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Bind, Tether, and Transcend: Achieving Integration Through Extra-Therapeutic Dance

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Running head: BIND, TETHER, AND TRANSCEND

**BIND, TETHER, AND TRANSCEND: ACHIEVING INTEGRATION THROUGH
EXTRA-THERAPEUTIC DANCE**

A dissertation presented to the faculty of

ANTIOCH UNIVERSITY SANTA BARBARA

In partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

in

CLINICAL PSYCHOLOGY

By

MEGAN KAIN

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BIND, TETHER, AND TRANSCEND: ACHIEVING INTEGRATION THROUGH
EXTRA-THERAPEUTIC DANCE

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DOCTOR OF PSYCHOLOGY

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ABSTRACT

The purpose of this study is to examine the lived experience of achieving integration through the fine art form of dance, using a phenomenological method coupled with narrative and arts-based research. Research material illustrating the various manifestations of integration will be derived from interviews of ten professional dancers representing the non-dominant cultural discourse. Through the application of theoretical underpinnings of somatic psychology, interpersonal neurobiology, psychoneuroimmunology, and relational psychotherapy, this qualitative research seeks to articulate the esoteric healing forces derived from creative movement that fortifies self and fosters resilience within individuals. While dance might constitute an effective processing and coping mechanism for handling everyday stress, this may be especially true for those dealing with histories of childhood adversity and trauma. Healing, integrative properties of dance may aid the individual in navigating both current life challenges as well as coping with the struggle for re-integration in the aftermath of trauma.

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Chapter 1 Introduction

Purpose Statement.

The purpose of this study is to examine the lived experience of achieving integration through the fine art form of dance, using a phenomenological method coupled with narrative and arts-based research (Finley, 2008; Harper, 2008). Research material illustrating the various manifestations of integration will be derived from interviews, both open-ended and video-elicited, of ten professional dancers representing the non-dominant cultural discourse. Through the application of theoretical underpinnings of somatic psychology, interpersonal neurobiology, psychoneuroimmunology, and relational psychotherapy, this qualitative research seeks to articulate the esoteric healing forces derived from a creative movement that fortifies self and fosters resilience within individuals. While dance might constitute an effective processing and coping mechanism for handling everyday stress, this may be especially true for those dealing with histories of childhood adversity and trauma. Healing, integrative properties of dance may aid the individual in navigating both current life challenges as well as coping with the struggle for re-integration in the aftermath of trauma.

A Brief Overview of the Problem.

Integration and Health.

Integration is defined by Siegel (2009) as the linkage of differentiated elements of a system. For a living being, this entails acceptance and balance of different aspects of oneself, leading to “adaptive and coherent flow of energy and information in the brain, the mind, and relationships” (p. 137). This is observable on many levels: from brain

functioning to affect regulation, the yoking of the mind with the body, a coherent self-identity, an understanding of the interplay between thoughts, behaviors, and emotions, and finally, our sense of selves in relationship to others. To be an integrated individual means to experience one's differentiated aspects working in concert to bolster not only a strong sense of self, but also to foster a thorough understanding of one's self in relation to others and as an amalgamation of the sum of one's past experiences. Hence, integration signifies adaptability and health across all domains of existence, permeating both the intrapersonal and interpersonal realms of subjective experience across one's lifespan.

Observable at one of the most microscopic levels of human functioning—activity of the human brain—integration entails synchrony amongst the complex symphony of neuronal pathways. Modern technology has only just begun to unveil the complex scope of brain functioning, revealing a plastic orchestra of neural pathways accounting for different aspects of human functioning, never operating in isolation. Differentiated regions of these neuronal substrates “fire together, wire together” (Hebb, 1949), meaning if certain neural groupings are active at the same time as others, this association will increase the likelihood of repeating such paired activation patterns in the future. This creates and facilitates *coherence*—or correspondence—between different brain regions (Kalat, 2013). Higher levels of coherence lead to increased inter-region communication between the multifarious functions of the brain that govern human functioning and response to the environment.

Neural integration is a critical precondition for the outward concentric rings of other integrative processes for the individual, including affective and cognitive integration as well as a cohesive sense of identity. In his seminal writings on affective

neuroscience, Schore (1994, 2003) outlines a “psychoneurobiological model” of affective processing and regulation. Communication between the (a) brain’s left and right hemispheres, and (b) the cortical and subcortical layers links verbal with non-verbal and conscious with non-conscious processes, respectively. Affective regulation on this level occurs between caregiver and infant throughout the first years of life, and continues as an interpersonal process between significant others beyond the early developmental period. Schore’s model of early life affective regulation via implicit relational communication from right brain to right brain echoes the model of interpersonal neurobiology proposed by Siegel (2009) which illustrates how neurobiological processes transpiring between two people assist the individual in achieving integration via attunement to others. An ability to self-regulate affect belies how an individual copes with life’s inevitable stressors. Keeping affect contained within a window of tolerance allows an individual to function with adaptability, thus optimizing chances for survival.

Integration directly influences health at the physical level. When neuronal functioning is optimally regulating cognitive and affective domains, physical manifestations of health will follow (Byrne-Davis & Vedhara, 2008; Fuxe, Agnati, & Mora, 2012). In other words, the health of the mind is observable in the body. The reciprocal relationship of the mind to the body is a well-documented phenomenon, forming a theoretical basis for the validity of a wide range of somatic interventions such as dance/movement therapy, somatic therapies, and the use of conscious breath regulation to control autonomic nervous system functioning (as in mindfulness techniques and yoga practice), to name just a few (Chodorow, 1991; Csordas, 1993; La Barre, 2001; Levine, 1997; Ogden, Minton, & Pain, 2006; Reich & Carfagno, 1980; Steele, 2003; Tantia,

2012). Somatic approaches intervene at the physical level of the individual to achieve integration, acknowledging the interdependence of the mind and the body both in health and disease states.

Mind and body integration renders long-term implications for the health of the individual. Personal experiences and the memories ascribed to them will be integrated throughout one's lifetime into varying degrees of consciousness, with limitless opportunities for influence upon one's sense of self and autobiographical identity, or *narrative*. One's formative experiences throughout the lifespan may, or may not, be integrated into consciousness: those kept partitioned off from awareness present themselves as obstacles to overall integration. While this sequestering-from-awareness may apply to either positively or negatively experienced situations or traumatic memories, by virtue of biological processes launched at the time they are experienced, they are particularly vulnerable to disinclusion from one's coherent narrative (van der Kolk, 1994; van der Kolk, 1998; van der Kolk, McFarlane, & Weisaeth, 1996). Painful, unintegrated memories may therefore remain stored at the cellular, implicit level, surfacing as psychophysiological symptoms and often impeding the sense of an integrated whole being (Herman, 1992). Research conducted under the umbrella of psychoneuroimmunology delineates the mechanisms by which unintegrated aspects of an individual (such as traumatic memories, or a dysregulated affective system) can progress to serious disease over the course of several years, by way of chronically activated physiological stress response (Kendall-Tackett, 2009 and 2010). From this perspective, the capacity of an individual to integrate cognitive aspects of affectively charged

subjective experiences into a unified self-concept is imperative to securing immediate and long-term physical health.

With respect to psychotherapeutic processes, a desired outcome common to all orientations is integration of the individual. Psychodynamic approaches seek to integrate what is unconscious into the conscious realm. Relational approaches seek to integrate the complexity of internalized objects to allow for individuation and secure emotional connections to others. Humanistic-focused psychotherapy places great therapeutic emphasis on the healing properties of positive self-regard and acceptance; acceptance of the differentiated aspects of oneself, which might be seen as synonymous with an integration. Cognitive behavioral techniques examine the interplay between thoughts, feelings, and behaviors in service of ultimately integrating awareness of all three into greater understanding of how one's core beliefs constitute one's self-concept, determining affective and behavioral responses to the environment. Somatic approaches, as discussed above, seek to integrate mental with physiological processes in service of a more healthful mind-body connection. Postmodern-influenced therapies seek to integrate the subjective experience of the individual into a wider, cultural context, understanding maladaptive functioning as a product of tension between the objective and subjective.

Dance: Binding the individual, tethering to others.

Existing at the intersection of fine art, sport, and somatic therapy, dance defies distillation into a simple activity with a single function. For those who have developed dance technique, whether formally or informally, alongside development of their sense of self, dance may become a coping mechanism applied to navigate the unpredictable

psychological and experiential terrain of a lifespan. On all levels, dance provides a means for an individual to achieve integration. Physically demanding movement animated by spontaneous creative decision-making engages both brain and body in a complex interplay. Neuronal pathways implicated in nearly every cognitive capacity are activated: pre-motor, sensorimotor, spatial, memory, prefrontal cortex, attention and concentration, planning, and rehearsing (Lezak, Howeson, Bigler, & Tranel, 2012; Thatcher, 2012). Emotional, cognitive, and behavioral domains unite in a concerted effort, allowing an individual creative expression through fine and gross motor movement. Left and right brain work together in tandem with cortical and subcortical structures, facilitating inter-hemispheric connectivity and broadening one's capacities across explicit and implicit, conscious and automatic domains. By cultivating access to nonverbal modes of creative expression, the dancer, unconstrained to verbal communication alone, is free to transmit emotional experience via physical representations.

Dance can occur in isolation or amongst others. Dancing alone allows space for a more internal focus, which may enable processes of introspection and even self-integration. When dancing with others, though, attunement to the positioning, movements, and creative decisions of others factors into the integration process. In other words, dance may facilitate integration within oneself and in relationship to others. In the dance environment, awareness of others—spatially and emotionally—automatically invokes processes of responding and attuning to them. Through the experience of dancing with others in an emotionally resonant environment, the dancer's attachment patterns of relating to others may be subject to amendment towards the direction of an "earned secure" style, whereby positive interpersonal experiences of creative movement

strengthen connection to and empathy between engaged individuals. The healing power inherent in this plausible “rewriting” process, in theory, might allow a significant encounter with another individual to override a previously insecure pattern of relating to others. Subsequently, changes in attachment style quite possibly could initiate changes across every domain of functioning for the individual: “Key changes in the nature of attachment may be occasioned by hormonal, neurophysiological, and cognitive changes and not merely by socioemotional experience” (Ainsworth, 1989, pg. 710). Interpersonal integration seems, therefore, reflective of the subjective experience of intrapersonal integration and vice versa.

This concept is buttressed by innovative research illustrating the successful use of dance and movement in addressing interpersonal conflict (Beausoleil & Lebaron, 2013). Bringing the body in as a resource has been observed as having a transformative effect in communication efforts around the world, from gang-riddled communities to post-war societal fall-out (Zelizer, 2003). The potential for cultivating empathy, emanating from our innate construction as social creatures (Frith & Frith, 2012), is a tremendously powerful property of movement within a social context. While dance/movement therapy refers to this process as *kinesthetic* empathy (Fischman, 2009), it is a primary aim of this current study to investigate lived descriptions of these processes without the formal boundaries established by D/MT. The embodied individual rests suspended in a dynamic homeostasis with its endlessly-concentric environment. It may follow that enhanced communication leading to reduction of conflict, and effectively a lowering of layered barriers demarking “us versus them” mentality, may likely initiate changes for the individual in terms of his schemata for what it means to be in relationship with others.

Dance: Transcending adversity.

The egalitarian nature of dance makes it accessible for everyone, irrespective of ethnicity, gender, sexual orientation, socioeconomic status, ability level, religious affiliation, or geographic location. Individuals representing all dimensions of culture may obtain significant integrative benefits from the art form, and engagement requires neither special tools nor resources beyond a space to move. While members of the dominant discourse may reap positive outcomes through involvement in creative movement, dance might prove an especially powerful healing tool for individuals who have been relegated to the margins of majority culture. Research highlights the disproportionate degree of adversity shouldered by non-members of the dominant discourse throughout the developmental years and beyond, whether it is due to the destructive forces of racial or classist discrimination, poverty, disability (such as mental illness, physical, or intellectual limitation), exposure to chronic violence or exploitation, or marginalization due to sexual orientation (Kendall-Tackett, 2009). This burden is correlated with increased rates of mental illness, chronic physical illness and higher mortality rates for members of the non-dominant discourse (Myers, Wyatt, Ullman, Loeb, Chin, Prause, & Liu, 2015).

Bridging this vast rift of incongruity that exists in both prevalence of illness rates and access to adequate treatment between marginalized populations and those included in the dominant discourse requires a multifaceted approach. Interventions accessible to all individuals, irrespective of resource level or cultural membership, are desperately needed in light of such discrepancies. Celebrated by virtually all societies, past and present, dance seems to be a language transcendent of divisive cultural boundaries. Discovering

and highlighting the mechanisms by which dance assists practitioners in achieving health through intrapersonal and interpersonal integration is the main focus of the current study.

Research Questions.

This research seeks to delineate the intensely personal lived experience of achieving integration through dance. For the purposes of this study, integration is explored on two levels: intrapersonal and interpersonal. At the intrapersonal level, the following phenomena will be explored: affective, cognitive, and behavioral regulation, the yoking of the mind and body, and the integration of trauma memories. Moving to the interpersonal domain, a sense of interconnectedness and one's quality of relational attachment to others will be investigated with respect to integration. In considering both domains, what personal meanings are ascribed to these experiences? What metaphors are ascribed to dance within the dancer's life, and what is the relationship of dance to one's personal narrative? Purposeful selection of participants will yield sixteen professional dancers representative of different cultural dimensions: ethnicity, sexual orientation, gender, religion, socioeconomic status, and nationality. All participants, with respect to at least one dimension of culture, will hail from the non-dominant cultural paradigm. Themes accounting for this experience of integration, emerging across interviews with these individuals, will be analyzed in an attempt to highlight universal aspects of this phenomenon.

Chapter 2 Literature Review

Integration: Defined

The mind-body connection is a well-researched phenomenon. The human brain is responsible for the intake and organization of sensory information from the wider world, governing over subsequent responses, meaning-making, memory storage, adaptability and ultimately, survival. Coordination between the brain and the body, within which it is housed, requires a constant reciprocity, active on many levels and responsively dynamic (Homann, 2010). Hence, the achievement of integration leads to “adaptive and coherent flow of energy and information in the brain, the mind, and relationships” (Siegel, 2009, p. 137). Integration, in this respect, entails the concerted, improvised pas de deux between the mind and body, experienced and observable on both intra-individual and interpersonal levels.

Recently confirmed by advances in neuroimaging technology delineating the interconnectedness of neuronal pathways, categories of human functioning—cognitive, affective, behavioral, and relational domains—are not discrete realms of existence, but are instead complexly interconnected and reciprocally influential. For the human individual to function efficiently, all aspects of the organism must operate in a concerted effort to achieve balance and, therefore, health. Thinking about the system on a whole, changes in one aspect of the system will produce changes in all (Bronfenbrenner, 2005). As perception of one’s environment and organization of subsequent response filters first through the mind, it can be seen how integration at the most microscopic level—neuronal—yields influence on larger, more directly observable phenomenon, such as conscious emotional experience or interpersonal behaviors. Conversely, dysregulation of

one aspect exacts ramifications for all other functions within the system. Therefore, in a foundational sense, integration can be equated directly with total well-being of an individual (Siegel, 2007a).

While the *lived* experience of integration is, by definition, a subjective phenomenon, markers of an integrated organism manifest at an observable level: the physical domain. Neurophysiological research plays a fundamental role in ascertaining how integration can be observed, objectively, at the level of neuronal function. Significant advancements made within the field of neuroscience offer new possibilities for observing integration at the level of brain functioning, as well as the interconnectedness between the body and the mind. Inquiries into neuronal functioning, therefore, have emerged as a direct correlate to the technology available, allowing researchers to observe brain functioning in real time (versus postmortem). This was first made possible with the advent of magnetic resonance imaging (MRI), then functional MRI (fMRI), and now quantitative encephalographic mapping (QEEG). Researchers have only just begun to illustrate interpersonal biological processes on the neuronal level that demarcate human development and subsequent functioning.

