psychology.



## **Core Assumptions**

### **The Mechanisms of Change Underlying Mindfulness Practice**

A primary core assumption of the model being presented, is that the field of modern psychology does not have a well-developed understanding of how the practice of mindfulness produces clinically significant results with clients. Regarding this phenomenon, authors of a meta-study reviewing mindfulness cognitive therapy write:

Indeed, [meditation's] specific effects are not fully clear, and even less so are the mechanisms that yield the effects. We believe that apart from a need to improve the methodological skills of many in the field, the two issues of theorizing and measurement are most important and warrant researchers' attention. Advancement in both might turn out to be quite difficult, but the potential fruits of this research make the endeavor worthwhile. The effects found in the current analyses show that meditation affects people in important ways. It now remains to be discovered what exactly the effects are, when and why they occur, how they relate to what we already know in psychology, and what we might learn from them to augment and enrich current psychological theories.

(Sedlmeier, Eberth, Schwarz, & Zimmerman, 2012, p. 1163)

Writing about this same phenomenon, authors of a research paper on sensorial introspection and possible links to anxiety note:

Most meta-analyses conclude that there is little reflection on the mechanisms of action at play, due to a lack of theoretical background compensated by an excessive development of dependent-variable measures leading to [the study of] causality links and not proof.

(Lieutaud & Bois, p. 638)

Empirically, numerous changes attributed to MP have been observed, including increased subjective well-being, reduced psychological symptoms and emotional reactivity, and improved behavioral regulation (Khouri et al., 2013). While such effects may be regarded as being desirable in clinical applications, their achievement could be questioned given a lack of clarity regarding mechanisms of change that are responsible.

In professional psychology, it is not simply the empirical results of treatment that are deemed to be important, but also the mechanisms determined to be behind such results. It may be true that a number of techniques are exceptionally effective at decreasing various psychological symptoms in clients. However, the fact that such correlations exist does not necessarily mean the practice of such techniques is ethical, or addresses broader consideration as to how the treatment could affect the individual. Therefore, it is important that the mechanisms for change are well-understood so that a treatment modality can be evaluated more completely.

### **The Long-Term and Systemic Effects of Treatment Modalities**

It is essential that treatment methods in clinical psychology be supported by theory that takes a number of factors into account. For example, it is imperative that not simply short-term results, but long-term and systemic change be considered in how treatment methods may affect clients. Another core assumption for this project is that theoretical considerations are of the utmost importance, including how a treatment method meshes with a client's worldview and life.

Eastern spiritual practices, which mindfulness practices in psychology have been primarily derived from, may largely or entirely deny the existence of a separate self, or individual (Maharaj, 2003). Such a philosophy is an intrinsic part of religions that gave rise to the mindfulness practices now being used in Western psychology. However, in Western society it seems a sweeping majority of individuals do not embrace a life philosophy that outright denies

the notion of the individual self as having veracity. A core assumption of this model is that it is highly important to consider how such philosophical elements of treatment may affect the patient's worldview. Such an effort can help professionals and patients to evaluate treatment methods in a more comprehensive manner, including their appropriateness of fit with patient populations.

### **The Focus of Current Psychological Intervention Theories**

Another assumption of the Ego Erosion Model includes that professional psychology as a whole seeks to integrate, and include meaningful aspects of an individual's life experience into the therapeutic process. For instance, when a client goes through trauma, modern clinical practices do not seek to steer a client away from processing and eventually integrating that experience as part of their life journey, and individuality. Such integration can be approached through various means such as examining early childhood experiences in psychodynamic theory, or the cognitions surrounding certain events in cognitive behavioral therapy. However, modern practices, as a whole, do not seek to have a client dissociate from experiences that are deemed to be important. Contrastingly, research evidence used as a basis for the Ego Erosion Model is against MP as having an inclusive effect, which deserves further discussion and consideration.

This project functions on a core premise that the vast amount of clinical practice in Western psychology has the goal of integrating the client's experience as part of themselves, rather than denying the existence of an individual self as certain Eastern religious traditions do. Some Western psychological theories include states of self-actualization, or transpersonal experiences, that indicate a dimension of human experience that goes beyond the paradigm of the individual self. However, these theories are less common, and do not outright exclude the notion of an individual self as existing in reality, as do some predominant Eastern religious ideologies.

Instead, the culture in the West predominantly embraces the notion of the individual as being a concrete reality, and Western psychological practices in general seem to function on this same core premise.

### **The Ethical Practice of Professional Psychology**

In the American Psychological Association's (2017) ethical standards, it is clearly put forward that clinical psychologists should not practice outside the scope of their expertise. It is assumed in the model being presented that practicing outside of the scope of a psychological clinician's expertise is a potentially harmful and irresponsible approach. The position of psychologists could be seen as one having substantial influence in the lives of clients, and it is imperative that psychologists are careful to practice within the bounds of the techniques and theories that they are considered to be expert in. Mindfulness has become a much more common modality being used in Western psychology, with practices being used that originally come from religious paths that have extensive belief systems surrounding the use of such practices. This calls into question whether or not Western psychologists with no spiritual/religious background in the practices they may administer are actually qualified to utilize such techniques with clients.

### **The Unintended Consequences of Cultural Appropriated Practices**

Cultural appropriation is the practice of taking an aspect of one culture, and transferring it to a different culture. Around the issue of cultural appropriation, there exists numerous possible concerns in relation to how the meaning of culturally appropriated practices is changed in the process of appropriation. Additional consideration can exist regarding how a culture may react if their practices have been, or are being appropriated by another.

Various cultures are heavily evolved, with rich histories and detailed traditions that function as part of a complete tradition. When certain aspects are taken from one culture to

another, it is quite possible that the original meaning attached to such practices can become lost or highly transformed. As the rich culture surrounding certain cultural elements often gets left behind, heavily evolved practices such as yoga or meditation can take on entirely different meanings within the new culture into which they are implanted. When that happens, the intricacies some practices carry may not be fully understood, appreciated, or respected.

When it comes to meditation or mindfulness, these specific practices evolved within religious practices that heavily affect an individual's identity and worldview. In the West, such practices are being transferred into a medical model, where they are used in treatment to achieve certain effects that are deemed to be beneficial. This usage in the West stands in stark contrast to traditional goals and contexts of these unique spiritual practices (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). For this project, it is assumed that the practice of cultural appropriation can have considerable unintended consequences due to the fidelity of a practice or tradition likely being altered.

### **The Model: An Overview**

The Ego Erosion Model represents an ideology about meditation and mindfulness that is supported by the original religious cultural context of meditation, as well as recent neurological research. Religious ideologies (as reviewed in this project) as well as neurological evidence both support a theory that the practice of mindfulness has a significant dissociative effect on the individual's sense of themselves (Brewer et al., 2011; Kilpatrick et al., 2011; Kit, 2002; Vyas, 1995). Here, *dissociation* is used as a term to describe when an individual experiences a distancing effect from cognition of oneself in the form of a finite, unique, and individual person. As has been expanded on in this project, Buddhist and Hindu religious beliefs can vary considerably based on sub-sects of the traditions. However, also as exemplified in this project, to

a very large degree, mindfulness and meditative practices are core components of religious ideologies that reflect the denial of an individual, finite, unique personal self as fundamentally existing (Kit, 2002; Vyas, 1995). Adhering to such ideologies, practitioners therefore seek to alter their worldview to lessen the extent to which they conceptualize themselves as a separate, unique, and individual person (Maharaj, 2003).