Dan Siegel on *Integration*

One of the most prominent conceptualizations of an integrated system has emerged at an intersection between developmental psychology and neuroscience. Developmental neuroscientist Dan Siegel provides a basic definition of integration as “the linkage of differentiated elements of a system” (Siegel, 2010, p. 484). Working off a model of a relational human brain, Siegel trains his lens of research on this linkage in

terms of the “three irreducible anchor points of our human experience”: the mind, the brain, and relationships (Siegel, 2010, p. 483). Siegel refers to this interconnectedness of the mind, the brain, and relationships as the “triangle of well-being” (Siegel, 2007a). Integration, therefore, can be seen as the ultimate signifier of health in that it leads to a flow of information across cognitive, affective, and behavioral domains, leading to increased flexibility and capacity to adapt successfully to one’s environment (Siegel, 1999). This definition of integration ultimately entails balance, acceptance, and acknowledgment of separate, but interconnected, facets of human functioning.

What constitutes an integrated person? How might one observe integration across its components? In order to understand how a creative, physical activity such as dance contributes to the achievement of integration for the individual, one must unpack the ways in which effects of integration might be observed. Siegel (2009) outlines nine functions, or outcomes, of integration: body regulation, attuned communication, emotional balance, fear modulation, response flexibility, insight, empathy, morality, and intuition. Each of these domains has been substantiated to varying degrees by supporting neuroscience research, illustrating the operative mechanisms behind them. What follows will be a brief review of prominent research pertaining to each of these aspects of integration.

Components of Integration

Body Regulation

The term *body regulation* pertains largely to activity of the autonomic nervous system, the aspect of the central nervous system responsible for mobilizing an individual

for action (sympathetic branch) and subsequently calming this surge of activity back down (parasympathetic branch). Directly tied to the activity of the autonomic nervous system are the other two components of the innate stress response: the hypothalamic-pituitary-adrenal (HPA) axis and the inflammation response (Kendall-Tackett, 2009). Our bodies are designed, through these three channels of biological response, to utilize both internal and external resources for survival in times of stress or perceived threat, necessitating that action be taken. The autonomic nervous system, concerned with arousal of regulatory systems, coordinates the rerouting of energy stores to areas of the body that will expedite the appropriate response. In effect, this process initiates a cascade of biological responses through activation of the sympathetic branch, which signals activation of a system or organ through increased cardiac activity and blood supply (Byrne-Davis & Vedhara, 2008). Activation of this sort mobilizes the body of the individual, across all levels, to evade harm associated with the menacing stimulus. This process subsequently orchestrates changes in metabolic, respiratory, cardiac, and neuroendocrine activity via the HPA axis and the inflammatory response, linking together many differentiated aspects governing the physical body that are typically automatic functions. The endocrine system becomes activated: stimulated by the sympathetic nervous system, adrenal glands secrete adrenaline and noradrenaline, which facilitate arousal and increase heart activity to mobilize other areas of functioning. At the same time, glucocorticoids (e.g. cortisol), which assist in glucose regulation and are vital for activity bursts required in the face of threat, are triggered for release into the bloodstream. Glucose production is required to deliver energy to different parts of the organism for mobility and activation. Comingling with cortisol in the bloodstream are the

neurohormones vasopressin, prolactin, and oxytocin, which have been implicated in social bonding as stress mediators (Carter, 1998; Kaye & Lightman, 2005; Stein & Vythilingum, 2009) and typically have been shown to inversely effect cortisol levels (Byrne-Davis & Vedhara, 2008).

Upon appraisal that the threat has diminished, parasympathetic activity kicks in to retract this complex neurochemical stress response via decreasing the heart rate and blood pressure. The parasympathetic branch of the nervous system attempts to return blood levels back to normal, so that the individual may recover from the perceived threat and automated systems may return to typical functioning. This activity occurs in tandem with other physiological systems, such as the polyvagal system proposed by Porges (2001 and 2003) discussed later in this chapter, by which an individual's biology is influenced by the quality of social support available in the wider environment. Biological responses to stress can be strongly mediated by the perceived availability of social support, which can fortify an individual's psychological and biological response to stressful situations. The perception of such availability, however, may be highly influenced by biopsychological patterns emergent from the quality of one's early childhood caregiving environment (Porges, 1998). In this way, the nature of one's response to threat, as well as the efficacy of this response, may trace it's epigenesis back to the early years of an individual's life and the responsiveness of those entrusted with his or her well-being. Upon close inspection of such interconnected systems, a contemporary stress response rooted in observable biological processes is complex, multidimensional, and dynamic in its efforts towards maintaining homeostasis for the organism.

Taken together, both branches of the ANS involve the release of hormones, which have dynamic influence upon the immune system of the organism over time (Byrnes-Davis & Vedhara, 2008). Citing these systems' reciprocal influence upon each other via shared components such as hormones (adrenaline, noradrenaline) and nerve fibers, historical review of the literature has characterized the relationship between the nervous and immune systems as one of bidirectionality (Cohen & Kinney, 2001).

The stress response of the human body works on many interconnected levels, simultaneously, to protect our body from eminent threat of invasion or injury. Flexible components within these protective pathways (e.g. chemicals, hormones, neurotransmitters, proteins) are responsive to one another, so that changes in one part of the system initiate changes elsewhere. This reciprocity amounts to a sensitive dialogue between the body's messengers that prepares our body for action. The autonomic nervous system connects to both cortical and subcortical areas of the brain, and therefore to both conscious/verbal and subconscious/nonverbal neuronal pathways respectively. These different dimensions of connectivity to both conscious and nonconscious neural processes facilitates quick, effective action in times of acute stress, bypassing the need for a cognitively-driven response, as time is often at a high premium during these circumstances. Balance between these two main branches of the ANS is required in order for the individual to maintain healthy homeostasis, as these two regulatory circuits govern many aspects of human functioning including heart rate, neuroendocrine function, and respiratory functioning. This balance between activation and de-escalation of the stress response, at both conscious and subconscious levels, is a chief signifier of an integrated individual.

Alternatively, a dysregulated stress response can perpetuate physical patterns that have adverse consequences not only for other dimensions of functioning, but also for long term health of the individual. Such a state can be a common consequence of an impactful traumatic event, or a history of trauma, for the individual (e.g. exposure to racism, violence, or childhood abuse), resulting in acute vigilance for possible danger and a hypersensitivity to perceived threat in the environment. Over time, chronic activation of these systems will compromise their efficiency to respond to stress in times of true threat. This chronic activation of the stress response exacts wear and tear on the body, known as allostatic load (McEwan, 2006). Research has shown that chronic exposure to stress without reprieve or conscious compensatory behaviors (i.e. getting sufficient sleep, nutritional vigilance, utilizing social support) can lead to remodeling of brain structures such as the hippocampus, amygdala, and prefrontal cortex (p. 283). This doesn't just occur in response to traumatic stress; allostatic load occurs over time as a consequence of over-activation of our physiological systems, sleep deprivation, and damaging coping behaviors. With allostasis, stress chemicals become depleted, stress systems become dysregulated, structural changes occur throughout the brain and body, and this process creates detrimental changes in neuroendocrine, metabolic, cardiovascular, and cognitive functioning.

This negative physical state overtaxes cognitive, affective, and physical resources, and can lead to serious health consequences over time, including higher incidences of negative cardiac events, diabetes, cancer, and overall mortality. The rapidly expanding field of psychoneuroimmunology (PNI) research has advanced scientific understanding of the linkage between one's current patterns of physical functioning (healthy or

maladaptive) and long-term health outcomes (Kendall-Tackett, 2009; Kendall-Tackett & Klest, 2009; McEwan, 2006; Nivision, Guillozet-Bongaarts, & Montine, 2010; Suarez & Goforth, 2010; Segerstrom & Miller, 2004). More space is devoted later on within the chapter to unpacking the implications of physical health or disease, and how somatic interventions can effectively intercept allostatic load for individuals at the physical level.

Emotional balance: *Affect regulation*

Emotional balance can be understood as the ability to maintain a tolerable level of arousal in response to inevitable fluctuations in both one's internal and external landscape. This capacity is a very critical facet of integration, as it is connected to cognitive and behavioral dimensions of experience. Literature on emotional, or affective, regulation also suggests this is intimately tied to the phenomenon of attuned communication, as well as the quality of attachment of the individual within close relationships (Schore, 2005). In fact, it has been proposed that a fundamental function of attachment is to facilitate innate regulation—or integration—of biological and behavioral systems within the organism (Reite & Capitano, 1985; Schore, 2003).

In his psychoneurobiological model of human development, affective neuroscientist Allan Schore (1994) proposes that the capacity for affect regulation emerges as a function of nonverbal caregiver-infant interactions during the child's first few formative years of life (Schore, 1994). The mother-child dyad interacts mainly through social contact and mutual gazing patterns, especially during holding and feeding periods. Interestingly, endogenous opioids are released at the time of breastfeeding through the mother's milk, activating reward centers in the infant's brain and associating a powerfully pleasurable experience with the maintenance of contact (via eye gaze and

breastfeeding) with the mother (Carter, 1998). These preverbal communication patterns activate right hemisphere cortical and subcortical pathways, generally implicated in nonverbal, emotional processing. This dyadic exchange amounts to what Schore (1994, 2005) refers to as right brain to right brain communication: through implicit (nonverbal) processes, the mother actively regulates the infant's arousal levels (via maintaining or averting her gaze, modulating facial cues), fostering positive affective states as well as helping the infant cope with stressful affective states such as anxiety or anger (Schore, 2003, p. 65). The right cerebral cortex has been found to control the two regulatory systems mentioned above: the HPA axis and the autonomic nervous system. Therefore, these caregiver-infant interactions imprint within the child a template for future mediation of stress throughout the lifespan.

Attachment and Affect Regulation

The quality of the infant-caregiver non-verbal dyadic interactions also engenders in the infant an emotional template for functioning within future significant relationships as the individual develops throughout childhood and into the adult years (Bowlby, 1969/1973/1982). This template is referred to as an *attachment style*. Original attachment theory, proposed by John Bowlby (1969), presents a model by which the responsiveness and appropriateness of the primary caregiver allows the infant to construct an “internal working model” of attitudes, beliefs, and expectations regarding significant relationships (Main, Kaplan, & Cassidy, 1985). Attachment theory posits that the quality of this relationship – the degree of security or insecurity—influences thoughts, feelings, and behaviors experienced by the individual with respect to his relationship with himself and

others. Furthermore, this attachment style plays a fundamental role in the self-concept of the infant as he/she develops, as well as attitudes and expectations about others.

Ainsworth, Blehar, Water, and Wall (1978) famously built upon Bowlby's original theory with their "Strange Situation" test. Through observation of separation-and-reunion behaviors between an infant and parent, these researchers determined three possibilities for attachment classifications displayed by the child that might emerge from caregiver-infant relational patterns: secure, insecure-ambivalent, or insecure-avoidant. Insecure attachment patterns have been linked with caregiving that is distant, unavailable, inconsistent, or rejecting. This pattern of interaction may inculcate the young child with a core belief that others cannot be relied upon. Further research conducted by Main and Solomon in 1990 retained these original three categories, adding a fourth attachment classification labeled "disorganized" to describe the infant attachment style derived from highly unpredictable, frightening, and/or abusive parenting (Main, 1996). Subsequently, a large body of work has since confirmed the pervasiveness of these original attachment styles, first through childhood and then, ultimately, throughout relationships experienced in adulthood (Benoit & Parker, 1994; Fraley, 2002; Hazan & Shaver, 1994; Main, 2000).

For those with insecure attachment styles as children, there is hope of acquiring an "earned-secure" attachment style via significant relationships in adulthood. Introduced by Pearson, Cohn, Cowan, and Cowan (1994), the designation "earned-secure" refers to those individuals who have departed from an intergenerational cycle of deficient parenting somewhere along their developmental course, enabling them to have successful close relationships as adults despite insecure attachments in youth (Roisman, Padron, Sroufe, Egeland, 2002). These individuals are able to coherently describe negative

childhood experiences, in contrast to both securely-attached persons, who describe mainly positive childhood experiences, and insecurely-attached persons, who have vague recollections of their youth and are unable to provide many specific details (Pearson et al., 1994). Longitudinal research confirms that the quality of these close adulthood relationships for earned-secures are indeed comparable to those individuals who have had secure attachments from infancy. Building upon data gathered from a 23-year longitudinal study, Roisman et al. (2002) tracked participants who had completed the Adult Attachment Interview (Main, 2000) as young adults at the start of the original study, earning them a designation of either “secure” or “insecure” attachment styles. According to data gleaned over time through periodic assessments of attachment style, several of those classified originally as insecure yielded “earned-secure” classification resulting from a repeated distribution of the AAI. As the focal point of their research, Roisman et al. compared the quality of close relationships experienced as adults for both the originally-designated “secure” and the “earned-secure” participants. Confirming findings from previous research, these researchers were able to conclude that “earned-secures” enjoy close romantic relationships as adults to a similar degree as those originally designated as securely attached.

One who emerges from infancy insecurely attached is not doomed to a life sentence of dysfunctional relationships; whether it’s through a strong therapeutic alliance, or extra-therapeutic encounters, a powerful corrective emotional experience may positively amend attachment style, long-term. The interception of insecure attachment style, in light of research reviewed above, may positively influence other aspects of functioning beyond relationships: biological response patterns to stress, appraisal of one’s

environment, and affective regulation (Roisman et al., 2002). In short, it seems that shifting from an insecure attachment to a secure one helps move an individual towards integration.

Attunement

Attuned communication and empathy are two vital aspects of an integrated individual. “Attuned communication is when two systems are allowed to become part of one resonating whole. (It is) part of healthy relationships in general, and in particular, between children and their caregivers” (Siegel, 2009, p. 139). Siegel, here, refers to basic patterns of nonverbal exchanges that occur between a parent and child during the first few years of life, heavily reliant on reciprocal gazing and nurturing: responsive physical contact. As discussed in an earlier section, this primary attuned communication between caregiver and child serves several critical functions for the developing infant, including the formation of a secure attachment style (Bowlby, 1973/1982) and stimulation of neuronal development integral to affective regulation (Schore, 2001). Attuned communication, fostered between the infant and caregiver early in life, persists throughout healthy interpersonal interactions for the duration of an individual’s lifespan. Intimately intertwined, attunement can be considered both a precursive condition as well as a signifier of empathy.

Beyond these functions, attunement facilitates another critical aspect of human development. Object relations theorists emphasize the process by which, through attunement, the caregiver assists the infant in actively sculpting a distinct sense of self (Mahler, Pine, & Bergman, 1968; Pallaro, 1996). Attuned communication during the first

year of life enables the infant to feel unified with the mother, not yet aware of his/her own separateness (Mahler et al., 1968). Through “merging” with the caregiver, an infant may come to identify with a caring, present, and responsive individual. Object relations theorists— Mahler, Fairbairn, Winnicott, and Kohut among others—assert that there is no possibility of identity formation for the infant without this process of bonding to the caregiver (Pallaro, 1996). Employing this same theoretical lens, Pallaro (1996) explains that this merging of caregiving and infant allows the infant to differentiate through his/her own identity construction, building upon an internalized sense of security and self-worth. These same interactional patterns between a caregiver and infant also create a template—an innate, implicit, nonconscious construct— for how to do things with intimate others (Lyons-Ruth, 1998). This nonverbal template, termed by Lyons-Ruth (1998) as “implicit relational knowing,” influences one’s subsequent relationships throughout the lifespan. Implicit relational knowing, in other words, includes a nonconscious blueprint of attunement instructions for how to engage with significant others, gaining access to their subjective vantage points as one outcome of such attuned communication. The attuned, merged caregiving dyad, therefore, is understood to be the conception point of empathy (Pallaro, 1996, p. 113).

Empathy

Cycles of merging and differentiating continue throughout life in perpetuity, via alignment with other individuals, groups, and wider sociocultural values, constantly influencing one’s identity through such self-other identification – the capacity to understand and respond to one another’s experiences. Throughout the lifespan, therefore,

one's sense of self is intimately tied to self-in-relationship, creating a conceptual bridge between outcomes of attunement and the capacity for empathy. An integrated sense of self— or identity—is indispensable in deriving intentions and assigning meaning to the actions of others (Gallese, 2003). Various levels of communication – verbal, nonverbal, explicit, implicit—facilitate perception and communication of our identity within an interpersonal context. Our understanding of our self provides the scaffolding upon which to organize our perception of others' actions and objectives. Gallese refers to this cohabitation of perspective as the *shared manifold of intersubjectivity*—the means by which “it is possible for us to recognize other human beings as similar to us” (Gallese, 2003, p. 171). This intersubjectivity offers a conceptual platform within which to understand empathy, articulated by Stern (1985) as our minds' capacity to sense and respond to each other within a context of congruent communication. This capacity, indispensable to integration, is “an essential part of being human” (Homann, 2010, p. 89).

Reciprocal, nonverbal communication within the caregiving dyad stimulates development of the infant's prefrontal cortex (Schore, 1994/2001). This area of the brain is implicated in higher cortical functions such as consciousness, theory of mind, social engagement, and the capacity to consider perspectives other than one's own (Siegel, 2007). Development of this particular brain region dictates the quality and capacity of interpersonal interactions for the individual. Physical contact between caregiver and infant, combined with these reciprocal communication patterns, facilitates the development of a nervous system vital to social interactions and regulation of autonomic function (arousal): the vagal nerve (Porges, 1998/2001/2003). The quality of vagal system development is heavily implicated in two capacities relevant to this section, social

engagement and empathy. Also strongly implicated in these functions are the interconnected activities of the right prefrontal cortex and the parietal lobe. Discussion of both capacities will follow in the next few paragraphs.

Proposed by Porges (2001), *polyvagal theory* illustrates how social behavior, involving affective regulation, is governed by the autonomic nervous system by way of a structure called the vagal nerve. Beginning at the brain stem, with connections to mirror neurons (discussed in the next paragraph), the vagal nerve extends down the length of the spine and attaches to major organs such as the heart, lungs, stomach, and intestines. The vagus is, in fact, not a single nerve but rather “a family of neural pathways” (Porges, 1995, p. 304). Linking major organs implicated in regulation of arousal with neuronal substrates responsible for emotional appraisal of others’ behavior, the vagal nerve system functions interdependently with the autonomic nervous system, providing “the neurophysiological substrates for the emotional experiences and affective processes that are major components of social behavior” (p. 126). Through this complex system, autonomic nervous system activity develops intimately with mechanisms of social engagement such as facial muscles, vocal tone, head-turning muscles, and middle ear structures (allowing us to discern human voice from environmental soundscapes), to name a few.

Work by social psychologists highlights the now-commonly-accepted tenant: socially-savvy behaviors facilitate the maintenance of homeostasis and help ensure survival of the human species. In other words, as a social species, we have biologically evolved to perceive nuances in social climate, discern friend (those who might facilitate survival) from foe (those who might threaten it), and communicate effectively. Theorized

by Porges to have phylogenetically evolved in tandem with increasing complexity of the mammalian organism (Porges, 2001), the polyvagal system comprises of three main branches, each accounting for differentiated adaptive behavioral strategy. Referred to as the social nervous system (Porges, 2001), these hierarchically-organized components of the mammalian nervous system have developed to provide individuals with a flexible, adaptive response to specific demands of unique challenges that may arise within a social context. In advanced mammals (e.g. humans), the ANS selects for the most recently-evolved branch of this stress response system, defaulting onto more primal response strategies if and when these fail to prove effective for the individual. In an evolutionary sense, the most primitive branch of this response system, known as the *dorsal vagal* complex (Porges, 2001), responds to threat by downregulating metabolism and heart rate to result in energy-conserving immobilization behaviors (e.g. feigning death). The second branch of the vagal system to develop is the *sympathetic nervous system* (see above), which coordinates activation of the sympathetic-adrenal system to mobilize the organism (maneuvering rapidly to facilitate active avoidance of a threat). Finally, activities of the ventral vagal complex concerning regulation of ANS functioning within a social context constitute what is known as “the social engagement system,” or “the vagal brake” (Porges, 2001, p. 130), which is the most recent corollary of the vagal system to evolutionarily develop (Porges, 1995). This recent development in the ANS is the product of a myelinated vagal nerve (compared to unmyelinated vagus of more primitive mammals, corresponding with the dorsal vagal complex), which allows for agile modulation of an individual’s visceral state in response to the social environment. The quality and effectiveness of this system is intimately interconnected with the quality of

the vagal nerve bundle, which develops, in relationship to the wider environment, mainly during an organism's first few years of life. The extent of brain development stimulated by caregiver-infant attunement and physical holding patterns, therefore, bears significant influence on functioning of this social engagement system, as the vagal nerve functioning relies heavily on the neuronal pathways to which it connects (prefrontal and sensorimotor cortexes). Our ability to make accurate appraisals of others' emotions and intentions directly affects our ability to regulate major physiological functioning such as cardiac, respiratory, and neuroendocrine activity.

While the entire prefrontal cortex is implicated in interpersonal engagement, the right prefrontal cortex specifically houses a cluster of neuronal pathways famously implicated in the function of empathy (Gallese, 2003/2005; Iacoboni, Molnar-Szakacs, Gallese, Buccino, Mazziotta, & Rizzolatti, 2005). Discovered by Italian researchers via a series of observational studies on primates, the *mirror neuron system* becomes active within a relational context – upon witnessing goal-oriented behaviors within others (Homann, 2010). The same neurons that fire when we perform an action are activated when watching another individual perform the action. Furthermore, the mirror neuron system tracks not just the goal-directed behavior, but also nonverbal expression, allowing us to make inferences about the intentions of others through their behavior (Gallese, Eagle, & Mingone, 2007). Research heavily suggests that with the help of this nonverbal recognition system, one can use observation of another's body posture in combination with facial expressions to infer emotional states of others (Meeren, van Heijnsbergen, & de Gelder, 2005; Winters, 2008). "The domains of mirror neurons ... span motoric, psychosocial, and cognitive functions, including specific psychosocial issues related to

attunement, attachment theory, and empathy” (Berrol, 2006, p. 303). This neuronal circuitry allows an individual to construct an internal emotional context for the actions of others, creating an implicit simulation of another’s subjective point of view. This is essentially what it means to *empathize*. Referring to conceptualizations of empathy originally offered by Edith Stein, Gallese (2003) delineates a broader, more basic connotation of empathy: “the other is experienced as another being as oneself through an appreciation of *similarity*” (p. 176). It is not a “total merging of self and other” (Ruby & Decety, 2004, p. 990), but rather the essence of empathy lies in the idea that we, as fellow humans, are more similar than different.

Empathic processes are complex, both in the scope of neuronal substrates recruited as well as the breadth of cognitive processes involved. While original research focused on the strong role that mirror neurons play in empathy, recent studies spill light on other areas vital to this function. The mirror neuron facilitates intraindividual neuronal integration by linking together the prefrontal and sensorimotor cortices, within the frontal and parietal lobe, respectively (Iacoboni et al., 2005). Neuroscience research seeking to define the specific neural substrates of empathy consistently highlight interconnected activities of the ventromedial prefrontal cortex (Janowski, Camerer, & Rangel, 2013; Mitchell, Macrae, & Banaji, 2005 and 2006; Shamay-Tsoory, 2011; Zaki, Weber, Bolger, & Ochsner, 2009), parietal lobe (Decety, 2010; Decety & Jackson, 2006; Franklin, Nelson, Baker, Beeney, Vescio, Lenz-Watson, & Adams, 2013; Levenson & Ruef, 1992), and temporoparietal junction (Decety & Lamm, 2007; Ruby & Decety, 2004). These neuronal sites must work in concert to engage higher-order social cognition towards the outcome of empathy, orchestrating activities such as perspective-taking, mentalizing,

emotional regulation, and affective responding to the observation of another's emotional state (Decety & Jackson, 2006). The idea of empathic substrates as a "shared-representations account of social interaction" (Saarela, Hlushchuk, Williams, Schurmann, Kalso, & Hari, 2007), that there is shared neural circuitry between third and first person experiences of emotion, has expanded to emphasize the importance of the ability to distinguish between self and other within this process. It has been proposed that failure to distinguish between self and other within socially-situated experiences of emotion might cause relentless distress and anxiety, therefore a cognitive mechanism must be involved to maintain distinctions between the experiences of oneself and those of others (Decety & Jackson, 2006). Neuroscience research attributes this capacity of self-other discrimination to activities of the temporoparietal junction, which plays a critical role in several aspects of social cognition, including perspective-taking, empathy, and theory of mind (Decety & Lamm, 2007). Connecting the frontal, temporal, and parietal lobes, the temporoparietal junction adds dimension to empathic processes by allowing us to gain cognitive and emotional distance from the observed painful experiences of others, allowing us to remember that the contents of others' minds can be different from our own (Decety & Jackson, 2006). The parietal lobe, therefore, makes a highly significant contribution to empathy via regulating emotion (managing anxiety and distress that might arise in observing negative emotional experiences of others), managing self-representations, and facilitating flexibility of perspective-taking.

Activation of premotor neurons extending throughout frontal, temporal, and parietal lobes potentiates neural pathways linking action with complex thought processes, enhancing one's capacity to be aware of and reflect upon the consequences of behavior of

self and others. These cognitive capacities contribute to decision-making about how one navigates one's world physically, cognitively, emotionally, as well as the meaning one ascribes to one's own existence. Consciousness on the individual level extends to encompass individuals with whom we interact and engage, creating what Tronick (1998) refers to as a "dyadic state of consciousness" as we co-construct a reciprocal awareness through attunement and empathic processes. Self and social identity over time coalesce into a coherent self-narrative, shaped significantly by interpersonal relationships and interpretations of significant events within one's personal history. Consciousness of this self-narrative and of one's interpersonal context give rise to the capacities of intuition, morality, and insight for the individual: the three final outcomes of integration (Siegel, 2009).

Insight, Morality, Intuition, and Consciousness

Siegel concludes his list of the manifestations of integration with three final concepts: insight, morality, and intuition. "Insight is self-knowing awareness . . . how we explore our memory of the past and our experience of the present and our anticipation and freedom to imagine the future" (Siegel, 2009, p. 138). Morality refers to culturally circumscribed standards delineating right from wrong, indicating what is just behavior and ultimately regulating behavior within an interpersonal context (Haidt & Kesebir, 2010; Ellemers & van den Bos, 2012). A newcomer to the domain of scientific acceptance, intuition can be understood with respect to its Latin root word, *in-tuir*: "looking, regarding, or knowing from within" (Hodgkinson, Langan-Fox, & Sadler-Smith, 2008). Siegel (2009) regards the function of intuition as "the way the nonverbal

processing of areas of our experience, including the body, come into our awareness (so that) we can have access to them” (p. 139). The complexity and scope of each of these topics contraindicates in-depth investigation for the purposes of this proposed study. It is, however, relevant to highlight a common phenomenon indispensable to all three concepts in service of further elucidating them. This common thread is consciousness.

Consciousness provides another opportunity to illuminate the pivotal role of integration with respect to higher cortical functioning. In his seminal book on biological basis of consciousness, Damasio (1999) delineates the integrated roles of mind and body in service of our capacity for conscious awareness. He conceptualizes emotions as *somatic markers*, affective activity communicating important information of our ever-changing bodily states. He also argues for the inseparability of emotions and consciousness. He offers two biological functions of emotions: to produce a specific reaction to a given stimulus in the environment, and to regulate the internal world of the organism so that it might prepare for the prescribed action (p. 54). In other words, mind and body work together in service of heightening and sustaining our awareness. These processes work together to facilitate growth of the individual, ultimately ensuring survival in a complex living environment that requires adaptability.

Consciousness is an integral component of insight, morality, and intuition. These three functions require the capacity for reflection, which is an ability to abstractly contemplate personal history in service of problem-solving in the present, or projecting into the future the consequences of one’s potential actions with respect to both self and others. Gaining insight into one’s life experiences from a retrospective position informs decisions made in the present, sculpting the direction of future interpretations and

responses and guiding our morality. Consciousness governs the way we experience our internal and external situations. It is an active agent in the weaving of our self-concepts and narrative, as well as the meaning we bestow upon the collective experiences of our own life. Understanding of the past and how it connects to present experience coalesces into an implicit reserve of wisdom, from which intuition emerges. This level of contemplation requires highly integrated mental functioning, especially within neo- and subcortical regions of the prefrontal lobe involved in judgment, reasoning, interpretation of other's actions, and empathy. And as discussed above, mental functioning ties directly to the somatic domain, an interplay that wields significant governance upon our interpersonal behavior. Consciousness, therefore, represents the ultimate manifestation of integration of all facets of existence: mind, body, brain, and the understanding of one's place within the wider environmental and temporal context.

The Disintegrating Effects of Trauma

Traumatic experience presents the individual with threat of dysregulation across one or many dimensions of functioning. This is especially true in cases of prolonged, repeated trauma experienced in early development (Ford, Courtois, Steele, van der Hart, & Nijenhuis, 2005; Herman, 1992; van der Kolk, McFarlane, & Weisaeth, 1996). Biological, affective, cognitive, and relational dimensions are often impacted negatively, and in an interconnected fashion, with detriments in one domain affecting other realms of functioning. The extent of such dysregulation has been found to be a function of the developmental level at which the trauma occurred. Individual premorbid overall functioning also affects the impact of trauma, with higher levels of functioning before a traumatic event providing a buffer towards functional impairments (Johnson, Brooks,

Mpofu, Anwer, Brock, Ngazimbi, & Magweva, 2012). Intensity and duration of traumatic experience have been shown to directly correlate with the negative impact of trauma (van der Kolk, 1996b). Different types of trauma are connected to different levels of impairment, as interpersonal trauma has been found to be more detrimental than trauma caused by natural disaster (Johnson et al., 2012). Trauma related to war is a well-researched phenomenon shown to have far-reaching implications for an individual's functioning upon return from combat (Goodson, Helstrom, Halpern, Ferenschack, Gilihan, & Powers, 2001; Renaud, 2008). In instances of interpersonal trauma such as abuse or assault, the relationship of the victim to the source of trauma (e.g. parent, stranger, partner) affects trauma-related outcomes, with a closer relationship correlating with increased impairment (Johnson et al., 2012). Irrespective of the nature of the traumatic event, the perceived availability of social support can be instrumental in both the extent of impairment and the ability of one to successfully recover from trauma (Kolassa, Ertl, Eckart, Kolassa, Onyut, & Elbert, 2010; McFarlane, 2000).

Survival Responses: Fight, Flight, Freeze

In order to comprehend the dysregulation that occurs in the aftermath of trauma, the response strategies and accompanying intrapersonal processes invoked at the time of trauma must be delineated. Intense fear invoked during a traumatic event initiates a series of innate biological reactions in order to enhance chances for survival. These physiological response pathways are reflexive and implicit by nature, requiring no conscious cognition to initiate, and producing one of three hierarchical options for response: fight, flight, or freeze. The response option nonconsciously "selected" is contingent upon an individual's instinctual, rapid appraisal of the threat, matching the

nature of the threat with the method of survival. If the threatened individual appraises the source of threat as potentially weaker than oneself, then “fight” becomes the first line of defense. If one’s appraisal of the enemy contraindicates fighting, the individual will attempt to flee. In both of these survival strategies, the corresponding physiological processes orchestrated by the autonomic nervous system (refer to preceding section) mobilize the entire organism for a rapid burst of action. The release of catecholamines by the sympathetic nervous system activates the HPA axis (“fight-or-flight” system), in turn releasing neurohormones such as cortisol into the blood stream to increase cardiac and respiratory capacity and decrease metabolic activity. The organism can quickly garner all available internal resources in service of either physically defeating one’s enemy or successfully evading further danger. Once threat has been eliminated or evaded, parasympathetic activity of the autonomic nervous system down-regulates the physiological arousal, enabling an eventual return to baseline functioning.