Meditation and mindfulness have been strongly embraced by Western mainstream culture, but clearly not for the same specific reasons that are found in the strict religious ideologies of the traditions that meditative practices came out of. In the West, the cultural paradigm these practices are being used within is predominantly not one of recognizing that the overall goal of practice is to move away from having a felt sense of being a separate and unique individual (Mayo Clinic Staff, 2018, 2019). Instead, the paradigm found in Western culture tends to be one that uses mindfulness and meditation in an attempt to further the enjoyment and quality of life of the individual (Mayo Clinic Staff, 2018, 2019). In this context, the practitioner likely still very much believes in the existence and importance of themselves as a unique and distinct personal entity. A Westernized medical model seems to predominantly use mindfulness as a mechanism to reduce unwanted symptoms and behaviors (Mayo Clinic Staff, 2018, 2019).

Documentation in the field of professional psychology is overwhelmingly favorable in terms of the empirically observed effects that mindfulness/meditation seem to have on the individuals studied (Khouri et al., 2013). The frame of reference, however, is one of a medical model that tracks features such as symptoms, neurological performance and qualities, and mood reports. In this researcher's experience, spiritual ideology is largely not touched upon at all in Western research studies on the effects of meditation as used on psychological treatment populations (Dunning et al., 2018; Keng et al., 2011; Khouri et al., 2013). The cultural

appropriation of meditation and mindfulness practices in the West has resulted in these practices being utilized for a vastly different purpose than they were originally intended for (Mayo Clinic Staff, 2019). The model being proposed in this research project reflects a recognition that cultural appropriation of mindfulness practice (MP) has taken place. Further, the Ego Erosion Model reflects that use of MP within a predominantly medical model carries significant consequences. Specifically, consequences relate to effects on the individual that may be overlooked when MP is used as an implement in a rather reductionist, symptom-based system of practice, as compared to the original religious contexts of practice.

The Ego Erosion Model represents a synthesis of Western neurological findings, and Eastern religious ideology for how MP is traditionally framed in its original context. The model is also used to emphasize how in clinical psychology MP is primarily being used to reduced problematic symptoms, and increase more clinically-seen-as-favorable qualities. As identified in this project, the prevailing model of treatment using MP in clinical psychology has gained great esteem, despite there being a deficit in understanding of the primary mechanism(s) of change to which results can be attributed.

In the Ego Erosion Model, it is hypothesized that one aspect of the mechanism of change behind MP, quite simply, is that the individual's personality is being reduced, which correspondingly leads to a reduction of undesirable symptoms that are tied to one's functioning personality. This hypothesis is in stark contrast to existing attempts that have been made within the Western medical model to identify mechanisms of change (Shonin & Van Gordon, 2016). Such existing attempts to identify mechanisms of change tend to be more reductionist in nature (Shonin & Van Gordon, 2016). The proposed mechanism of change in the Ego Erosion Model could eventually prove to be incorrect. However, the model still reflects a research-based view

on MP that has significant implications as to how MP is currently being used in clinical applications.

### **Core Elements of the Model**

#### **Meditation's Dissociative Effect**

It has been thousands of years since systems of meditation were developed in Eastern religious practice (Shonin & Van Gorden, 2016). Currently, through advances in Western scientific research involving neuroimaging, researchers are able to show that meditation does in-fact move practitioners towards the goals ascribed to various Eastern religions. Specifically, research has shown a significant correlation between the practice of meditation and a dampening, or lessening effect, on the individual's experience of themselves as being a distinct personal entity (Brewer et al., 2011; Jang et al., 2011; Kilpatrick et al., 2011).

The attenuating effect that mindfulness has been shown to have on self-referencing activity is more than just a neurological feature. In varying degrees, this effect represents a significant shift in the fundamental frame of experience that an individual has. An active Default Mode Network (DMN) represents self-referencing thought and awareness (Brewer et al., 2011). When one is thinking of themselves in a number of ways, be it about the past, future, or present, the DMN is active (Brewer et al., 2011). An active DMN allows a person to engage in considering their own behavior, or in thinking about what part they play in relation to events they are involved in (Brewer et al., 2011). For the majority of people, these types of activities are fundamental, and constitute a paradigmatic frame-of-reference for considering the self and the world.

Many areas of the brain and its cognitive activity have been shown to be affected through MP (Brewer et al., 2011; Jang et al., 2011). Attributable to MP, a change to the self-referencing



paradigm represents, by definition, a shift in perhaps the most fundamental characteristics that makes a person who they are. Qualities such as mood, executive function, visuo-spatial processing, and working memory are undoubtedly core aspects of one's mental makeup. However, the ability to have a mental concept of oneself at all, it could be argued, is an even more fundamental element of one's personality structure.

Individuals may do many activities that invoke a type of dissociative effect. Music, media, narcotics, and adrenaline-inducing activities could all be seen as having a dissociative effect in the sense that these activities can transport an individual away from thinking about their individual identity as a separate person. Such ways of escaping ourselves to a degree, it seems, are not uncommon. However, it could be interesting to consider to what degree such a dissociative trend becomes unhealthy. It seems there is a tremendous spectrum of variety in this category. For the scope of this project, however, focus can be made on activities that are commonly seen as dysfunctional in the practice of clinical psychology.

One extreme example of a maladaptive use of dissociation could be a person who uses drugs to an extent where the induced dissociative effects make the person unable to tend to important aspects of their life. In such a case, an underlying dissociative effect, caused by the substance, could be seen as being responsible for the maladjustment behaviors. In another case, perhaps a person has a tendency to use various dissociative means to avoid thinking about themselves, and the role they play in different circumstances involving their personal dealings. For such a person, their seeking of dissociative states to avoid engaging with certain aspects of their life could be seen as a type of maladjustment. So it seems, depending on the individual and the circumstances, dissociation could be regarded as being completely normal, or as a distinct form of maladjustment. Having a dissociative experience could potentially be tremendously

healing for an individual, or it could alternatively be a means to escape opportunities to bring certain types of healing into one's life.

In the West, mindfulness may not be typically thought of as a dissociative act. However, upon examining the dynamics of mindfulness, it could definitely be conceptualized as being dissociative in nature. Through negating the act of thinking, mindfulness can distinctly distance an individual from having a solid sense of themselves as a separate and distinct human being. Similarly, in the DSM 5, *Depersonalization-derealization Disorder* is characterized by an individual having recurring feelings of being disconnected or detached from one's self (American Psychiatric Association, 2013).

Interestingly, the American Psychiatric Association's definition of dissociation is ideologically identical to the personal religious goals of practitioners within the primary religious practices that have been reviewed in this project. Dissociation could be defined as experiencing an absence of the self-referencing thought paradigm that results in feeling disconnected or detached from oneself. In widely practiced Eastern religions, as have been reviewed in this project, practitioners who ideologically do not endorse the existence of an individual self as a distinct human being, purposely seek to invoke what is seen as a dissociative state (in Western terms) as it is in alignment with their spiritual path (Maharaj, 2003). Mindfulness, which is used purposefully within these practices, is perfectly in line with that end goal, as it is a practice that forcefully curtails the self-referencing thought paradigm within the individual (Ward, 1994).

Despite the fairly overt dynamics of what happens in meditation, and how it parallels religious goals of divorcing oneself from the self-referencing thought paradigm, Western culture does not seem to conceptualize of mindfulness in such terms, as being an act of staunch dissociation (Mayo Clinic Staff, 2019). This seems to be a result of the cultural appropriation

that has occurred, whereby mindfulness is now being used within Western culture in a vastly different way compared to how it is utilized in its original religious contexts. While religious practitioners embrace an ideology that seemingly very much acknowledges dissociation (in Western terms) as a path and goal, mindfulness in the West is seldom discussed in dissociative terms (Maharaj, 2003). In the West, dissociation is associated with psychological disorders and maladaptive behaviors. Its connotations are widely held as unfavorable. Dissociation is a powerful act, and a variety of consciousness with much potential to shape a person's experience.