When both fight and flight are predicted to be futile, or would in fact decrease one’s chances for survival, an organism defaults to prolonged immobilization, also known as passive avoidance (Porges, 2001). This response entails an entirely different physiological response, leading to immobility, numbing of bodily awareness, and sometimes loss of consciousness. When an extremely stressful situation has been deemed inescapable, endogenous opioids are released as part of a biological cascade initiated by the hypothalamus, numbing the body from the sensory experience of pain while simultaneously interfering with attentional and memory processes. Intensely stressful situations can overwhelm cognitive functioning in the moment, giving rise to dissociative experiences that lead to the partitioning off of sensory and affective elements of the

traumatic experience (van der Kolk & Fisler, 1995). When experiences cannot be integrated into one's narrative memory on an explicit, verbal level, they tend to be organized as visual images and somatic sensations (Piaget, 1962). With trauma, declarative components of the traumatic experience are much less prominent than emotional and perceptual elements, subsequently limiting the degree to which a person can explicitly narrate the memory in the future (Janet, 1989; Janet, 1925; van der Kolk & Kadish, 1987).

The nature of memory storage of a perceptual experience has implications for learning and future recall. Stress-induced neurochemical processes and overwhelming sensorimotor experiences potentially impede fear-inducing experience from being consolidated into long-term memory (Rothschild, 2000), living on instead at nonverbal levels outside the domain of conscious recall and control. This has implications for defensive behaviors during future times of stress: if an individual has attempted to fight or flee in the face of threat, and has been thwarted repeatedly by these efforts in the past, the immobilization option becomes conditioned as the preferred survival response. Research supports the idea that experiences of dissociation during negatively-charged events are highly predictive of the development of posttraumatic stress symptomology (Shalev, Orr, & Pitman, 1994, van der Kolk & Fisler, 1995), as well as making the individual vulnerable to retraumatization in the future. When chronically invoked by the individual, such passive avoidance, therefore, may belie a history of chronic exposure to inescapable threat.

Emotionally-charged events take on observably different neuronal substrates than do mundane ones. Postulated long ago by Janet (1889), the idea that traumatic memories

are stored at the implicit (nonverbal, sensorimotor) level has received overwhelming support by a new generation of neuroscience research (LeDoux, Cicchetti, Xagoraris, & Romanski, 1990; LeDoux, 2000; Sigurdsson, Doyere, Cain, & LeDoux, 2007; van der Kolk & Fisler, 1995). Research on the nature of emotional memory processes support the idea that neuronal activity routes information regarding intensely stressful or fear-inducing situations through multiple simultaneous pathways involving sensory information processing via the amygdala (LeDoux, 1992; LeDoux, Iwata, Cicchetti, & Reis, 1988; Sigurdsson et al., 2007). The amygdala, an area in the temporal lobe implicated in assigning emotional meaning to stimuli, dominates neural activity during times of stress. This has been understood, and observed through neuroimaging, as an apparent trade-off to activities of brain areas implicated in verbal expression and explicit (narrative, verbal) memory. In other words, these parallel processes facilitate the organization of emotionally-charged perceptual information at the sensorimotor, implicit level (van der Kolk & Fisler, 1995). This storage method, characterized as fear conditioning (LeDoux, 1994) and its associated learning process, can be understood as evolutionarily adaptive for the survival of the species, as it allows the animal to associate a specific stimulus with danger and therefore avoid dangerous situations. Future survival behaviors of the individual operate as a function of such emotional memory and conditioning. However, such functions can go awry when situations overwhelm existing coping mechanisms, and fractured pieces of implicitly-stored traumatic memories surface with unpredictable frequency and intensity. Until implicitly-stored memories can be organized and integrated into a coherent self-narrative, the traumatized individual awaits

in apprehension of the next unannounced reminder, vulnerable to reliving of such distressing memories.

Traumatization: Failure to Integrate

A person's level of functioning achieved prior to the trauma plays a strong role in its impact, moderating the spectrum of possible detriment and negative outcomes. For previously integrated individuals, an isolated traumatic event might produce a variety of different effects, varying in severity. For instance, it has been shown that the earlier the age at which trauma is experienced, and the more prolonged the traumatic event, the greater likelihood the individual will experience significant deficits in memory functioning (Briere & Conte, 1993). Alternatively, individuals who have encountered trauma during an early developmental stage may be denied the opportunity to form an integrated sense of self altogether, as trauma during childhood may preclude achievement of healthy affective, cognitive, biological, and interpersonal regulation. Janet (1907) characterizes traumatization as a failure of the capacity to integrate (as cited in Ogden, Minton, & Pain, 2006). Biological, affective, cognitive, and interpersonal functioning may no longer work in concert in the aftermath of trauma. Previously effectual stress responses become easily triggered, disproportionate, and maladaptive. Perception of environmental cues for threat become distorted, ignored, overridden, or exaggerated. Fear and anger pervade and underwrite emotional responses (Hathaway, Boals, & Banks, 2010). Uncomfortable memories reminiscent of the trauma invade consciousness, uninvited. Behaviors and interactions with others become altered in service of avoiding reminders of the trauma, or further discomfort. These symptoms of dysregulation

constitute the hallmark of “posttraumatic stress disorder”, a diagnosable condition occurring in the aftermath of a traumatic event experienced by the individual to be intensely distressing (American Psychiatric Association, 2013). Occasionally, these symptoms may resolve on their own, in the presence of supportive relationships and in the absence of further trauma (Kolassa et al., 2010; McFarlane, 2000). Often, however, relief from such symptomology must be procured within the context of professional therapeutic alliance.

Complex Trauma

For those who experience persistent, maladaptive functioning stemming from a history of repeated trauma at any developmental stage, the concept of “complex posttraumatic self-dysregulation” becomes applicable (Ford et al., 2005). Chronic childhood abuse, exposure to war, torture, captivity, and prolonged exposure to violence are but a few scenarios that might give rise to complex self-dysregulation, or *complex* PTSD (Herman, 1992; van der Kolk, 2001). Biological, affective, cognitive, and relational dimensions of existence are dysregulated, but in different ways and to different degrees than those resulting from “simple” PTSD. Habituated reliance on dissociative strategies (exemplified by the freeze response to threat) dysregulate consciousness (Ford et al., 2005) and place the individual at risk for future traumatization (McFarlane & Yehuda, 1996). Implicit cognitive processes become disconnected from higher cortical functioning, impeding processes of memory consolidation, integration of sensory experiences, accurate appraisal of and response to threat, and affective regulation (Jovanovic, Perski, Berglund, & Savic, 2011). The range of one’s affective landscape becomes constricted to negative emotions, dominated by rage and feelings of emptiness.

Negative affective states can also be compounded by the sense of worthlessness and loss of hope that frequently accompany the experience of repeated traumatization.

Core beliefs about oneself and world shift towards pessimistic expectations regarding others and life itself (American Psychiatric Association, 2013). One might even experience a loss of previously sustaining beliefs (Ogden & Minton, 2000; van der Kolk, 1996). Such changes in cognition often constitute a self-fulfilling prophecy, as information confirming one's negatively-skewed worldview becomes selectively attended to and integrated in favor of more positive, self-affirming information (Krans, Naring, Becker, & Homes, 2009). Interpersonal functioning suffers significantly as one isolates from potentially vital sources of social support. Specifically, relational trauma incurred during childhood and usually at the hands of a caregiver may imprint the individual with an insecure relational template. The capacity to emotionally attach to others, beginning with primary caregivers in infancy, is vital for the evolving ability to access social support when needed, to modulate physiological stress responses (Gunnar, Brodersen, Nachmias, Buss, & Rugatuso, 1996; Smeets, 2010; Sparrow, 2007), and to feel secure in the possibility that others will be there for us in difficult times. In early life, if a child's relational needs are inconsistently or inappropriately met, these core beliefs may not take hold, creating anxiety at the experience of disappointment at the hands of others, stunting one's willingness to turn to others as vital sources of support. In this sense, it may be postulated that an insecure relational template may preclude the possibility of trusting and relying upon others, which may significantly limit one's ability to access social support in times of stress throughout the lifespan.

This multidimensional, persistent dysregulation of the individual can be conceptualized as a type of disintegrative state. This may entail a dismantling of the operative mechanisms that ensure fundamental safety, support the maintenance of a sense of self, and drive human intrapersonal and interpersonal functioning. To remain in this state of disintegration can have ominous implications for long-term survival: chronic dysregulation of the stress response is implicated in long-term negative health outcomes, perpetuating the adverse effects of the initial trauma and threatening the integrity of health for the traumatized individual across the lifespan (Kendall-Tackett, 2009; Kendall-Tackett & Klest, 2009). The need to assist traumatized individuals with re-integration is a critical element of treatment.

The more divorced the mind is from body and affective awareness, the more difficult it may become to address trauma with words alone (Ford, Courtois, Steele, van der Hart, & Nijenhuis, 2005; Herman, 1992). Aberrations in memory are a hallmark of the traumatized individual (Janet, 1889; van der Kolk, 1998; LeDoux, 1992). If trauma memories are deeply entrenched on implicit or somatic levels, this may defy formulation of the experience into a coherent verbal narrative (van der Kolk, 1994 and 1998). Research has shown that when recalling traumatic memories, activity in the Broca's area of left frontal lobe (responsible for linguistic expression) decreases while activity of areas within the right hemisphere responsible for spatial, visual, and sensorimotor organization of experience increases (Rausch, van der Kolk, Fislser, Orr, Alpert, Savage, Fischman, Jenike, & Pitman, 1994). It has been speculated that extreme emotional arousal interferes with the functioning of brain structures involved in memory formation and consolidation (e.g. hippocampus) (van der Kolk, 1994). Traditional talk therapy approaches alone may

fall short in the face of a disintegrated individual; nonverbal and somatic interventions may be helpful in these cases as a means to unify the fractured aspects of self (Ogden, Minton, & Pain, 2006; Ritter & Low, 1996; Rothschild, 2000). Inspired by the seminal assertion that “the body keeps score” (van der Kolk, 1996a), a growing body of research highlights the unique efficacy of incorporating somatic interventions, by working with the body on an implicit level with traditional talk therapy in accessing and healing trauma (Ogden et al., 2006; Pallaro, 1996; Ritter & Low, 1996; Samiy, 2013; Stromsted, 2001; van der Kolk, 1996b; Whitehouse, 1999).

The Body Evens the Score: Unique Benefits of Nonverbal Interventions

Fear and Memory Storage

Research on the efficacy of treatments for individuals with a trauma history is influenced greatly by the consensus that traumatic memories are largely stored and accessed via our implicit memory systems (Fava & Sonino, 2000; Ogden, Kekuni, & Pain, 2006; Rothschild, 2000; van der Kolk, 1994). Our implicit brain, also known as our “paleomammalian brain,” is mainly concerned with emotion, memory, social behavior, and learning (Cozolino, 2002). Literature illustrates that both the memories and recall of traumatic memories are sensory-based in nature; the limbic system, stratified bilaterally throughout the brain but potentially skewed towards the right hemisphere, deals very generally with processing emotion and sensory information. This is confirmed in brain activation studies that demonstrate elevated right hemispheric and decreased left hemispheric activity during traumatic memory recall (Lanius, Williamson, Densmore, Boksman, Neufeld, Gati, & Menon, 2004). The timing of a traumatic event is relevant to

its impact: for the first three years of human life, as the language functions are developing, right hemisphere activity is dominant, therefore early trauma memories may be preferentially stored in the right hemisphere of the brain. Consequently, trauma occurring at the preverbal developmental stage may potentially lead to a lack of integration of left hemispheric function (Green, 2011; Siegel, 1999). As further illustration, marked hemispheric lateralization favoring right brain activity over left and correspondingly, sensory- over language-based expression is an enduring neuroanatomical feature of individuals with a history of trauma, irrespective of the age at which trauma was endured (Ogden et al., 2006; van der Kolk, 2001).

Two specific limbic structures, the amygdala and the hippocampus, are highlighted within the literature as bearing a direct effect on an individual's ability to recall and integrate traumatic memories (Schacter, 1996; Schore, 2003). The amygdala, implicated in emotional processing and charged with initiating the sympathetic nervous system response to perceived threat, displays increased activation in individuals with PTSD (Ogden et al., 2006, van der Kolk, 2001). The hippocampus, which is thought to play a large role in the consolidation of sensory information into episodic memory, displays neuronal shrinkage in trauma survivors (van der Kolk, 2001). This is associated with over-activity of the HPA axis, by which excess cortisol binds to glucocorticoid receptors in the hippocampus, initiating dendritic damage (Ogden et al., 2006, p. 151). Increased amygdala activity may inversely correlate with optimal hippocampal functioning, as appraisal of threat becomes sensitized and episodic memory becomes inaccessible. The displacement of incoming information within the limbic brain speaks to the lack of memory accuracy and retrieval displayed in trauma victims.

Traumatic events are correlated with significant distortions in memory. Hyperamnesias, which are involuntary reminders of sensory features of the trauma, and amnesias for conscious recall of trauma memory details are two memory distortions often experienced in PTSD. Invasive shrapnel of memory in response to internal and external triggers haunt the trauma survivor in a seemingly random barrage of sensory-based memories, while at the same time the individual has great difficulty accurately recalling details of the trauma or putting the memory into words. Intrusive trauma memories are “rich, multi-modal mental images of highly detailed sensory impressions of the traumatic event including sights, sounds, feelings and bodily sensations” (Krans, 2009, p. 1077). This constant reliving of the memory, in the form of unwanted memory fragments, is emblematic of the lack of integration of trauma memories. Research implicates the role of the HPA axis in memory distortions for trauma victims: high levels of perceived threat, paired with an inability to escape, causes the body to release high amounts of both cortisol and endogenous opioids. Excess cortisol binds to glucocorticoid receptors in the hippocampus, leading to neuronal shrinkage and death in this area of the brain responsible for the encoding of episodic memory (Schacter, 1996). This aspect of trauma contributes significantly to the lack of integration of trauma memories: hippocampal functioning significantly decreases, thus compromising semantic storage of these events.

Disturbing memories that fail to become stored in our episodic memories, thus remaining largely in our implicit memories and subject to alteration only through implicit learning, are problematic for several reasons. Unintegrated memories present a significant impediment to the healing process for the individual (Levine, 1997). Precisely because of the nature of the encoding process for traumatic events, these memories remain splintered

off from the semantic processing of episodic memory, and exist in a sort of purgatorial position in our limbic brain, until they can be consciously recalled, processed, and integrated into episodic memory and therefore laid to rest. Trauma memories can be seen as lost islands of the sea inside the survivor, floating unanchored and lawless, subject not to declarative retrieval, but to random triggering by uncontrollable external and internal events. Because of this, these unintegrated memories are permitted to thrive within the trauma survivor, evading exploration and the opportunity to become effectively woven into one's understanding of the past.

In this manner, unintegrated trauma memories pose a threat to the core of one's being: a sense of self. How we self-identify is a direct function of the integrity of our autobiographical memories. Decisions we make in response to present situations rest on what we have learned, either primarily or vicariously, and how we recall this knowledge. The manner in which we formulate, delineate, and pursue goals for the future is predicated by our understanding of our self and our vast accumulation of experience. Unresolved trauma that lives on in the body, therefore, puts one's inherent identity in jeopardy of disintegration: a type of unraveling of one's experience- and memory-based narrative. Effective treatment of unresolved trauma must therefore gain access to unintegrated memories on the nonverbal level, with the ultimate objective being holistic integration of the traumatized individual.

Implicit Memory and Nonverbal Therapies

Verbal recall of traumatic memories is difficult, or even dangerously overwhelming, for survivors of trauma. Pushing a client to put painful memories into

words might initiate a familiar reactivation of an already overworked physiological stress response, which may sustain traumatization patterns in the body and further bury the unintegrated memories beneath consciousness. Furthermore, for some populations, traditional interventions that rely on the ability to articulate one's experience with words may not be helpful or appropriate—for example, young children. When this is the case, therapists should address traumatic memories within the realm in which they thrive—the body. “Mainstream psychotherapy ... lacks techniques that work directly with the physiological elements (of trauma) despite the fact that trauma profoundly affects the body” (van der Kolk et al., 1996). Whether using the body holistically in motion, or addressing specific senses, nonverbal therapeutic interventions can provide a critical means by which to liberate one's body of painful memories that are alive and well in the body, for which there are no words to describe. Expressive arts and somatic-based therapies (EASTs) encompass a broad array of techniques that access traumatic memories at the level at which they are stored: the sensorimotor, nonverbal, implicit levels of memory. EASTs include, but are not limited to, fine arts, music, dance/movement therapy (DMT), yoga, and body work. A detailed description of the benefits of each modality would reach beyond the scope of this brief survey, so these approaches will be discussed in terms of the common threads that bind them together, with a particular emphasis on dance/movement therapy. All expressive arts therapies offer a chance at healing through externalization of an individual's traumatic memories, increased body/sensory awareness, and the cultivation of capacity to regulate one's responses to perceived environmental threat. These interventions offer the hope of healthy re-integration for the distressed, fractured individual.

While successful therapeutic outcome is often measured in terms of observable symptom reduction, of great importance is an understanding of the underlying cognitive mechanisms by which symptoms are actually reduced—integration of traumatic memories via altered implicit learning. Unbridled trauma-related memories, sequestered away from conscious access, may create a state of chronic stress for the affected individual, taxing the body, the mind, and interpersonal relationships (Kendall-Tackett, 2009; Kendall-Tackett & Klest, 2009; McEwen, 2006; Segerstrom & Miller, 2004). These memories arise seemingly at-random, triggered by both environmental influence and changes in physiological homeostasis. The cornerstone of posttraumatic stress is an overactive, dysregulated fear response (APA, 2013) continually played out in the theatre of the body. This dysregulated fear response needs to be linked back to accurate interpretation of environmental cues and emotional responses that were once adaptive and healthy.

In an atmosphere of safety, EASTs allow clients to engage in an artistic process while at the same time increasing awareness of one's body, emotions, and physiological response patterns. As many traumatized individuals can attest, awareness of one's body is a radical departure from the emotional and numbing characteristic of trauma aftermath. When the site of trauma overtly implicates the body, as is the case with rape (Green, 2011; Herman 1992b), war (Kock & Weidinger-von der Recke, 2009; Gray, 2001), chronic physical or sexual abuse (Dale, Carroll, Galen, Schein, Bliss, Mattison, & Neace, 2011), and domestic violence (Devereaux, 2008), DMT and yoga therapies present uniquely potent healing properties, pairing expressive postures with autonomic nervous system regulation via conscious breath control (Adler, 2002; Berrol, 1992; Brauninger,

2012a and 2012b;). The traumatized body, once functioning as a punishing source of incessant pain, regains hope of becoming a trusted ally once again.

Witnessed Movement as Therapy: Dismantling the Trauma

Holistic and integrative, creative movement possesses profound healing properties that can be applied in response to a wide array of maladies, ranging from anxiety, low self-concept, and depression to chronic stress and the trauma-induced disintegration. Since its first therapeutic application to “shell-shocked” WWII veterans who had lost the capacity for verbal expression (Kock & Weidinger-von der Recke, 2009), creative movement has been developed as a flexible technique—dance/movement therapy—to treat a variety of trauma-related conditions (Adler, 2002; Chodorow, 1991). Faced with clients who had been traumatized beyond words, and thus necessitating a non-verbal modality of healing, Marion Chace inventively introduced the technique of dance/movement therapy, circumventing the limitations of traditional talk therapy specific to this population and thereby producing significant symptom reduction through expressive movement.

DMT has developed throughout the decades since its inception, manifesting most recognizably in the form of Authentic Movement pioneered by Mary Starks Whitehouse (1999), which animates Jungian principles of active imagination via physical dimensions of movement. Employing a “witness” (therapist) and a mover (client) dynamic, Authentic Movement activates processes of empathy, mirroring, and nonverbal expression to help clients increase awareness of previously automatic, non-conscious processes that have evaded linguistic expression. Creative movement employed in this way helps individuals

become grounded in their bodies, increasing the range of motion to counteract stagnation, liberating clients from perpetual “freeze” response states to stress and fear characteristic of trauma conditioning. This technique, and others inspired by its principles, provides shape and expression for painful affective states, and facilitating integration of painful memories that have remained stuck in the non-verbal dimensions of the body. Applied within a therapeutic context, creative movement allows the individual to piece back together a disassembled experience of self, thereby counteracting the once-disintegrative state of being (Gray, 2001). Getting back into the body reunites dimensions of existence that have been, at times, violently divorced as a function of persistent, repeated trauma, allowing the individual to once again negotiate the world as an empowered, integrated being.

A meta-analysis conducted by Ritter and Low (1996) convincingly illustrates the efficacy of dance/movement therapy across diverse populations and psychiatric conditions. Clients who were successfully treated are diverse in age and condition, experiencing significantly alleviated symptomology related to conditions such as developmental disabilities (Leventhal, 1980), schizophrenia, anxiety disorders, depression, and posttraumatic stress disorder (Ritter & Low, 1996). These results are echoed in separate studies pertaining to different clinical populations, finding DMT as an effective treatment for those who struggle with eating disorders (Krantz, 1999), traumatized refugees (Kock & Weidinger-von der Recke, 2009), survivors of torture (Gray, 2001), and rape (Wyman-McGinty, 2005). Anxiety-related difficulties are particularly amenable to treatment with DMT (Ritter & Low, 1996). Posttraumatic stress disorder and complex trauma are treatable by DMT, and it has been found suitable for use

with both individuals and groups. For instance, in her case study involving a family with a history of domestic violence, Devereaux (2008) explains that DMT allows family members to address the physical and emotional patterns of immobilization, assists victims in integrating healthy self-regulatory capacities, and builds body awareness. Participants can build upon the presence of healthy physical contact with family members, physically negotiate spatial boundaries as a metaphor for relational ones, and reap benefits of physical movement in counteracting the corporeal rigidity that is often the legacy of trauma (Schoore, 2003).

While uniquely effective for alleviating trauma-related symptomology, DMT can be successfully applied to both psychiatric and non-psychiatric populations, across a range of functioning and conditions. In randomized controlled trials on outpatients suffering from stress, dance/movement therapy has been shown to significantly reduce stress and contribute to a general sense of well-being, producing lasting benefits and extending individual positive stress-reduction strategies beyond the immediate intervention (Brauninger, 2012b). In another controlled study conducted by the same author, dance movement therapy was found to effectively improve quality of life for sufferers of stress across several domains, significantly the psychological, social relations, physical health, and spirituality realms (Brauninger, 2012a). Kierr (2011) explores aspects of dance/movement therapeutic practice that stoke the development of a healthy sexuality, integral to general human development and arguably an indispensable component of healing for those with sexually-related trauma histories. Stromsted (2001) highlights the manner in which dance/movement therapy—specifically Authentic Movement—counters the culturally-sanctioned disenfranchisement of the feminine, the

corporeal, the intuitive by enabling women to reinhabit their bodies, re-connecting to inherent wisdom not valued by dominant, gender-related cultural paradigms. Academic literature, seemingly, has just begun to discover the plethora and scope of benefits to be gleaned from the therapeutic application of dance.

Yoga Means “to Yolk”: Breath, Mind, and Body

Yoga therapies offer similar benefits to those of D/MT, with an added emphasis on awareness and quality of one’s breathing patterns. Yoga philosophies reject the Cartesian dualism of the mind and body, emphasizing instead their interdependence (Goldberg, 2005). Quality of breath can reveal underlying physiological functioning, particularly of one’s stress response. Many asana-based yoga styles honor the breath as a vehicle for transformation, both in physical poses and in one’s mind. Put in physiological terms, by consciously devoting attention to cycles of breath, especially in the midst of physically-challenging postures that elevate heart rate, one can consciously access non-conscious functions that govern homeostasis, namely the parasympathetic branch of the autonomic nervous system (Golberg, 2005; Kalat, 2013). The increased capacity to regulate one’s response to stress and fear via breathing patterns is a powerful way to retrain a stress response that has become dysregulated. Breath becomes an entry point, the vehicle to internal, physiological processes that link to psychological dimensions of the individual.

Operating with these principles in mind, therapists can bestow clients with regulating techniques to help calm both body and mind. Yoga practices can condition a client to become more aware of changes in their breathing, or body response, to

uncomfortable memories or dynamics, and to begin to regulate the stressful physiological response that was once automatic and involuntary. Yoga-derived breathing techniques can be used in isolation from the physical postures and applied effectively to many different trauma populations (Cohen, Mannarino, & Deblinger, 2006; Sherman, 2014; Weisz, Kzdin, & Alan, 2010). In one study of tsunami survivors in Southeast Asia, implementation of a yoga breath intervention alone decreased PTSD Checklist and Beck Depression Inventory scores by 60% and 90% respectively, and results were maintained at a four month follow-up (Descilo, Vedamurtachar, Gerberg, Nagaraja, Gangadhar, Damodaran, Adelson, Braslow, Marcus, & Brown, 2010). Another study illustrated that moderate to frequent yoga practice has a positive effect on female abuse survivors' overall self-concept, something which is highly vulnerable to degradation following domestic violence (Dale, Carroll, Galen, Schein, Bliss, Mattison, and Neace, 2011).

Symbolic Self-Actualization: A Humanistic Perspective

Invoking William James' concept of transpersonal psychology and Maslow's hierarchy of needs, Samiy (2013) casts the purpose of dance within the light of self-actualization, claiming that creative movement can deliver an individual to greater understanding of and congruence with one's purpose and potential. According to Maslow (1968), self-actualization represents a higher-order human need, albeit one fundamental to an intrinsic sense of well-being. This view purports that, intrinsic to our experience as human beings, we possess an innate movement tendency towards self-actualization. This self-actualization is often the function of an interplay between self-exploration in solitude, juxtaposed by the experience of being in relationship to others.

A sense of interconnectedness is one main dimension of the construct of spirituality, what Jung (1958) called “an inherent aspect of humanity” (as cited in Samiy, 2013). According to this perspective, a positive sense of connection with other human beings directly contributes to a robust spirituality while at the same time, helping the individual feel more aligned with one’s humanity. In literature addressing health outcomes (Dyson, Cobb, & Forman, 1997; Mahoney & Graci, 1999), spirituality, a construct tandem to interpersonal integration, consistently correlates with overall well-being and positive mental health. Dance, therefore, may simultaneously move the individual closer towards actualization of self while offering a path towards deepening one’s understanding of human interconnectedness.

These therapies can put individuals back in touch with their bodies and give voice to the nonverbally-stored, trauma-related memory. As trauma memories are initially organized on a perceptual level, it is imperative for a client to feel grounded in his or her body first as a prerequisite to safe exploration of difficult past experiences (Green, 2011). By beginning with the body and allowing verbal expression to take the back burner, “(positive) physical interactions are translated into patterned neuronal activity that results in positive changes” (Devereaux, 2008, p. 61). This represents a type of bottom-up processing as an antidote to the limited top-down channel of verbal processing of traumatic experiences. Once a client is able to increase awareness and regulation of the vessel in which these memories are stored (the body) he or she can begin to integrate somatic memories, making the implicit explicit. This integration of splintered memories, albeit sometimes several years after the fact, from implicit to explicit memory allows conscious access to truths only previously restricted to somatic expression. Until this

happens, implicitly stored memories may risk remaining unbridled within one's subconscious, surfacing without warning when triggered.

Achieving a healthy balance between body and mind allows an individual to regain control over autobiographical knowledge previously too painful to consciously accept. By acknowledging the interconnectivity of mind and body, dance/movement therapy helps individuals heal on multiple levels—cognitive, behavioral, and affective—in a manner that influences the individual, holistically, as well as the quality of his/her interpersonal relationships. Expressive therapies bestow upon clients an invaluable process by which the internal becomes external, resolving a previously-unacknowledged part of one's identity. Once expressed in an alternative, coherent format, distorted memories that render negative effects on one's self-concept and physical health are finally subject to conscious scrutiny. Once the trauma story is finally made visible to the conscious mind, it is the *body* that has the chance to even the score.

Chapter 3: Methods

Introduction

The purpose of this qualitative study is to examine the lived experience of achieving integration through the fine art form of dance, using a phenomenological method coupled with arts-based research (Finley, 2008; Harper, 2008). Interviews with ten professional dancers, including both open-ended and video-elicited interviewing techniques, constitute the research material illustrating the various manifestations of integration. Participants were purposefully selected on the basis they have endorsed a history of childhood adversity or developmental trauma, ranging from physical abuse, sexual violence, significant mental illness of a parent or sibling, systemic trauma imposed by chronic poverty and institutionalized racism. All participants represent the non-dominant discourse in at least one dimension of culture (e.g. ethnicity, gender, sexual orientation, ability, nationality, religion, socioeconomic status). Through the application of somatic psychology, interpersonal neurobiology, psychoneuroimmunology, and relational psychotherapy, this qualitative research seeks to articulate the esoteric healing forces derived from creative movement that fortifies self and fosters resilience within individuals. Healing, integrative properties of dance aid the individual in navigating both current challenges as well as what can sometimes be the fragmented aftermath of adversity.

The research question pursued sought to understand the “life worlds” (experiential perspectives) of the chosen participants, and the foundational assumptions upon which these views are constructed (Barker, Pistrang, & Elliot, 2002, p. 76). These individuals hail from many different walks of life, representing a diverse array of cultural

dimensions. Their stories are textured, unique, and positioned within a geographical, historical, and cultural context. The desired objective of this study has been a well-articulated, vivid depiction of the dynamic role of dance as integral to the development of the individual's identity, sense of resilience, approach to conflict, and the vehicle by which they can navigate their worlds. Therefore, a qualitative lens blending both phenomenological and narrative approaches is the most appropriate choice in pursuit of these outcomes.

Qualitative Perspectives

Developed as an alternative to a positivist-driven quantitative research approach, qualitative research operates from a very different paradigm, accompanied by a distinct understanding of reality, knowledge, values, and process. Belief in an "objective" reality that can be reliably defined by science is abandoned in favor of the ontological view that reality is best understood as a multiplicity of perspectives (Creswell, 2013). Embedded in this philosophical perspective is the high premium which qualitative research places in subjective sources of knowledge. Personal accounts offered by participants in dynamic dialogues, not standardized observational or experimental methods imposed by a distanced researcher, constitute as data to be analyzed. Multiplicity of perspectives are valued and preserved, and great care is taken to avoid automated superimposition of the researcher's values onto those of the individuals being studied. Human biases inherent in the research process are explicitly acknowledged: personal experiences of the researcher are "bracketed" (addressed and sequestered) in an attempt to address perspectives that the researcher brings to the process that most likely influence the information sought, gleaned, and conceptualized (van Manen, 1990). The research methodology for

qualitative design is emerging and iterative: data gathered at one stage of the process shapes the types of questions subsequently asked, and that which is revealed constantly shapes the lens of inquiry (Creswell, 2013).

A Phenomenological Study

Phenomenology refers to “the systematic study of people’s experiences and ways of viewing the world” (Barker et al., 2002). One of several possible qualitative approaches, a phenomenological study seeks to illuminate and understand people’s experiences and underlying assumptions. Here, the role of the researcher is to consider all participants’ perspectives collectively and distill them down to the essence of a given phenomenon (van Manen, 1990). Credited as the founding father of phenomenology, philosopher Husserl postulated that central to scientific inquiry of such experiences is the process of “going back to the things themselves” (Husserl, 1970, p. 252, as quoted in Mortari, 2008). According to views purported by Husserl and further developed by writers such as Heidegger, Merleau-Ponty, and Sartre, any discussion of knowledge is inextricable from that of consciousness, which is intimately involved in the construction of what we come to recognize as (a given individual’s) reality (Creswell, 2013). Phenomenology, therefore, is acutely interested in the construction process of an individual’s subjective reality, as known through consciousness and the articulated experience thereof. This process requires ample personal accounts obtained chiefly from semi-structured interviews of participants that can then be analyzed in service of cultivating a “detailed, conscientious description of the phenomenon” being studied (Mortari, 2008, p. 4).