Whether it is commonly thought of as such or not, mindfulness can be a strongly dissociative act and deserves to be thought of in these terms. In psychodynamic theory, dissociation is seen as a defense mechanism that allows an individual to escape from traumatic experiences in their life (Spitzer, Barnow, Freyberger, & Grabe, 2006). As is the case, any dissociative behaviors could potentially be used in ways that are escapist in nature, and are not necessarily responses to life conditions that allow for engagement and resulting growth. Framing acts of mindfulness, which seeks to curtail personally-related thought, as dissociative events is a fundamentally accurate definition of such practices. The use of such terminology could be very helpful for clinicians to more fully approach mindfulness practices for what they truly are, considering their dissociative effects.

### **A Synthesis of Neuropsychological and Traditional Religious Views**

Theoretically, scrutinizing what MP consists of, it is easily understood how helpful it could be for practitioners who have the distinct spiritual goals of transforming themselves away from the self-referencing paradigm of thought. Modern empirical neurological research has now shown quite well that MP indeed has the desired outcome that is meant to be achieved within the religious and spiritual traditions that gave rise to these practices (Brewer et al., 2011; Jang et al.,

2011). The confluence of religious ideology with neuroscience evidence portrays a clear picture of just how MP can transform human consciousness in ways that are fundamental to how individuals experience both the world and themselves.

Effectively attenuating self-referencing thought patterns (described in the model being presented as *ego erosion*), MP is described within the Ego Erosion Model in a way that is seemingly not very prevalent in Western society. On the Mayo Clinic's website, for example, MP is described as being most commonly used for relaxation and stress-reduction (Mayo Clinic Staff, 2018, 2019). In Western society, stress-reduction and relaxation seem to be very prominent associations that people tend to have with MP. It would strongly appear that in Western culture it is not the common understanding of MP as techniques that can have persistent attenuating effects on an individual's fundamental self-concept. However, that is what is being indicated by religious ideology surrounding MP, as well as the corresponding neuropsychological empirical research on these activities (Brewer et al., 2011; Kilpatrick et al., 2011; Kit, 2002; Vyas, 1995).

In the Ego Erosion Model, MP is presented in a way that is meant to encourage further discussion and consideration amongst clinicians and other professionals who may seek to use MP as a treatment modality. There currently exists a preponderance of evidence supporting MP's effectiveness on improving mood and other cognitive abilities (Khoury et al., 2013). As a result, there is likely a strong draw for many clinicians to take such results at face value, and to make use of MP in their own treatment approach. The Ego Erosion Model is a response to this perceived trend in that it re-introduces the original religious contextual element of MP, which seems to have been largely lost with the adaptation of MP into a Western medical model as a treatment modality, rather than as a distinct spiritual or religious practice.

## **An Overall Disparity Exists**

In 2015, a meta-analysis was conducted by researchers who sought to analyze the mechanisms of change that were responsible for the effectiveness of mindfulness meditation with individuals experiencing Major Depressive Disorder (Maj van der Velden et al., 2015). The meta-analyses specifically examined the Mindfulness Based Cognitive Therapy (MBCT) treatment, which consists of standard cognitive behavioral therapy, that also incorporates MPs that are often engaged in on a daily basis (Williams, 2019). The primary online resource for the MBCT movement describes the MP of meditation as follows:

Mindfulness is traditionally cultivated by the practice of meditation in which people learn to pay attention in each moment with full intentionality and with friendly interest.

Meditation is not about clearing the mind, but rather coming to see the mind's patterns.

Daily meditation practice allows people to see the way in which certain patterns of mind lead to escalation of emotions, despite our best efforts to control them. It also allows us to see more clearly what sorts of actions lead to more wholesome outcomes in everyday life.

(Williams, 2019)

The 2015 meta-analysis of MBCT treatment identified that alterations in mindfulness, rumination, worry, compassion, or meta-awareness were associated with, predicted or mediated MBCT's effect on treatment outcome (Maj van der Velden et al., 2015). Additionally, they found that preliminary studies have indicated that alterations in attention, memory specificity, self-discrepancy, emotional reactivity, and momentary positive and negative affect might play a role in how MBCT produces clinical outcomes that have been regarded as favorable (Maj van der Velden et al., 2015). The meta-analysis researchers conclude that there is strong support for the premise that MBCT practitioners operate on in terms of mechanisms of change (Maj van der

Velden et al., 2015). They also conclude that more rigorous designs are needed in order to better address causal specificity (Maj van der Velden et al., 2015).

Examining the same 2015 meta-analysis, the mechanisms of change that are identified do not specifically include the dampening effect on self-referencing thought activity, despite it being a unique, and strongly established effect of MP, as has been identified through research studies using neuro-imagery (Brewer et al., 2011; Kilpatrick et al., 2011). A dampening of self-referencing thought represents a significant, large-scale shift in an individual's personality structure that is happening amongst mindfulness practitioners (Brewer et al., 2011; Kilpatrick et al., 2011). However, this effect is strangely absent in meta-studies that examine mechanisms of change responsible for clinical effects of MP that are regarded as being favorable (Maj van der Velden et al., 2015; Sedlmeier et al., 2012). Instead, the mechanisms of change that are identified are more compartmental in nature, and describe changes in individual traits that are observed to be linked to clinical treatment outcomes (Maj van der Velden et al., 2015; Sedlmeier et al., 2012). As the meta-analysis authors note, there is a need for causal specificity to be more clearly defined (Maj van der Velden et al., 2015).

The reductionist trend in current research that establishes an association between MP and an altering of certain psychological traits leaves a large potential void in understanding underlying mechanisms of change. For example, alterations in rumination, worry, and attention may be explained in part by the dampening effect that MP has been shown to have on the self-referencing cognition patterns of practitioners (Brewer et al., 2011; Kilpatrick et al., 2011). A practice that has the effect of distancing patients from their thoughts about themselves can have numerous consequences. For example, for individuals experiencing major depression,

significantly less rumination on negative self-referencing ideas can lead to a reduction of worry, upsetting thoughts about themselves.

As reviewed in this project, in Buddhist and Hindu traditions alike there is extensive discussion on the fundamental nature of the self, and on what is regarded in these traditions as the illusory nature of the separate individual (Kit, 2002; Maharaj, 2003; Vyas, 1995). This is a core tenet, and one that entire traditions could be seen as revolving around. Yet, with the adoption of MP practices in the West, the original philosophical and religious contexts of these practices, it would appear, have been lost to an extensive degree. A cultural appropriation of MP has removed these practices from their original context so much so that researchers have seemingly not been able to meaningfully engage almost at all with what in the East are held to be fundamental core tenants of the practice. This is despite all of the focus placed on the reduction of self-referencing thought in the Eastern traditions, as has been mentioned here. This is also despite the overwhelmingly strong evidence that has been provided by neuroimaging studies showing that MP does exactly what Eastern practitioners aim to achieve, which is to curb the self-referencing trend of thought (Brewer et al., 2011; Kilpatrick et al., 2011). Instead, Western researchers seem to focus on shifts in cognition, mood, and other compartmentalized features, regarding such shifts as mechanisms of change behind the clinically-achieved outcomes from MP (Maj van der Velden et al., 2015; Sedlmeier et al., 2012). By doing so, any meaningful discussion of the most fundamental mechanism of change behind MP, as it is seen from a traditional religious context, is left out.

### **Contraindications for Clinical Use**

In light of the Ego Erosion Model, certain contraindications emerge in relation to using MP practices in clinical applications.

**Patients improperly using mindfulness as a dissociative mechanism.** One

contraindication has to do with acknowledging that the empirical evidence supports MP as having a dissociative effect (Brewer et al., 2011; Kilpatrick et al., 2011). For the purpose of this project, a dissociative effect is defined in terms of invoking an experience in practitioners that does not revolve around their personal, self-referencing personality structure. Framing MP in such terms, as being a dissociative mechanism, is a connotation that an evaluation of modern research on MP reveals is not currently being applied to MP. However, other non-research-based literature on the practice of MP contains discussion acknowledging that misusing MP as a dissociative mechanism is a danger of MP (Welwood, 2002, n.p.).

John Welwood was a renowned psychotherapist who discussed and wrote about concepts of MP from a western psychological perspective. In relation to the dissociative effect of MP, Welwood coined a term, *spiritual bypassing* which he defined as using “spiritual ideas and practices to sidestep personal, emotional ‘unfinished business,’ to shore up a shaky sense of self, or to belittle basic needs, feelings, and developmental tasks” (Welwood, 2002, n.p.). Spiritual bypassing represents a misuse of MP that could pose a serious threat to the well-being of mindfulness practitioners in general, including clinical populations. Such a risk calls into question how prepared clinicians might be to approach the use of MP as used in clinical treatment.

It is possible that certain clinical populations may be more inclined to misuse MP in ways that Welwood has summarized using his concept of spiritual bypassing. However, at this point, given that such misuse of MP seems to be rarely discussed in relation to clinical practice, it is unclear what populations might be most at-risk for such concerning behaviors. MP has many accolades behind it in the field of psychology (Maj van der Velden et al., 2015; Sedlmeier, et al.,



2012). Being critical of MP and looking for specific pitfalls such as those covered by the concept of spiritual bypassing, however, likely represents a skill and area of expertise unfamiliar to Western clinicians who are not necessarily well-versed in the many intricacies that go along with MP.

**Practicing beyond one's scope of expertise.** In clinical settings, patients can be instructed rather easily on how to engage in mindfulness techniques. For example, they could be instructed to sit in silence and to not try to actively engage the process of thinking, but rather to simply observe thoughts as they may or may not arise. Another example could be simply to instruct patients to simply pay attention to their breathing for a period of time. Such activities may be rather easily prescribed. However, clinicians who do not have extensive experience with the practice of mindfulness are not necessarily equipped with the training and background that would allow them to competently and ethically work with patients using mindfulness techniques.

In The American Psychological Association's (2017) Code of Ethics is written the following:

## Section 2: Competence

### 2.01 Boundaries of Competence

(a) Psychologists provide services, teach, and conduct research with populations and in areas only within the boundaries of their competence, based on their education, training, supervised experience, consultation, study, or professional experience.

c) Psychologists planning to provide services, teach, or conduct research involving populations, areas, techniques, or technologies new to them undertake relevant education, training, supervised experience, consultation, or study.

When clinicians are using mindfulness techniques that have been developed in, or largely influenced by religious traditions that require extensive training, the question arises as to what degree of training would be sufficient for a clinician seeking to use mindfulness techniques with patients. Is reading a book about mindfulness sufficient? or maybe attending a weekend seminar? Given how popular the clinical use of MP has become, and considering the significant body of research supporting clinical effectiveness in symptom management using MP, it is likely that a number of clinicians may be interested in using MP with patients, even if those clinicians may have only received minimal training on the subject.

A key component of the Ego Erosion Model is research literature on how MP reliably effects systemic changes to personality and cognitive patterns. As observed in a review of research literature for this project, this fundamental feature of MP receives very little, if any notice in research supporting MP's effectiveness in alleviating various symptoms of psychological disorders (Khoury et al., 2013; Maj van der Velden et al., 2015; Sedlmeier, et al., 2012). However, considering the significance of MP having an overarching effect on individuals' cognitive patterns of self-conceptualization, this aspect of MP is one that likely deserves to be addressed by clinicians. In this researcher's opinion, given the research that is available, clinicians should not only be aware of the fundamental shift in self-referencing cognitive patterns that MP will likely cause. As part of an ethical approach to treatment, clinicians should also be prepared to anticipate potentially problematic results of the shift in self-referencing cognition that MP has been shown to effect (Brewer et al., 2011; Kilpatrick et al., 2011).

In summary, traditional methods of psychotherapy practice that effect significant, fundamental changes in personality structure tend to be very well-studied. However, MP seems to lack a broadly accepted, comprehensive theory of practice. Given the original religious

contexts of MP, and the significant, and fundamental changes that MP has been shown to have on overarching personality structure, issues of clinicians using MP beyond their scope expertise seems likely. Such issues could present a significant ethical concern for clinicians using MP with patients.

**Using mindfulness with individuals who are developmentally unready.** Similar to how MP could be actively misused by individuals, it is speculative, but also quite possible that MP could be inappropriate or have undesirable effects when used with certain populations. Referencing the traditional religious literature of Kamalashila, a Buddhist monk who lived in the 8th century, MP is not appropriate for use with individuals who have unresolved psychological conflict (Dharma Fellowship of His Holiness the Gyalwa Karmapa, 2015). Similarly, it could be possible that MP could have destabilizing or unfavorable effects with populations who, for example, may not have transitioned into a more formal operational stage according to Piaget. Such possibilities are speculative at this point, without in-depth research being conducted on the subject. However, as indicated by very experienced traditional practitioners of MP such as Kamalashila, patterns of undesirable clinical effects with certain populations may emerge with proper clinical research. It is also quite possible that while MP could invoke desirable short-term effects in terms of symptom abatement, if MP is applied with certain populations, undesirable longer-term effects on the psyche could emerge that are not being accounted for.

**A lack of a comprehensive informed consent procedure when using mindfulness with patients.** In this researcher's experience, MP is typically discussed in terms of symptom treatment, as opposed to the significant shift in an individual's paradigm of experience that can occur with practice. Many individuals who do MP may be interested in the reduction of troublesome psychological symptoms. However, it appears that discussing MP in terms of

having an effect on shift in worldview (according to literature) is not common in clinical applications. Therefore, clinical populations may be receiving guidance from psychologists to modify their fundamental way of relating to reality relatively unwittingly. For some individuals, that might not represent an issue. However, for others, if they were more informed about the systemic changed MP has been shown to effect, they might not be willing to participate in MP.

As pointed out in the Ego Erosion Model, MP tends to invoke a significant shift in an individual's fundamental self-concept and experience of themselves, due to a significant and ongoing attenuation effect on self-referencing thought (Brewer et al., 2011; Jang et al., 2011; Kilpatrick et al., 2011). If patients are not prepared for such a change as a result of MP, even though such a change could be anticipated based on the supporting research, this represents a potential issue of a lack of proper informed consent by the treating therapist(s). Again referencing the American Psychological Association's (2017) Code of Ethics, the section on Informed Consent reads as follows:

(b) When obtaining informed consent for treatment for which generally recognized techniques and procedures have not been established, psychologists inform their clients/patients of the developing nature of the treatment, the potential risks involved, alternative treatments that may be available, and the voluntary nature of their participation. (see also Standards 2.01e, Boundaries of Competence, and 3.10, Informed Consent.)

Given the lack of a universally recognized, formalized credential or training program in MP for clinicians, it seems that the administration of MP by clinicians would likely fit into a category of techniques denoted as being of a "developing nature." Given their nature, techniques in this "developing nature" category that would require a specific type of informed consent according to

the APA's (2017) code of ethics. It might be tempting for clinicians to refer clients to research that supports the alleviation of troublesome psychological symptoms due to MP. However, without a thorough discussion of the developing nature of MP as used with clinical populations, and without a discussion of potential risks involved in the practice of MP, clinicians may be at risk of not practicing in an ethical manner.

### **Responses to Contraindications**

In response to the contraindications that have been made regarding the use of MP in light of the Ego Erosion Model, certain recommendations can be made.