Phenomenological research sharply departs from quantitative methods with respect to its paradigm of reality, therefore affecting every aspect of the research process. In contrast to quantitative methods, which seek to confirm or disconfirm a specific view, phenomenology leaves great latitude for multiple perspectives to co-exist, treating them all as simultaneously valid. Assuming a position of what's known as *critical realism*, phenomenological research processes operate under the assumption that, while there does indeed exist a real world that has regularities, we can never know it with absolute certainty (Barker et al, 2002). Influenced greatly by postmodernism views, rejecting singular Grand Narratives or the possibility, or desirability, of a single "Truth" to be discovered, phenomenology recognizes that there exist many multiple truths and seeks to shed light on as many facets of these truths as possible as they relate to a subjects' worldview. This critical realist lens, coupled with the acknowledgement of multiple truths, yields tentative conclusions that are dynamic, flexible, and co-constructed through collaboration between participants and researcher. A researcher's ability to bracket his or her own experiences as they pertain to the subject being studied is instrumental in this delineation of multiplicity of truth. This is especially important considering that the researcher, a dancer, has adopted an "insider" (*emic*) view throughout the inquiry, necessitating reflection about personal values, voice, and perspective (Bloomberg & Volpe, 2012).

Considering its reliance on verbal accounts and their interpretation, phenomenological research is heavily dependent on the linguistic ability of the researcher: the ability to elicit verbal depictions from participants and to creatively analyze these verbalizations in a manner so as to allow the emergence of wider themes.

“It is a matter of not only being present ... to words in themselves, but to the meaning given through the words” (Todres, 2005, p. 111). This amounts to an analysis mediated by creativity, a necessary element when looking at the lived experience of a dynamic art form. “Experience can become known through language, but is so much more than language itself” (Norlyk, Dreyer, Haahr, & Martinsen, 2011, p. 1). Todres (1998) emphasizes the importance of eliciting empathy in a reader via a researcher’s chosen tone and language, stating “phenomenological text involves an aesthetic dimension” (p. 123). Language and creativity combine to invoke empathic processes in the reader, in service of facilitating understanding of different perspectives.

Benefits of employing a qualitative research design, specifically phenomenological, are numerous with respect to this subject. This author’s interest lies in richly describing a human phenomenon – how dance may contribute to one’s sense of integration – through the many different perspectives of the culturally diverse participant sample. The value of this inquiry lies not in its ability to quantify or distill such varied descriptions down to an erroneously simple explanation of the process by which such individuals become integrated. Humans cannot be reduced down to units, nor can their experiences be simplified into black-and-white, unidirectional causal explanations. A quantitative research approach would risk neglecting the richness and texture available to qualitative methods when seeking to understand another human’s vantage point. Eschewing a narrowly scientific focus (prized in quantitative research) in favor of a divergent investigation process, phenomenological methods allow latitude for unexpected outcomes – themes, revelations, concepts, processes—to emerge organically from the data, unencumbered by researcher’s unacknowledged biases and expectations. This

research question—seeking to understand a lived experience of several dancers—simply does not lend itself to quantification (Barker et al., 2002).

A Layered, Multicultural Emphasis

It is important to call attention to the composition of my sample population as it pertains to the values of phenomenological research, posited within both a cultural and historical context. Each of the ten subjects constitutes as a member of the non-dominant discourse along at least one cultural dimension, be it ethnicity, gender, sexual orientation, socioeconomic status, disability, age, religion, nationality, or indigenous heritage. Those hailing from the dominant cultural discourse (European, Western, heterosexual, masculine, Judeo-Christian, young, abled, American, moderately wealthy citizens) determine the nature, content, and amplitude of the discussions we have as a society. These discussions are perpetuated by the media, which has notoriously omitted the voices, images, and perspectives of those who are culturally marginalized. Historically speaking, these members of society have been effectively silenced, barred from contributing to the dynamic cultural dialogues that shape our present and determine our society's future. This applies to the ten dancers studied: these individuals do not navigate life from the position of privilege, and have therefore been denied critical opportunities to identify reflections of themselves and their worldviews in the majority-sponsored media. Well-endowed with an artistic capacity to cope, as well as a beautifully expressive language of their own, these non-dominant dancers have thrived in the face of omission and oppression. Yet it is the belief of this researcher that simply to survive and thrive is not good enough; these artists have a valuable voice that deserves to be heard as well as a

powerful message to be disseminated. To acknowledge and honor the multiplicity of realities propagated by phenomenological research is to exact social justice to those who have been denied intrinsic rights as a citizen to fully participate in collective culture.

In this chapter, I will delineate my research process. Rationale for the process by which my participants have been accessed, selected, and secured will be discussed, as will the methods employed to gather and analyze my data. My role as researcher, and the implications of my personal history on the quality and range of data obtained, will be specified. Finally, conceivable ethical considerations will be appropriately addressed and the limitations of this chosen methodology will be given attention.

Participants

Inspiration for this proposed study emanates directly from the personal perspectives, experiences, and relationships acquired throughout my lifetime pursuit of professional dance, an endeavor spanning cities as diverse as Madrid, Ann Arbor, Kansas City, Melbourne, New York, and currently, Los Angeles. At this point in history, the global dance community functions intimately. Due to the nature of contemporary social media, as well as the geographic mobility of professional dancers, the dissemination of dance images and accompanying identities is vast, frequent, and as immediate as an internet download. A professional dance lifestyle in the commercial or contemporary realm is fueled by collaboration, working relationships, competition, affiliation, and apprenticeship. The nature of this lifestyle keeps these artists in close proximity to one another, participating in each other's lives, be it voluntarily or not, active or vicarious.

Bearing witness to trajectories of personal, professional, and creative development of my fellow dancers has created the impetus to study the phenomenon in question.

While the extraordinary life stories of a handful of professional dancers provided the initial spark to pursue this research question, other potential subjects easily came to mind. These prospective participants were recruited from within the tightly knit network of professional dancers currently based in the undisputed epicenter of the commercial dance world: Los Angeles, California. Commercial dance jobs emanate directly from the entertainment industry, centering on tour, film, live performance, and other sources of commercial media, most of which is conceptualized, created, and booked in Los Angeles. Dancers hailing from all parts of the world and from a broad spectrum of backgrounds (including both formal and informal dance training) descend upon Los Angeles to train, build vital relationships with choreographers, and ultimately obtain representation to initiate a professional career in dance. The composition of the professional dance community in Los Angeles, therefore, constitutes as one of the most diverse in the world. This study's imperative to highlight the perspectives of a culturally diverse array of dancers has been greatly facilitated by the vastly heterogeneous nature of this particular community.

Sampling Method

Considering researcher familiarity with the phenomenon and insider access to the insular community of professional dancers, purposeful sampling was deemed the most appropriate means of selecting my participants. Purposeful sampling, also referred to as purposive or judgment sampling, yields rich, in-depth information about a given

phenomenon, and is frequently employed in qualitative research design (Bloomberg & Volpe, 2012; Patton, 2001). Embedded in this sampling approach are the values of the research design: the intent of this research is to glean vibrant, relevant accounts of the lived experience of achieving integration through dance, in service of achieving unique insights and understanding. Purposeful sampling of participants was integral to targeting those whose personal experiences actually align with this phenomenon. This approach employs specific inclusion criteria, but the researcher's judgment is also integral to the selection process (Barker, Pistrang, & Elliot, 2002). When considering the variety of potential purposeful sampling strategies available, the most appropriate strategy for the objectives of this inquiry appeared to be intensity sampling, where information-rich cases are highly desirable and chosen on their ability to "manifest the phenomenon intensely, but not extremely" (Bloomberg & Volpe, 2012). Rich accounts of a diverse sample of dancers were sought in order to capture a true picture of that which might be a common phenomenon amongst those who hail from adversity and choose dance as a profession: achievement of integration.

As mentioned above, of great importance when considering composition of the prospective participant pool is the issue of cultural diversity. As an organizing principle, it was an objective of this research to select a range of dancers representative of a wide spectrum of various cultural dimensions, including ethnicity, socioeconomic status, gender, sexual orientation, nationality, age, religion, and ability. Additionally, participants were purposefully selected on the basis they have endorsed a history of childhood adversity or developmental trauma, ranging from physical abuse, sexual violence, significant mental illness of a parent or sibling, systemic trauma imposed by

chronic poverty and institutionalized racism. This remains an explicit focus, first and foremost, due to the general disinclusion of diverse voices from the literature on dance with respect to psychological well-being. Furthermore, research on dancers should cast the cultural net wide, as cultural diversity is a defining feature of the contemporary arts scene. It has been my strong desire to encapsulate vibrant insights afforded by addressing this spectrum of perspectives pertaining to dance as an integrating function.

Beyond selecting a diverse array of individuals, inclusion criteria remained minimal: those included must be at least 21 years old and live, or be based, in Los Angeles. Dancers must be based in Los Angeles for two reasons: so that face-to-face interviews could be conducted using video-elicited interviewing techniques, and because Los Angeles is an especially relevant environmental backdrop with respect to the professional dance community. A final stipulation is that the dancers included identify the length of their dance history, whether formally- or informally-trained, as at least ten years' duration. Minimum age and length of dance history requirements were imposed in order to allow enough time for the dancer's adequate identity development, especially with respect to dance. Dancers who choose to pursue a professional career in the arts typically train from a very young age, enabling the progression through several stages of identity development, both as an individual and as a dancer, but often intertwined. Minimums were established with this process in mind.

Polkinghorne (1989) establishes the ideal sample size for qualitative research as five to 25 participants (Creswell, 2013). Based on this recommendation, ten dancers who fulfill the aforementioned requirements were recruited from my network of professional dance relationships, all fostered throughout a long-term career in dance. These

individuals received a personal invitation, via phone call, to participate in this study. Each of these dancers remains active in the commercial dance scene in Los Angeles, and each has enjoyed a certain degree of professional success as a direct function of their hard work, artistic sensibility, and innate talent. Each dancer has a unique story to reveal, a life narrative bound by the discipline of dance and the imperative to move. This type of life calling, conjured through years of discipline, labors of love, and intermittent trials and triumphs, sculpts the dancer in a very particular way, while at the same time moving him/her towards a true state of integration. This research aimed to give voice and shape to these unique processes of earned integration, translated from the first language favored by these individuals: the self-expressionism of dance.

Information Needed to Answer the Research Question

Loosely structured clinical interviews, guided by an iterative questioning process paired with dance videos selected by the participants themselves, were employed to gather data throughout this study. While open-ended in its scope of inquiry, this study required several categorical parameters to focus the information-gathering process. Domains of information that were required to address the research question at hand can be considered via four categories: contextual, demographic, perceptual, and theoretical.

Contextual

Behaviors and worldviews must be considered with respect to the circumscribing culture from within which they arise. As mentioned earlier in the chapter, the site of this study alone provides us with an important backdrop against which to understand the perspectives of participants. Los Angeles constitutes the definitive competitive arena for

dancers pursuing a professional career. The aesthetics, values, ambitions, and needs of the wider entertainment industry strongly influence those of the individual who seeks to work within it. Regardless of whether the dancer under consideration currently resides in Los Angeles or is merely based there while on tour, the influence of Hollywood and its accouterments is all encompassing. Dancers in Los Angeles, by virtue of their decision to live, train, and compete for jobs within this particular city and the unique pressures/benefits it affords, can be understood as culturally distinct from dancers in New York, Tokyo, San Francisco, Paris, and Mexico City. To the intimately familiar eye, Los Angeles dance culture has unique choreography, freestyle, fashion style, language, attitudes, values, and purpose. The flavors of this specific culture, in turn, provide the observer with indispensable information about the wider, dominant culture within which it exists.

As dancers in Los Angeles tend to hail from elsewhere geographically, and represent a diverse array of cultural dimensions, it is important to highlight both the unifying elements of worldviews as well as those that stand apart from the collective. Dancers arrive at a professional lifestyle via a multiplicity of possible pathways. Some hail from highly-structured dance studio backgrounds, dancing multiple hours after school from age six onwards, their bodies sculpted from countless hours at the ballet barre, fitted in tap shoes, or otherwise hurling themselves across the dance studio space. Emerging into adulthood, these dancers might develop against the creative confines imposed by rigid dance training as one matures into an adult artist with distinct style. Others fall into a career in dance after honing their artistic sensibilities in the street, discovering their own discipline without the requisite financial resources or four-walled

restriction of the aforementioned dance studio upbringing. The environment within which the dancer developed their creative and professional identities provides the filter through which they experience their contemporary life in Los Angeles. The same exact dance class, attended by both the studio-trained dancer and the street dancer, will be experienced, navigated, and processed in dramatically different ways. These experiences, over time, continue to shape the individual with unique force and direction. Furthermore, the constructive benefits of dance for the dancer, in terms of integration, are applied, gleaned, and accessed with respect to one's personal history, juxtaposed to their current worldview. These forces act on one another reciprocally, reflexively, and in a non-linear fashion. Insight into such contextual and historical information is provided by the participant's descriptions of personal narrative, the environments within which they developed, the formative dance-related experiences that have molded their sensibilities, and the ways they experience their wider contemporary world.

Demographic

As cultural diversity is an explicit emphasis of this study, demographic information of each participant is important to consider alongside the themes that emerge from the data. The following categories of demographic information were asked of each interviewee: age, gender, ethnicity, religion, sexual orientation, disability (mental or physical), educational history, type of dance environment within which training occurred, socioeconomic status (family-of-origin and current) and source of income, national origin, and indigenous heritage. While many aspects of the individual culture are overtly and compulsively disclosed – gender and ethnicity being two of the most obvious – others are not readily inferred by merely observing the individual. It was very important

for the purposes of this research for participants to identify, in their own words, the categories of culture to which they subscribe and belong. These cultural facets of the dancer are understood as indispensable to the manner in which they have developed as an individual, especially when considering the influence of adversity created by any discrepancies between one's own culture and that of the dominant discourse.

This information was collected via a personal data sheet provided at the time of interviewing, with the assurance that all information will be maintained anonymously. Such anonymity was ensured by transcribing demographic information for each participant to a separate document, coded with a pseudonym in lieu of the participant's actual name. Subsequently, the de-identified data was represented in the written outcome of the research to maintain confidentiality.

Perceptual

At the heart of this study is the pursuit of participant's perceptions. In what ways, if any, do they feel that dance constitutes an explicitly integrating force in their lives, contributing directly or indirectly to an overall sense of well-being? Interviews explicitly focused on the unique perceptions of participants across a lifetime, culminating into the current portrait of self. What is the lived, and therefore subjective, experience of this process of identity construction and strengthening? What is the experience of earning a sense of self, and in finding one's place in the surrounding world? Salient memories and decisive moments involving the intersection of life process and dance were anticipated to be integral in describing these perceptions. Furthermore, perspectives of participants were assumed to be malleable with respect to changing dimensions of culture and environment. It was important to inquire about ways in which these perspectives have

changed over time and how such views influence the individual. The process by which one's life world is construed is dynamic, reiterative, and emergent.

Aligned with the philosophy of qualitative research, the unique perspectives of the individual were sought in pursuit of highlighting, and understanding, multiple truths: this approach effectively rejects the positivist belief in a single, discoverable, universal "Truth." The perceptual domain of information, therefore, is the most integral to the objectives of this qualitative research.

Theoretical

The proposed inquiry into the lived experience of achieving integration through dance is heavily informed by an expanding body of knowledge spanning several disciplines. Literature substantiating the reciprocal relationship between body and mind constitutes the core inspiration for this present study, including empirical and theoretical writings on somatic psychology and psychoneuroimmunology. The powerfully therapeutic benefits of creative movement, with respect to addressing trauma, may provide insight foundational to understanding the unique capacities of dance to transcend adversity and foster resilience. A historical wealth of literature on attachment theory, coupled with more recent developments in the field of affective neuroscience, feed modern understandings of interpersonal neurobiology, also of importance to this study.

While this author anticipated these particular domains of theoretical knowledge would be integral to the interpretation of data obtained, it remained possible that other areas of research might emerge alongside unexpected material that might transpire throughout the interview process. It was, therefore, important to hold space for such

peripheral themes and bodies of knowledge relevant to the participants' perspectives as they were divulged.