**Revised informed consent practices.** Firstly, in clinical practice, informed consent is a critical part of practicing in an ethical fashion. Given how evident it is that MP techniques are currently being employed in an overt effort towards the reduction of undesirable psychological symptoms, most patients are likely being informed of the types of effects that MP can have in relation to symptom reduction. However, inferring from the lack of discussion in clinical research literature on MP, patients are more than likely not being informed of the systemic changes in perception that research has shown MP to cause (Brewer et al., 2011; Jang et al., 2011; Khoury et al., 2013; Kilpatrick et al., 2011; Maj van der Velden et al., 2015; Sedlmeier et al., 2012).

In addition to being informed of how MP can lessen certain psychological symptoms, informed consent can also be provided in relation to the shift MP has been shown to cause in self-referencing thought patterns that are central to the personality structure (Jang et al., 2011; Maj van der Velden et al., 2015). Informed consent along these more comprehensive lines could help to open up meaningful discussion between patients and treating clinicians on a variety of topics related to the use of MP. As an example of a discussion that could occur as part of a more

thorough approach to informed consent, a patient and therapist could go over how MP could potentially affect the relationship one has not just to themselves, but also to others who might not be engaged in MP. A more detailed informed consent process could also be used to introduce patients to the topic of how MP could potentially be misused, in order to provide a roadmap on potential pitfalls of the practice.

**Steps to prevent clinicians from practicing beyond their scope of expertise.** A clinician's initial training could contain information regarding some of the potential concerns that have been mentioned in this project regarding the use of MP with clinical populations. In clinicians' initial exposure to MP as a potential addition to treatment, information could potentially be included that highlights the empirically supported perspective of MP affecting significant changes to personality structure by way of lessening self-referencing cognition (Brewer et al., 2011; Jang et al., 2011; Kilpatrick et al., 2011). Being aware of such information could help clinicians make more deliberate decisions regarding their use of MP with patients. Also, training programs could specifically work to provide clinicians with guidelines on how to approach potential areas of concern when using MP with patients. Academic psychology programs are an excellent forum where additional breadth to the discussion of MP could be developed, as are different privatized training programs.

Rather than attempt to engage patients in MP, clinicians could begin to regularize the practice of outsourcing their patient to more qualified MP instructors. Individuals who have devoted their training specifically to MP are likely to have a wealth of experience and knowledge that would make them more expert in that area, and so more suited to guide individuals in using MP. As reviewed in this project, MP comes out of rich religious traditions with long-standing histories of using MP. It is conceivable that it could become regular practice for clinicians to

outsource patients to those who have extensive experience and training in facilitating MP. If that were to happen, clinicians could potentially begin to develop pools of instructors who are able to work specifically with patient populations, and who could potentially do so in a more nondenominational manner, which is a factor that could be polarizing for many Western patients.

**Incorporation of specific monitoring criteria for patients engaging in mindfulness practice.** As has been mentioned in this project, a specific concern that is raised regarding patients' potential misuse of MP, is as a dissociative mechanism used in maladjustment behaviors. To approach this potential issue thoughtfully, clinicians can make regular efforts to check in with patients regarding when and how the patients find themselves using MP in daily life. By inquiring if patients are using MP techniques outside of a specific time window they have set aside for practice, clinicians could potentially better assess for whether techniques are being used in ways indicative of maladjustment.

An additional technique clinicians could use with patients is to make regular inquiries as to issues or difficulties patients might be encountering. Patients with acquiescent tendencies may be inclined to report that their practice is going well if they are asked in an open-ended form. However, by making deliberate efforts to seek out potential areas of conflicts for clients engaged in MP, clinicians can create an atmosphere of comfort for patients related to disclosing about their experience. By communicating clearly to patients that they can discontinue MP at any time should an issue arise, therapists can create a dynamic of trust. Additionally, such a dynamic allows for addressing potential conflicts in a way that could be beneficial to facilitating productive discussion of patients' psychological content and experiences.

**Development of exclusion criteria for the use of mindfulness practice.** This step would likely involve a significant amount of research dedicated to finding out if certain patient

traits or populations are likely to have adverse reactions to MP. While such a discovery process may be slow, it starts with a theory that calls into question whether MP could have seriously detrimental effects on patients, despite the preponderance of evidence that reflects positive outcomes in relation to symptom reduction and mood improvement. Elements contained in the Ego Erosion Model could provide guidance for researchers. For instance, researchers could look for maladaptive responses to MP in populations that may have a greater tendency to use behaviors to dissociate from life content in a maladaptive manner. With research dedicated specifically to this area, eventually questionnaires or checklists could be developed as screening mechanisms to help to identify patients who are likely to have a significant conflict with MP.

**Development of working groups.** Localized or online working groups dedicated to the clinical use of MP could help to serve as an excellent resource for both therapists and patients. Such groups could provide educational resources including a breadth of empirical literature and synopses, that address both benefits and potential concerns regarding the use of MP. For clinicians, working groups could serve as a resource to consult with other clinicians in a confidential manner, to help further the practice of using MP in an ethical way. Resources made available to verified clinicians could include protocols and guideline suggestions for using MP with patients in an ethical manner. Such groups could be of great support considering the relatively recent trend towards using more MP in clinical settings.

Beyond working groups that serve as resources for clinicians, an overarching group could be developed. Such a group could potentially serve as gatekeepers for the use of MP in clinical settings, helping to regulate its use within the profession. Such a group could serve multiple functions including providing training and consultation, and promoting research and practice towards ethical use of MP. Having a centralized working-group could provide a concentrated



forum for a comprehensive analysis of the use of MP in clinical applications to take place, which could be of significant use to the field of clinical psychology.

### **Model Application**

What follows is a best practices vignette based on the proposed Ego Erosion Model:

Dr. PsyD has been recommending MP to a number of his patients for several years. Working in private practice, he had developed an interest in prescribing MP after he had been exposed to various research indicating positive clinical outcomes using MP with various treatment populations. When Dr. PsyD began researching different MP methods that he could use with patients, he came across various literature, including the Ego Erosion Model. After researching about MP use in clinical applications, including the Ego Erosion Model, Dr. PsyD decided he needed to approach the issue with a great deal of consideration, not only acknowledging the symptom reduction effects that MP has been shown to have, but also the possible concerns of using MP with patients.

In order to feel as if he was approaching using MP in clinical practice in an ethical fashion, Dr. PsyD decided to go online and seek out a supportive community of professionals who were discussing issues of using MP in clinical applications. He found a non-profit organization, "Online Institute for Ethical Practice of Mindfulness and Meditation in Clinical Psychology", which he was able to join at no cost after verifying his credentials as an active psychologist. As a member of the institute, Dr. PsyD was able to access additional literature regarding techniques to use MP more ethically, and also to a discussion board with other therapists where relevant topics regarding the clinical use of MP could be addressed. Through his activity with the institute, Dr. PsyD was able to slowly develop what he felt was a more well-rounded understanding of various potential concerns when using MP with patients. After he felt

better-versed in the important topics that were raised concerning the ethical use of MP (many of which were directly inspired by the Ego Erosion Model), Dr. PsyD began using MP techniques with patients.

Ms. Patient, a newer patient of Dr. PsyD, had originally sought treatment as a result of anxiety, which she had related to stress from her profession working in a casino. Dr. PsyD was cautious to not prescribe MP too quickly, before feeling as if he had a detailed understanding of the causes for Ms. Patient's anxiety. She related that working in a fast-paced environment had tended to have a triggering effect on her anxiety, but that she did not currently have other viable options for work due to certain life circumstances. Dr. PsyD decided that MP would be helpful for her to use to decrease symptoms of anxiety, which he shared with her.