Data Collection

A valuable property of qualitative research can be found in the ability to mine participants for context-rich, textured personal accounts with respect to the given research question. In order to obtain detailed, nuanced understanding of an individual's perspective, many qualitative studies employ participant interviews as the main data collection modality. A researcher utilizing interviews can structure them to an appropriate degree best suited to the objectives of research, and has the freedom to conduct interviews in their natural setting (Bloomberg & Volpe, 2012). Unencumbered by rigid, preset protocol, such latitude within the interview format ultimately allows descriptions of complex interactions and processes to organically emerge from the data.

In service of investigating the personal experience of the process of integration, this study employed interviewing techniques to elicit and reign in sufficient information to sculpt textured depictions of each participant's experience, as well as to highlight nuances in the dance culture that contribute to the experience of integration. These interviews have been viewed as an iterative process, and the types of follow-up questions asked reflected a conversational cadence, allowing for unanticipated themes to emerge that were not prompted by original interview questions. Therefore, semi-structured interviews building upon a loose matrix of preset questions were employed as a skeleton, allowing a more divergent, detailed response set to transpire.

Interview questions were formulated with the objective of satisfying this author's specific research questions. Both intrapersonal and interpersonal manifestations of integration were of interest, therefore the inclusive questions were asked with the intention to draw out perspectives, or experiences, that pertain to such manifestations. Considering that the process of integration unfurls over a period of time within one's life, interview questions attempted to speak to a participant's life history, encouraging participants to derive and articulate meaning from their own memories (Bloomberg & Volpe, 2012). These questions aimed to elicit for analysis an autobiographical context to an individual's process of integration, as understood with respect to the influence of dance in his or her life. A list of skeleton questions used can be found in Appendix A of this study.

Arts-based inquiry

Annexed to the semi-structured interview was a video component derived from the principles of arts-based inquiry. A postmodern form of qualitative inquiry, arts-based inquiry aligns the research with contemporary social justice principles, valuing a multiplicity of truths, especially those of individuals who have traditionally been excluded from the dominant discourse (e.g. marginalized populations) (Denzin, 2000; Finley, 2008). "In the context of activism, what is called or is expressive research that portrays the multidimensionality of human life as compared with truth finding, proofs, and conclusivity in traditional social science" (Finley, 2008, p. 683). Adding art to the process of inquiry, therefore, is a political act, setting this research apart from a positivist

agenda of quantitative research, and accommodating the interview process to the native tongue of the participants (creative expression).

In his discussion of the benefits of arts-based inquiry, Harper (2008) highlights the unique ability of imagery to “stimulate memories that word-based interviewing (does) not” (p. 757). For this reason, and those considered above, video-elicited interviewing was utilized, devised to gain access to aspects of participant’s subjective experiences further removed from conscious awareness and not readily retrieved by verbal formats alone. Upon contact to schedule an interview, participants were asked simply to select a video clip of themselves dancing that best captures the essence of who they know themselves to be. No further specifications were imposed on the video selection, save for that the video involve them dancing and must be under ten minutes duration. As many dancers have ample video clips of themselves dancing, whether in class, rehearsal, performance, or socially, it was anticipated that the process of selecting a video will serve two main functions: first, as an exercise in attunement with oneself, allowing the dancer to refamiliarize him- or herself with autobiographical material connecting to a wealth of personal memories, and secondly, as a priming function to prepare the individual to articulate the role of dance in their personal development and integration of self.

Interview setting

Interviews were conducted within a setting intimately familiar to the ten purposively sampled participants: a professional dance studio in Hollywood utilized by many top choreographers for class and rehearsal space, with proximity to agencies, soundstages, and film studios vital to the entertainment industry. This particular dance

studio has several floors, each containing multiple dance spaces that are available to rent by the hour. It was a natural and conscious decision to hold interviews in this particular studio, as for many working dancers in Los Angeles, it is the space where they have spent the most amount of time training and rehearsing. As the interest of this study lies in the mechanisms of integration relative to dance, it is the studio dance floor that provides the foundation upon which the self is constructed, and the wall-to-wall mirrors, the opportunity for introspection and reflection. Privacy was maintained by booking a smaller studio space during non-peak class times, and by closing window blinds to prohibit observation by others.

Data storage

Interviews were recorded with a digital video recorder, which constituted the initial source of raw data. Footage was then transferred to an external hard drive, and all raw data subsequently stored in a locked, secure file cabinet. Once transferred to the hard drive, footage was deleted from the video recorder. The researcher proceeded to transcribe the interviews verbatim into separate text documents titled by participant pseudonym mentally-stored by the researcher, rendering participants' identities anonymous. These precautions were followed meticulously to protect the personal information of participants and ensure overall confidentiality.

Bracketing and the role of the researcher's experience

An important component relevant to the interviewing process is the role of the researcher's own experience as a dancer. This is a commonality that exists between the

researcher and all participants, fostering inspiration for the study at hand and creating access to the participant pool (professional dancers). However, intimate familiarity with this shared vantage point could create a bias within the interviewing process, subtly shading the types of questions asked (or avoided), or decisions made by the interviewer. As a safeguard against such a bias, it has been necessary to *bracket* the personal experiences, attitudes, and perspectives of the researcher throughout recruitment, interview, and data analysis portions of the study. Thus, bracketing refers to the process by which personal biases are explicitly acknowledged, exposed, and set aside. LeVasseur (2003) proposes a refined definition of bracketing, suggesting that the process involves “suspending our understandings in a reflective move that cultivates curiosity” (as cited in Creswell, 2013, p. 83). This concept is very pertinent to this study, as all participants have been acquired via personal relationships carried throughout the researcher’s lifetime involved in dance and some of the experiences described by participants could potentially be shared with the researcher as well. Shared experiences, however, certainly do not mean shared interpretations of such experiences, and bracketing has been employed to buffer against the researcher engaging in an automatic, heuristical meaning-making process. Bracketing, therefore, acknowledges and accepts the lenses that shape the interviewing process, and allow for the perspectives of the participants to exist in juxtaposition to those of the researcher. A personal research journal, separate from data collection materials, has been maintained by the researcher throughout the data collection process to ensure continuous self-assessment and vigilant self-awareness. These elements of research are implemented to minimize unacknowledged researcher bias and to more

clearly parse out those perspectives that belong to the researcher from those that belong to participants.

Data Analysis

The pursuit of phenomenologically analyzing data, to fit within the conceptual framework of this qualitative study, is an inherently creative process. Irreducible to a rigid set of predetermined, predictable steps, this process has been likened to an “attitude, an investigative posture with a certain set of goals” (Keen, 1975, p. 41). This approach is crucial to qualitative research, so as not to compromise the integrity of the phenomenon (Hycner, 1985). Phenomenological research values the iterative processes of the construction of knowledge via personal accounts by those who experience a given phenomenon. The methodological elements of this knowledge quest must therefore follow suit, honoring the cadence of an iterative process, one which continually builds upon itself as it unfurls. The same holds true for data analysis procedures.

As mentioned above, data was collected via audio-recorded interviews, following a semi-structured interview schedule that involves arts-based inquiry (a personal video selected by each participant). Field notes were taken to capture nonverbal communications of participants, including tone, posture, emotional reactions, and body language. Considering the broad range of body motion and heightened expressivity of the participant pool (dancers), significant non-verbal gestures and paralinguistic communications were be coded in addition to verbal responses. Verbatim transcripts of the interviews contain these additional field notes. Individual transcripts of each interview – containing verbatim verbal exchanges as well as non-verbal/gestural

communications – were created by the researcher and entitled by each respective participant pseudonym. Transcripts were then hand-coded line by line. Codes were created and assigned with conscious juxtaposition to the conceptual framework of this study, which sought to understand the subjective experiences of the participants. From these codes, units of meaning emerged, ultimately providing the basis for broad, collective themes to materialize. According to the constructivist viewpoint that informs this research, meanings transpired as a direct function of the researcher’s receptivity to them, requiring a conscious openness to perceiving meanings that are not intrinsic to one’s own. Researcher’s subjectivity, therefore, needed to be acknowledged and masked off in order to attempt to understand the worldview of the participant. Known as *bracketing* the experiences of the researcher, this process rejects the possibility of researcher “objectivity” in favor of explicitly acknowledging the nonlinear, reciprocal influence of researcher and participant worldviews.

As a means of minimizing potential biases imposed by the subjective worldview of the researcher, two colleagues were utilized in order to corroborate coding and interpretation decisions made by the researcher. Triangulating other professionals into the analysis process to review the codes derived and assigned, as well as the units of meaning deduced from the data, constituted an important safeguard to ensuring accuracy throughout the analysis process. Once data had been coded and analyzed, “member checks” were conducted with the participants on an individual basis in order to review interpretations that have been extrapolated and ensure accuracy and increase validity with respect to the participant’s views (Bloomberg & Volpe, 2012, 110).

Treating data analysis as an iterative process, consciously bracketing the attitudes and worldview of the researcher, and employing both participants and trusted colleagues to corroborate codes and interpretations extracted from the data, were all employed to ensure this study achieves an optimal degree of validity.

Ethical Considerations

Of critical importance was anticipating the manner by which this study could potentially harm its human participants. Three main domains of risk were identified by the researcher: informed consent and clarifying confidentiality issues, the potential activation of trauma-related memories throughout data collection, and the role of cultural differences in accurate interpretation. Through identification of these issues, the researcher sought to avoid any harm to participants, protecting both the rights and well being of these individuals and upholding our profession's governing Hippocratic oath.

To clearly articulate the terms of participation in this study, informed consent was obtained from each participant during initial contact. Thorough informed consent, initiated by way of both a written document using clear language as well as an ongoing dialogic exchange between participants and researcher delineated the limits of confidentiality, the risks inherent in participation, the manner by which individuals' personal information would be securely handled and stored, and the objectives of this research. Sufficient informed consent helped to instill a sense of security and trust in the participant that his/her personal information will not be linkable to his/her identity, as well as to clarify the terms and limits of confidentiality. Throughout the data collection and coding phases, participant data was decoupled from any identifying features by use

of a matrix, assigning a numeric code to each participant in lieu of their names. While video clips were collected from each participant to be used within their own interview, these videos are not included in the published dissertation and participants were assured via the informed consent process that they will be kept private. These videos are stored on a thumb drive and remain stored in a locked cabinet. Accessible solely to the researcher, *all* remaining data (in digitalized audio, text, and video formats) will be securely stored on an external hard drive, in a locked cabinet for seven years per current IRB standards. Data and identifying codes are stored in two separate areas. These precautionary measures will be taken to protect participant's information and ensure the integrity of the research.

The interview format was designed to address formative life experiences of participants as they pertain to dance and one's sense of self. These questions naturally elicited emotionally-charged, sensitive material from these individuals, including private disclosures involving information about one's family of origin, partners, or other identifiable individuals. Such personal accounts depicted challenging life experiences, including mental illness, drug use, violence, physical or sexual abuse, neglect, lack of resources, and/or discrimination, to name a few. It was therefore essential that participants feel safe to discuss such matters within the secure context of ensured confidentiality and anonymity, as covered in the informed consent process and in the handling of data. Additionally, the process of recanting personal memories could have conjured up intense, even overwhelming, emotional processes for participants, some of who might have been telling these stories for the first time to anyone outside of their family, or indeed anyone at all. In this instance, referrals for psychotherapeutic services

were made available to participants upon request to continue processing material invoked by interviews.

As participants were purposively selected with diverse cultural membership in mind, worldview differences between researcher and participant needed to be explicitly addressed to ensure valid interpretations. Unchecked, these differences might have guided the researcher away from congruency with the subjective worldview that the participant is attempting to articulate, resulting in interpretations of data more aligned with the researcher's worldview than that of the participant. Such incongruences, at best, would represent unfortunate misunderstandings and an opportunity lost; at worst, they would constitute further cultural oppression for an individual whose disclusion from the dominant discourse already stifles means of expression and amplification. Observations about and responses to such discrepancies were tracked by way of journaling throughout the research process to clarify which perspectives belong to whom. Two additional techniques were employed to negotiate these inevitable differences and minimize the influence of the researcher's own life world upon articulation of the phenomenon studied: bracketing the views of the researcher (who shares the perspective lens of "dancer" with the participants) and reviewing interpretations of data with participants.

Safety and privacy exist at the forefront of the ethical considerations accompanying this study. Research design and methods selected, including informed consent and storage arrangements, were expected to minimize the anticipated risks listed above. Unrelenting awareness and self-reflection on behalf of the researcher have been indispensable aspects of the research process in order to identify and field any additional, unexpected concerns should they arise.

Chapter 4 Results

From ten verbatim transcripts, 421 significant statements were extracted. From these significant statements, nine overarching themes were derived. Table 4.1 lists these themes, and the number of transcripts in which each theme appeared.

Theme 1: Self-Attunement as Primary. These dancers describe a process by which they experience, and rely upon, their refined sense of self-attunement to identify and respond to fluctuating internal states. This attunement to self is described as a “sensitivity”; a “presence with oneself”; a “responsiveness” to the physical and emotional body, and is also delineated as a guiding mechanism both within the realm of dance as well as negotiating internal and external worlds. In an artistically effective sense, this sensitivity produces a better dancer, who makes more intriguing creative choices as a direct result of his or her congruence of emotion: a dancer with a keen attunement to her dynamic emotional state can access and employ this emotionality, infusing the movement with creative expression that resonates with those participating and observing. Participants describe this as “channeling the emotional experience” behind the movement which helps them “move through” the emotion: without dance, one interviewee explains, “my emotional energies get inflated so much that I can’t function.” Dancers also emphasize the need for self-attunement as a compensatory antidote to personal compromises inherently made whenever working within the dance industry:

“This dance business ... has nothing to do with art. Our business ... our business is ‘Take our art, and then figure out how you can manipulate it for somebody else’ ... in every aspect. So we kinda lose ourselves completely, because we’re just a canvas. It’s a completely different art form, it’s learning how to not be an artist but to just be a canvas. Even though we have ... this canvas is full of so many colors already, but that’s kinda

what we stand there for: to pull those colors out. I've had to negotiate this with my need to be an artist, express myself.”

They speak of the cognitive dissonance – “the dark side of what we do” –created when conducting an externally-imposed vision that feels inauthentic to one’s own experience, specifically the tension that exists within the juxtaposition of the art of dance versus the industry of dance. One dancer describes how, once he began dancing as his profession:

“From there, the dancing really became an actual source of anxiety for me. From the (perspective of the job), I just really didn't understand dance or the world around me. I think (that tour) sort of made me lose my emotional outlet for some time, the dancing was so boring and repetitive without creativity.”

Self-attunement creates a protective bubble within which the dancer can endure rejection when pursuing dance industry jobs, in addition to acknowledging the self while executing someone else’s creative vision. “When I dance for my own self-worth and creativity, I feel so much better ... And for the periods of time when I wasn’t dancing this way (e.g. for a job), my emotional processing is essentially nothing, so I’m depressed.” These veterans of the dance industry speak of the purity of returning to dance class, time and time again, to reap the benefits of focusing solely on the self, on delving into the movement without the pressures of choreographing or performing for anyone else: the intrinsic pleasure of “just being able to focus on yourself and not being responsible for generating something” fosters introspection and a healthy self-centeredness.

Self-attunement also applies to a dancer’s awareness of—and responsiveness to—changing physical states over time. One participant, at 35 years old, laughs as he says, “old is now.” Movements exacted with the ferocity and power of youth must be tailored appropriately to a dynamic physical vessel as it ages. Many participants attribute the longevity of their career thus far to a keen responsiveness to their own physical body’s

changing needs with time: “Obviously I want to keep dancing forever, until I literally can’t anymore. So I make the necessary changes as time goes on.” Another asks himself, “How can I get my body to keep going through all of this? I think modification has to occur... Okay, if I want to dance until I’m 80, I’m not going to be able to do jetés and splits, so I’ll have to find a new way of moving that’s better on the joints, on the body.” As one dancer states, “I’m a prime believer that the body sustains as long as you want it to, based upon the knowledge that you have about it.” Self-knowledge, awareness, adaptability, and compensatory behaviors are all key in achieving longevity in life as a dancer. Participants positively reframe injury as opportunity – “I always say to anybody that gets injured, it’s really an opportunity to create change, and it’s an opportunity for you to really learn what you need to do to make yourself stronger.”