In addition to discussing about how MP can reduce symptoms, Dr. PsyD also made a point to have a clear discussion with Ms. Patient about the use of MP. Referencing the Ego Erosion Model material, upon which he had educated himself, Dr. PsyD shared with his patient that research has shown that practitioners of MP undergo systemic changes in patterns of thinking, and specifically that they tend to have significant decreases in self-referencing thought. Dr. PsyD also discussed with her how traditionally, MP has been used by religious practitioners who sought to drastically transform the way in which they experienced the world, and who felt they were ready to depart from more conventional ways of experiencing reality. Dr. PsyD explained that just because MPs were traditionally used in such manners, it did not mean that a catered application of MP techniques for different people could be effective in different ways. Upon gaining an understanding of these topics, Ms. Patient communicated that she was taken rather aback and surprised at certain aspects of MP that she had not formerly known about, such as traditional usage and long-term neurological effects, Ms. Patient began questioning her

therapist about how that might affect her in the long-term, and she communicated some concerns, but stated that she was willing to try the techniques short-term just to see if she noticed any effect.

Given that Dr. PsyD had provided his patient with a more fully informed idea about what MP entails in terms of effects, and she had wanted to move forward with trying out the practice, Dr. PsyD moved forward with discussing some additional details. He informed Ms. Patient that there is a potential for MP techniques to be misused, with people using such techniques as a type of escape from facing certain aspects of their lives. This, he stated, was similar to other forms of escape that people can use to not acknowledge things that are happening in their life. Dr. PsyD asked his patient what she thought about that, and Ms. Patient responded that she could see how that could potentially happen, and agreed it could be something to watch out for. Together, they decided that Ms. Patient would be very deliberate about when she would use MP techniques, and whether she was using such techniques as a type of escape.

Given the concerns that Ms. Patient had voiced about long-term effects of MP in decreasing self-referencing thought, they decided that she would do only three, 15 minute meditations per week. They arrived at this recommendation together, given what the patient had stated felt reasonable to her, and also based on the Dr. PsyD's knowledge about the minimum amount of MP that had been shown to have clinically significant effects on reducing symptoms. As their therapy sessions went on, the two continued to discuss relevant issues to treatment as seen from a Cognitive Behavioral model. Dr. PsyD would also check in regularly with Ms. Patient regarding how her meditation sessions were going in various ways.

With ongoing therapy sessions, Dr. PsyD would make sure to check in on his patient's progress with MP in different ways, and with three specific areas that he had come to understand

are critical to be responsible for. First of these is the patient's felt experience of the practice during MP. Additionally, Ms. Patient was asked to reflect on the ongoing effects on her thought patterns that she felt MP was having on her, in light of the Ego Erosion Model. Lastly, Dr. PsyD and Ms. Patient would regularly discuss how she was using MP, and whether she felt she was using the techniques in an unhealthy way in order to bypass processing things about her life.

Several months went by of having weekly sessions together, and of Ms. Patient practicing MP to the minimum extent that has been shown to help reduce symptoms such as anxiety. Ms. Patient and Dr. PsyD spent a considerable amount of time discussing issues related to MP, as informed by the Ego Erosion Model, and these discussions had a considerable effect on Ms. Patient's conceptualization of the practice. She had achieved notable effects in the reduction of her anxiety, however, as a result of considering the long-term effects that MP has been shown to have on modifying thought patterns, and after considering how MP has been used traditionally in a rather extreme fashion, Ms. Patient made a concerted effort to not become reliant on the practice, but rather to seek a resolution of her troublesome symptoms in other ways. Eventually she decided that she needed to take certain steps to change her employment to an area that would not provoke symptoms of anxiety, deciding that would be the healthiest thing for her. It was not something that she had been ready to do when she first sought out therapy, however, eventually she was able to take certain steps to make that happen.

Due to needing to relocate, Ms. Patient communicated that she would need to end her therapy sessions, and discussed with Dr. PsyD how she felt about their work together. She communicated that she had definitely noticed a reduction in her anxiety symptoms, which she felt were a result of both tradition Cognitive Behavioral techniques, in addition to MP. She discussed how she appreciated the more informed picture of using MP that he had presented, and

how that had informed her decision in terms of how frequently she chose to practice, and how she treated the practice with consideration for the effects that it has been shown to have (in relation to the Ego Erosion Model). She stated that having a more detailed understanding about potential misuse of MP, as well as the rather extreme ways that it could transform a personality, had kept her motivated to seek resolutions to issues that were activating her anxiety, rather than to become reliant on a technique as a for of escape. Ms. Patient expressed that she would likely discontinue her weekly meditation practice considering that she was removing herself from the environment that has been causing her anxiety, because she wanted to approach MP judiciously and with caution and respect.

### **Strengths and Limitations of the Mode**

#### **Strengths**

The Ego Erosion Model provides strengths that will enhance best practices with respect to mindfulness practice.

**Empirically supported and theoretically inclusive.** The Ego Erosion Model is based directly on a well-supported body of empirical research in the field of neuropsychology. Additionally, the traditional religious material regarding MP that is included within the Ego Erosion Model fits together very well with the empirical research, providing ideological and theoretical support for the observed phenomena. With empirically-observed phenomena being in accordance with the ideological theory from a long-standing religious cultural tradition, the Ego Erosion Model presents a fairly balanced and cohesive view of the phenomena of MP.

**A focus on well-established ethical principles.** Another strength of the Ego Erosion Model is that it incorporates two widely accepted ethical principles of practice as have been defined by the American Psychological Association (APA, 2017). Informed consent and

practicing within the limits of one's competency are two cornerstones of ethical clinical practice. These two principles are widely accepted and valued in clinical work. The Ego Erosion Model can be used to point out specific aspects of using MP with clinical applications that bring attention to the two ethical principles. Therefore the model contains well-established ethical benchmarks as the basis of relevant discussions and recommendations.

**Specific recommendations for clinicians can be readily derived.** In the Ego Erosion Model are outlined some specific areas that current clinicians can take into consideration. An example of this is addressing the issue of how MP can be misused, by inappropriately using the practice to bypass meaningful aspects of patients' lives. While treatment orientations can vary drastically amongst clinicians, it could be argued that a vast majority of clinicians are not seeking to provide their patients mechanisms by which they can avoid or escape from dealing with important aspects of their lives. Therefore, specific recommendations have been made to help clinicians address such potential conflicts of interest.

Another specific point that is raised that could be readily applied by clinicians is looking into some of the empirical literature that the Ego Erosion Model is based upon. As examined in the model, there appears to be a bias in research on MP that focuses on symptom reduction, while there appears to exist a deficit in understanding mechanisms of change (Khoury et al., 2013; Maj van der Velden et al., 2015; Sedlmeier et al., 2012). Additionally, research is highlighted that indicates certain large-scale cognitive changes attributed to MP that clinicians may not be aware of (Brewer et al., 2011; Jang et al., 2011; Kilpatrick et al., 2011). Becoming knowledgeable about such literature and related arguments, as found in the Ego Erosion Model, could direct clinicians to obtain a more thorough background in the effects of MP. Having such additional awareness could in-turn help clinicians in providing patients with a more

comprehensive form of informed consent for MP, or in raising articles of relevant discussion with patients doing MP.

### **Weaknesses**

The Ego Erosion Model is in its formative stages of development. It still requires implementation and formative evaluation in the field.

**A lack of current methodology.** The Ego Erosion Model contains indications for clinicians such as regularly checking in with patients on issues of possible misuse of MP. This issue has been largely identified due to the work of Buddhist practitioners who have been able to articulate such concerns (Trungpa, 1974, n.p.; Welwood, 2002, n.p.). However, in an extensive review of research literature, this researcher was not able to find any research studies on MP that specifically mention the potential for practitioners to use MP to bypass engaging with their life content in meaningful ways. With research on such issues, more specific conclusions and recommendations could likely be arrived at. Perhaps such research could even help to reveal certain treatment populations and patient traits that would be counter-indicated for MP. However, given the current lack of research on the subject, such specific details surrounding misusing MP remain fairly undeveloped.

**Additional considerations.** The Ego Erosion Model contains several indications for the clinical use of MP that could potentially be dissuasive for some patients who are considering MP. For example, having a more rigorous informed consent procedure that characterizes MP as more of a developing method could instill less confidence in patients regarding the practice. This researcher is of the opinion that a more comprehensive addressing of potential issues is a healthy part of recommending treatments to patients. However, given how well-supported MP is in achieving clinical results that are typically regarded as favorable (i.e., symptom reduction), it is

possible that in some cases, presenting patients with a slightly more critical view of MP could be detrimental. Presenting potential concerns in the use of MP to patients is likely a skill that would take some honing in order to provide an accurate representation to patients in a way that does not discourage them from using MP unnecessarily.

**Hypothetical nature of the proposed potential mechanism of change.** As has been discussed, the Ego Erosion Model contains a proposed mechanism of change for the clinically observed effects of MP. This mechanism was deduced through an understanding that individuals' unique personality structures are what in many cases create adverse symptoms. If self-referencing cognitive activity is attenuated, it goes to follow that negative symptoms associated with self-referencing cognitions will also be reduced. While rational, and including empirical research on the effect of MP on self-referencing cognitive patterns, this theorized mechanism of change remains hypothetical. To add support for such an idea, the hypothesis would need to be reviewed and tested under rigorous and more intentionally-focused research conditions.

### **Summary of Ethical Considerations**

MP, in its original religious context, has traditionally been used as part of a complete system of beliefs and practices that have specific aims. As has been reviewed in this project, some of the most widely practiced Eastern religious traditions incorporate MP as part of an ideology specifically designed to effect sweeping transformation in the psyche of the practitioner (Copleston, 1892, as cited in Harris, 2006; Shankaracharya, n.d.). Traditionally regarded not just as a mechanism by which patients can help alleviate certain symptoms, but as a method of systemic self-concept transformation, MP carries some significant implications in terms of how its use can affect clinical populations. The Ego Erosion Model serves to underscore the significance of some of the changes that MP has been shown to effect. In doing so the Ego



Erosion Model is used to help raise certain considerations in regard to the ethical use of MP in the practice of clinical psychology.

The research that has been cited in this project supports the conclusion that MP could be considered as having a significant effect on the overall structure of an individual's psychological makeup—particularly regarding their self-concept (Brewer et al., 2011; Jang et al., 2011; Kilpatrick et al., 2011). Mainstream psychological treatment modalities, which are generally used for the purpose of effecting significant change regarding an individual's personality structure, tend to be extremely well researched and understood from a theoretical perspective. MP, however, despite having significant effects on the personality structure, is not a treatment modality that currently has a comprehensive or widely-accepted supporting theoretical structure or system of training for its use in clinical work (Dunning et al., 2018; Keng et al., 2011). This discrepancy creates circumstances where MP, as a treatment modality, could easily be used in ways that are not in alignment with certain guiding ethical principles that have been developed for psychologists. In order to help ensure the competent, reliable practice of clinical psychology in a way that takes into account known variables, the Ego Erosion Model is used to emphasize lesser-addressed effects of MP. By contributing to a more comprehensive understanding of MP, additional ethical considerations can be raised and discussed.

## **CHAPTER IV. DISCUSSION**

### **Discussion of Findings as They Relate to Original Questions**

The findings of this project reveal a significant disparity between the ideologies of primary religious traditions from which mindfulness practices have emerged, and the more common ideology surrounding mindfulness use in applications found in clinical psychology. In particular, evidence was reviewed that emphasizes how mindfulness in the clinical realm is primarily being used to effect symptom reduction amongst clinical populations. This clinical focus is in profound contrast as compared to original religious contexts that tend to focus on a radical re-alignment of an individual's personality by way of applied beliefs about life, and manipulating consciousness with practices such as mindfulness techniques.

An ideological disparity between a religious context of a practice could be expected when comparing that to a scientific, or treatment-based system. However, of significant note is that certain specific neurological-based empirical research does in-fact support the religious ideologies that surround mindfulness. Given that finding, a religious focus of using mindfulness as part of a practice based on significantly lessening self-referencing thought activity is an ideology that carries empirical credence. Despite having such theoretical and empirical support, the religion-based ideology is found to be nearly entirely absent in the realm of psychological research on mindfulness in its more prevalent form, which has to do with the ability of mindfulness practice to lessen symptoms of psychological disorders. Therefore, the largely missing aspect of discussing the significant changes in personality structure that mindfulness has been shown to effect is particularly noteworthy considering the empirical support that exists for this occurrence.

### **Clinical Implications**

In a treatment-based system such as clinical psychology, great emphasis is placed on methods of treatment that have been shown to contribute to treatment outcomes that are deemed to be favorable. However, a focus on symptom reduction alone obviously does not represent a thorough clinical approach to treatment. In addition to evaluating treatment outcomes, understanding and evaluating the specific mechanisms behind such transformations can be of the utmost importance. A thorough understanding of mechanisms of change that are in operation as part of a treatment modality can help clinicians to better assess a mode of treatment in numerous important regards.

This project has revealed that currently in clinical psychology, mechanisms of change for mindfulness techniques are not clearly understood and well-defined. As a result, mindfulness modalities can be categorized as a treatment modality that meets criteria for what the American Psychological Association (2017) has termed to be of a "developing nature." Such modalities carry specific ethical considerations and concerns for clinicians seeking to make use of mindfulness as a treatment modality. Taking such an approach to using mindfulness with clinical populations may be unpopular considering the tremendous body of research that has shown mindfulness to be effective at reducing certain psychological symptoms that have been regarded as undesirable. However, as the model that has been presented in this project can be used to illustrate, clinicians who are responsible for the ethical treatment of their patients cannot be considered to be well-informed if they have focused almost exclusively on the symptom-alleviation aspect of mindfulness techniques.

When a treatment modality shows reliable clinical efficaciousness, there may be a rush to make use of such techniques. The Ego Erosion Model is not meant to be used to dissuade the use

of mindfulness with clinical populations, nor to encourage it. Instead, the model can be used as an implement in developing a more exhaustive consideration process regarding the clinical use of mindfulness modalities with clinical populations. Additional considerations that arise in light of the Ego Erosion Model could help individual clinicians to approach the issue in a more ethical manner. Alternatively, considerations related to the model could be used to provide direction for future research, as well as to inform developing systems of training related to the use of mindfulness in clinical psychology.

Overemphasizing symptom reduction, and under-emphasizing mechanisms of change behind such observable effects are conditions that could lead to potentially unintended and undesirable results. While psychological conditions can surely exist that can be linked directly to physiological causes, in many cases, psychological distress is a result of an individual's specific personality and unique life experience. One of my teachers in my academic journey related how one of her professors used to engage the class with a question of how psychological treatment is different compared to brain-washing. While many people could potentially get offended by the making of such a comparison, the fact of the matter is that, if it is the unique personality structure that is responsible for the presence of various psychological symptoms deemed to be undesirable, by the wiping out the individual personality structure to any significant degree, an alleviation of some symptoms could definitely be expected as a result.

In cases involving traumatic physical injuries and neurological ablation, distinct shifts in personality structure have been observed, and have been attributed to offending overt physical trauma (The University of Akron, 2019). Something as seemingly as benign as mindfulness could be regarded as existing on the opposite end of the spectrum of experience compared to any kind of brain trauma. Yet, actions and behaviors are not simply patterns that people follow.

These actions and behaviors can have lasting effects on the physical structure of the brain (Bliss & Cooke, 2011). One example of this is long-term potentiation, by which the patterns of an individual's thought can strengthen or weaken the physical structure of nerve pathways in the brain, thus altering the fundamental composure of the mental apparatus of a person (Bliss & Cooke, 2011). While mindfulness is not typically regarded as some type of brain trauma, it is nonetheless an action that can significantly alter brain structure and cognitive pathways in the direction of an individual having significantly less self-referencing thought (Brewer et al 2011; Kilpatrick et al., 2011). That such a drastic personality restructuring could potentially explain the alleviation of certain psychological symptoms in some individuals who practice mindfulness, therefore, could start to look more like a type of personality loss that could be expected with some type of low-level effort at what, in layman's terms, is thought of as brainwashing.

The Ego Erosion Model can offer a correlation between an observed decrease in self-referencing thought in mindfulness practitioners, and a decrease of symptoms that are associated with psychological disorders. That these two factors could be linked in a causal fashion is only theoretical. However, the possibility exists that mindfulness techniques are decreasing symptoms due to a loss of personality due to a significant decrease of self-referencing thought. This distinct possibility paints a very different picture of the use of mindfulness in clinical applications, and could open some significant discussion as to the ethical implications of such potential mechanisms of change existing. Additionally, mindfulness is being introduced as a mechanism that individuals are assumed to have not gravitated to on their own. Therefore, it is quite possible that there is an issue of developmental readiness in patients utilizing, in a well-adjusted fashion, the distinct dissociative-oriented experiences that are induced by mindfulness. The Ego Erosion

Model is presented to encourage additional discussion, consideration, and further research around such topics.

### **Recommendations for Future Research**

Future research on the use of mindfulness with clinical populations could take some new directions in response to some of the elements contained within the Ego Erosion Model. One example could be investigating the issue of misusing, in a maladaptive manner, the dissociative effect of mindfulness in order to avoid thoughts and engagement with certain types of meaningful engagement with one's life. To investigate this a qualitative study could be developed that specifically investigated to what extent clinical populations were using a dissociative type of effect, learned from mindfulness, as a type of escape or bypass in their life. Such studies could help to present a more complete picture as to how mindfulness could potentially have undesirable influence on behavior. Additionally, variations on this theme could even help to reveal specific clinical populations that could be more at risk for a maladaptive use of mindfulness techniques.

Qualitative research could also be conducted with the aim of trying to reveal in greater detail, evidence of a causal relationship between a significant decrease in self-referencing thought, and symptom abatement. Such studies would involve a clinical focus that could assess specifically for certain changes in self-referencing thought, and how such changes may contribute directly to lessening symptoms deemed to be maladaptive. Establishing a causal relationship between these two factors may prove to be difficult. However, in general, research looking at the treatment of symptoms would appear to be more balanced and inclusive if it were to include a consideration and discussion of the significant change in self-referencing thought that mindfulness has been shown to effect.

One additional area of research that could be investigated has to do with effect size. Options could be researched to develop modified modalities for patients and clinicians who might be more hesitant to engage in more rigorous forms of mindfulness practice as a result of the potentials for misuse and/or unwanted personality change. Such research, for example, could investigate the use of mindfulness in more finite forms, or when it is used intermittently in the course of treatment. These hypothetical, more limited-use forms of mindfulness could represent a middle ground approach that retains certain efficacy, while mitigating some potential risks of more intensive mindfulness practice.

### **Conclusion**

This project could be used to elucidate a rather stark contrast between MP as found in an originating religious context, as opposed to the context of modern clinical psychology. A review of religious literature has shown how MP is traditionally part of a system that is oriented towards helping practitioners to distinctly move away from self-referencing cognitive activity. In Western culture, however, and in clinical psychology, MP seems to primarily be engaged in without such overt intents to distance oneself from self-referencing thought. A review of MP in a Western context reveals that these practices are primarily being engaged in as a type of service to oneself. For the purpose of comparison, by defining one's self as "ego," it could be stated that the predominant religious models containing MP are ego-denying, whereas the Western take on MP is based on improving the enjoyment of the ego.

The stark shift in ideology that has occurred with the cultural appropriation of MP into the West is not without consequence. In the West, as MP tends to be regarded as a mechanism by which symptoms can be reduced, and quality of life can be improved, the Eastern wisdom behind such practices appears lost. However, as has been reviewed the field of neuropsychology,

through neuroimagery studies on MP, has reinforced that MP does in fact significantly lessen the self-referencing cognitive activities of practitioners. Clinical researchers and clinicians, by not acknowledging that change, are potentially doing patients a great disservice. Profound shifts in cognitive structure are a serious matter, and it seems possible concerns are being overshadowed by a vast amount of evidence support the effect of MP in achieving clinically favorable symptom reduction, mood improvement, etc. However, such achievements need to be considered in light of mechanisms of change, which researchers have admitted are currently lacking. The Ego Erosion Model will hopefully open up new areas of discussion regarding potential mechanisms of change, and areas where clinicians can practice in a more ethical manner.



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February 22, 2019

Joshua Abramson  
407 Kaumakani St.  
Honolulu, HI 96825

j\_a\_@tuta.io

Dear Mr. Abramson,

Your Level 1 application, "The Default Mode Network and Worldview: Constructing a More Culturally Inclusive Model for the Default Mode Network" has no human participants or human participants' data and is fully certified by the Institutional Review Board as of February 22, 2019.

Please note that research must be conducted according to this application that was certified by the IRB. Your proposal should have been revised to be consistent with your application. Any changes you make to your study need to be reported to and certified by the IRB.

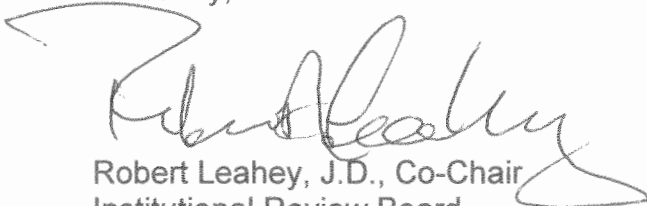
When you have completed your research you will also need to inform the IRB of this in writing and complete the required forms.

Good Luck with your research!

Please be careful not to lose this letter.

If you have questions please feel free to contact me.

Sincerely,



Robert Leahey, J.D., Co-Chair  
Institutional Review Board

cc: Dr. Joy Tanji

**Institutional Review Board.**

Chair: Helen Turner, Ph.D.

Vice-Chair: Claire Wright, Ph.D.

Vice Chair: Darren Iwamoto, Ph.D.

[irb@chaminade.edu](mailto:irb@chaminade.edu)

April 25, 2019

Mr. Joshua Abramson  
407 Kaumakai Street  
Honolulu, Hawaii 96825

Dear Mr. Abramson:

This letter is to confirm receipt of your Argosy University Institutional Review Board (IRB) approval for "The Default Mode Network and Worldview: Constructing a More Culturally Inclusive Model for the Default Mode Network".

The CUH IRB IRB00007927 reviewed the above IRB external approval.

The Chaminade University IRB will accept your current number and will not require reapproval at this time. Your Chaminade IRB protocol number is CUH 087-2019. You will now be entered into our annual report cycle (due date below). Please use the attached Form VI to complete your annual reporting.

The final date for your Argosy approval is February 22<sup>nd</sup> 2020. Continuation of research after this date will require:

1. Submission of Form IV Final Report; and
2. Request for an extension letter to be submitted to [irb@chaminade.edu](mailto:irb@chaminade.edu) 30-days prior to the expiration date of your Argosy approval. The Board may require a new protocol submission, so please do this as early as possible.

Effective proposal approval date: February 22<sup>nd</sup> 2029

Date of annual or final report due to Chaminade IRB: February 22<sup>nd</sup> 2020

Please submit a copy of your current CITI training certifiable by email to [irb@chaminade.edu](mailto:irb@chaminade.edu). Please be advised that if you submit future protocols to our IRB we will require updated CITI certification aligned with Chaminade's requirements.

Please feel free to contact the IRB above with any questions or concerns.

Kind Regards,



Helen Turner, PhD  
Chair, Chaminade IRB Committee