Subtheme 1: The Importance of Balance. When cultivating movement, physical balance is essential in order to refine technique, cultivate control, and accurately channel expression. As dance inculcates tremendous discipline in the dancer—to acquire technique, endure physical discomfort, and constantly refine the self (discussed in Theme 3)—these dancers acknowledge the importance of knowing how to temper this discipline on both physical and emotional levels. Several participants speak wistfully about the experience of getting stuck in a distressing mental loop of constant comparison, self-criticism, and negative appraisal as a consequence of this same constant self-refinement process that helps to refine technical prowess. One dancer describes this as:

“the internal discomfort, of seeing a place that you want to get to and not reaching it yet, or trying so hard and feeling like you’re chasing this ever-moving point of getting better and better. It’s self-torture, self-inflicted, as in, ‘That was bad! Do it again! You know you’re not good enough, try again!’ You know, that self-comparison. You literally stand in front of a mirror all the time.”

When unchecked, this incessant evaluation can be a force of disintegration, a source of dismantling of the self. One participant speaks of dance as having “no final arrival point... the understanding that one can always be better.” This dancer, and others, articulate the struggle that exists when trying to displace the external validation, earned from teachers and choreographers and those who will ultimately hire or fire you, to an internally-generated sense of validation and acceptance:

“And I just hope that people can be gentle with themselves... I feel that I’m going to get emotional (he starts to tear up) ... Because I’m always looking for a way to encourage people to be nicer to themselves ... And I feel like I wasn’t, you know? And that sucks because it’s already so hard as a dancer, and to be that negative voice always telling yourself that you’re not enough it makes it almost impossible, you know ...? And it’s so funny, because in classes, I’m always telling these kids, ‘You can do it! You can do it!’ And I’m like a cheerleader .. But for some reason, I can’t do that to myself.”

Another participant speaks of how she is constantly seeking balance between reaching for perfection on one hand, yet knowing that this platonic ideal is actually impossible: “this self-comparison can become really unhealthy if it becomes out of balance, if you focus too much on the area of deficit.” Mechanisms referenced by dancers that help the developing dancer attain this balance include exposure to sensitive teachers that can model self-acceptance (“being a teacher of dance ... having that consciousness of, what we’re transmuting to young people, not only through movement but through words, is very, very important.”), positive role models that engender a sense of humor in the training process, and an emphasis on a playful mindset built into learning (“I’ve learned that it’s okay to be bad! Looseness of self, rather than [makes gunshot gesture to the head] is a more productive stance.”). Self-acceptance for where one is at, technique- or performance or career-wise, helps cultivate a sense of, “That’s okay (if it’s not perfect), just practice! ... Having a looseness of self,” which tempers the often-unreasonable quest for perfection many dancers describe. Several interviewees cite

specific dance mentors as templates for modeling this balance for them, so that they could ultimately do the same for themselves and adopt this stance while in mentorship roles themselves, a type of “paying it forward” process: “Rich and Tone [choreographers] told me that I have a lot of heart . . . I think that’s how other people see me, because I will nurture people if I can. I will help you out until you get it, whatever is needed. People did that for me, and now I wanna do it for others . . . The reason why I am a dancer, and the reason why I’m an educator, is really because of her [Lisa, his childhood dance teacher] first and foremost.”

Theme 2: A Means to Build Confidence, Engender Agency. Most participants explicitly cite their formative years spent within a dance environment—whether structured or street—as integral to cultivating their sense of confidence and positive self-concept. “Dance gave me a lot more confidence”; “I’m extremely socially awkward . . . I used to never go out, now that part is much easier because of how dance just brings you in touch with so many different people . . . you’re constantly interacting with others on multiple levels.” Concurrently, these individuals cite this growth-promoting context as standing in stark contrast to the deficits that characterized their home and/or academic environments: “I wasn’t really interested in school or other sports. Having outside validation (in the dance studio) was a huge confidence booster, because it helped me grow . . . I felt confident enough to be challenged to make myself better, and so I would be better.” Another dancer cites the encouraging reflections experienced within dance spaces as the only source of positive validation for him: “. . . the feeling of being alien because I was gay, and coming from a large family where I felt a bit looked over and ignored was only

really mitigated by dancing. There at least I could push ‘conventional’ boundaries in a safe way, and to be honest I didn't even really know I was pushing them.” Exploring dance under the watchful guidance of teachers or older role models helped participants experience positive validation of self and emotional containment: “My parents really paid little attention to this sphere of life and really had no clue what was going on with it and so it was my place away. And in many ways not just the dancing but actually Brian and Beth [the teachers] played major roles in developing my attitude about everything, shaping me and guiding me.” One participant, who experienced cultural marginalization growing up gay-identified in an insular town, explained, “I was good at it (dance) and was getting praise, and so it just kind of like ... worked. And built me up in a way I wasn't getting elsewhere in the family, and from the surrounding community at all ... I was always a loner kid.” Many participants felt lost at school—or, alternatively, understimulated or unmotivated—and yet excelled in dance class or in competitions. This allows one the experience of feeling competent and masterful, having a mechanism to propel one forward in life, as one participant explains, “to help me grow, because then I would feel confident enough to be challenged to make myself better, and so I would be better.”

For some, participation and excellence in dance drew caregivers in closer and provided the means by which they could experience proud, supportive parents; “Those are the moments that he [his emotionally detached father] was proud because I think that other people showed him that... he didn't realize how good I was until other people would praise me, or I was there and I was winning, so I think he kind of took note like, ‘Aha!’” For others, the competitive environment of dance sparked motivation to work

hard, make progress, and reap the benefits of achieving goals via a sense of agency: the value of “sticking to my guns, really seeing a product of my hard work is what dance has taught me.” Some describe dance environments as inoculating them against social anxiety or a tendency to isolate, withdraw from others, citing the realm of performance as a way of venturing out of one’s protective shell: “I’m extremely socially awkward. Dance has given me a lot more confidence.” Another dancer, hailing from a West Coast street crew dance background, speaks of the political agency that comes with finding one’s place in the wider cultural dialogue via his expressive dance style: “Krump [dance style] gives voice to the voiceless,” meaning personal empowerment, cleansing, and catharsis for those who are relegated to the margins of society. Without options for participation or meaningful expression, one dancer explains, individuals in underprivileged, or dangerous environments are threatened with the possibility of “sinking in” to the negativity and pitfalls surrounding them, informing them of what is and isn’t possible for their lifetime: “Without dance, there would’ve been more free time, more pitfalls, more trouble, more hard-learned lessons ... and less growth-promoting options.”

Subtheme 2: Freedom of Expansive Expression. Participants describe the importance of discovering, and employing, their unique, expressive voice via involvement in dance. Some focus on political agency that dance medium provides, by explaining how dance can be used to explore power dynamics – politics, queerness, gender, oppression, sexuality – and to create space to further a wider dialogue of inclusiveness, acceptance, and collectivism: “Hopefully the work I’m creating can make space and opportunities in the entertainment industry for Asian-American performers”; “...being exposed to Fred Astaire and Gene Kelly was a hugely pivotal point for me in

being able to be comfortable with my gender and my sexuality – as a male watching male dancers, it was amazing, they were huge inspirations.”; “(Our choreographic work) came out at a perfect time and we created that perfect time as well – it wasn’t being done, there was no one doing this punk rock choreography, at least not in LA by any means. We were ugly, we were queer, we were women, we were men, we were old, we were vulnerable, we were murderers, we were showgirls. We just had open reign on who we wanted to be, and that was liberating to say the least.” Another describes how the social contagion initiated when you discover and employ your voice within the context of dance, amongst others, creates space for others to do the same for themselves: “This happens when you perform, and through movement, you become transcendent ... It happens in class too ... and I feel that since I go there, naturally, that it’s permission for other people to go there.” Another dancer asks himself, “How can I release in a way that somebody else can understand it, or relate to it?” Unstructured movement, versus explicit choreography, offers unique benefits to locating and employing one’s voice; improvisational (“improv”) dance, or freestyling, is characterized by multiple participants as a means of “feel whatever it was that I wanted to feel, even if I couldn’t say or didn’t know how to say it.” In this sense, improv allows access to unspoken emotional content, giving the dancer ability to tap into the mainline of the unconscious and bypass the funneling of emotional experience into constrained verbal – or even pre-choreographed – expression. Discovering one’s voice, and amplifying it through creative movement, is acknowledged as indispensable to the articulation of the self: “Dance, in particular freestyle dance, has grown me wholeheartedly in everything that has helped me in my personal life.”

Theme 3: Discipline, Stamina, Physical and Emotional Pain Tolerance. Commitment to a dance career or lifestyle entails a tremendous amount of relentless work, as one develops and refines technical skill through repetition and stretches the body beyond typical range of motion, all the while weathering the emotional pitfalls of a hypercompetitive industry. Dancers discuss how early life encounters with dance engender a “fierce competitiveness” and discipline within them that they apply not only to the pursuit of dance, but to other pursuits along their life journey:

“It’s just empowering because now I have all these experiences stacked, that I’m carrying with me, of ‘I know I can do it.’ So I think it fuels, when you’re encountering challenging scenarios, it’s like, Oh I’ve done these things so maybe I can do those too ... I’ve succeeded.”

Developing stamina – both physical and emotional – is required to remain focused within the field of dance, as a few dancers touch on the endless process of refinement and competition: “There is always someone better than you, and you yourself can always be better.” Some speak of adaptively developing a sense of humor in the face of possible defeat, the ability to consciously reframe challenging situations into positively-framed prospects, and the cultivation of strong character as ancillary consequences of their dedication, hard work, and discipline. One dancer relays a humorous anecdote of how he coped with body-image insecurity during a major audition for a world tour with Jennifer Lopez:

“And then, in the final round they asked us to take off our shirts and do the combination. I knew I had no chance, body-wise, against these other dancers: they’re all chiseled, huge, and many of them have worked for her before. So I found a sharpie and drew on a 6-pack! When it came my turn, I got to watch J-Lo’s face erupt in a smile and she stood up and encouraged me as I danced, laughing along with the other judges. I’ll never forget that moment – I didn’t book the job, but I sure left an impression.”

The willingness to greet uncomfortable situations as they appear in life – in the realm of dance, or elsewhere—seemingly earns the dancer experiential wisdom and assurance:

“Now I know I can overcome certain things if I feel afraid of something or if I’m not comfortable.”

The event of injury is highly likely within the dancer’s lifetime. Therefore, many frame the event of injury as “opportunity”: a time to reflect, dream, and assess one’s position in relationship to one’s ultimate goals. One dancer describes a make-or-break time at the inception of her dance career, when she had to go home to Portland to recover from back surgery for four months:

“I had gone home and I had back surgery, so there was that four month span where I was at home and waiting, I think it was in the first part of the year, towards the end of that period, before I came back down here that Janet (Jackson) was doing ‘Damita Jo’ ... so she did all those performances on Saturday Night Live ... I just remember that summer prior, like, taking from Brian (Friedman, choreographer) at a convention, and him pulling me up onstage, and him being like, “Who are you?” And talking to me ... and then that summer taking classes at Edge, taking Gil’s (Duldano, Janet Jackson’s choreographer) class and taking Tovarish (Wilson, choreographer)... and Gil and Nick are in class – and Aminah – and then all of those people are in that performance. You know ... and I was kind of like, “I’m in there! I’m not with you guys, but I’m in here!” You know, that glimmer of just, “I can do this. I think I could do this.” So I was hurt, and I remember watching the SNL performances– It was just a very poignant feeling, a very clear feeling of, “I think I can – Not ‘I will’ because that would’ve been hard for me to do at that age – but, I can do this.” Just interesting once I think that internal self aligned those things how it came to fruition ... So that’s definitely a moment of confidence or recognition of “Ah!” – One thing that I wanted within it.”

Acceptance of pain that comes along with inhabiting a human body and pushing it to its physical limits comes with a self-conscious attitude of “Pain is good ... if it hurts, it’s a good thing, right?” As a result of this attitude – embracing pain – many dancers describe how they continue to persist and dance through injury, cultivating an offensive, versus defensive, relationship with fear: “A more integrated position, for me, is one of holding space for the fear, but not letting it govern your decisions – going forward with that consciousness of having to take care and not hurt myself again, but also not be fearful of

that.” For some, this process – training how to mindfully push through physical pain – also translates into pushing through emotional pain that comes with constantly facing rejection in a notoriously competitive dance industry: “Frequently experiencing rejection is one of the more painful aspects of dance”; “It’s a cool thing, only if you use the struggle for personal growth, and not to dwell on the negativity that they struggle gives you. Almost like, eat the meat and throw away the bones.” Whether one is raised in a formal dance studio or cultivate their dance skills via street styles, dancers develop within an interpersonal context of constant evaluation and comparison, which allows the chance to negotiate these evaluative voices: “(Criticism/judgment) is in your face, all around you ... so you can dial that concern for others’ evaluations of you down, as you dial up your own voice.” Pursuit of dance over many years, especially formative developmental stages, can therefore present many opportunities to greet and grapple with more uncomfortable emotional experiences, be it feelings of inadequacy, vulnerability, or threat of competition. Dancers acknowledge there is great value in willfully “practicing at” fear in order to mitigate, and thus potentially master it incrementally: “What I saw in (dancers in) Japan was this playful attitude, this willingness to try and it wasn’t such a big deal. That’s how I think those kids get masterful so quickly ... they don’t seem like they’re afraid to fail.” Proactivity and flexibility during these times is an integrative alternative to other, less-adaptive coping strategies such as avoidance, rigidity, or internalization. Having a sense of humor is cited as integral here: “I remember constantly thinking ... ‘What can I do to make light of this situation?’” The reward for taking a proactive coping stance in the face of distressing affect (e.g. fear, anger) is described by more than one participant as the acknowledgment that this process contains a character-

building mechanism, which can be applied to difficult life experiences overall: “The struggle is so beautiful. That’s what you learn out of it ... All that we went through ... built our character. It put us in a space to where if anything came our way, we would know how to balance it based upon what we had been through.”

Theme 4: Dance as Therapy. Overwhelmingly for most participants, “dance is my therapy.” Dance functions for many as a primary means of maintaining an ongoing dialogue with the self, a space to return to time and time again when needing to process difficult emotional experiences or achieve catharsis. Participants discuss bringing any and all issues to the dance studio, to the streets, to the stage in order to process them: struggling with familial rejection of one’s chosen sexuality (“Alone in my basement, dancing to Ani DiFranco, I felt so free.”), coping with childhood abuse and domestic violence (“Creating pieces ... [with creative partner from similar background] allowed me to express the violence of my childhood, to express things that were never explicitly spoken about directly.”), dealing with the rage of an impoverished and oppressed environment (lacking positive outlets in the wider environment: “expressing ourselves in that way to where we couldn’t really do it where we were living at.”), parental abandonment (“Now there’s no hatred there, no frustration, ... but I had those thoughts along the way. Krumping gave me that same result as if I was able to explain it all.”), substance abuse (creating work that reflects one’s experience of “this constant sense of unraveling and falling and getting back up” as a parallel to his relationship with his alcoholic mother), physical assault in adulthood (“After the mugging, all my creative energy was gone and I was just depressed ... creating dance videos that I felt drawn to do

it let me project the emotional chaos, eject the formless emptiness I was experiencing, so that I could engage with it and process it.”), rape (feeling genderless after rape, reconnecting with the body and reinstating intimacy/comfort with one’s body again), and systemic discrimination (“(Dance is) almost like a spiritual conversation. It’s almost like, we are all going through the same thing, just in different ways, and we are all coming together to let that all out and just keep going along the way.”).

For those dancers who have endured harsh or hostile environments, involvement in dance began as a pastime alternative to a more grim lifestyle which then evolved into a survival mechanism. “Flexin’ (dance style) is what kept us out of the riff-raff, honestly ... there was a whole lot of gangs, violence, and negativity where I grew up, and not much else.” Similarly, another participant explained what street dance did for himself, and other youth, in his neighborhood:

“The majority of the people in krumping come from one-parent households, in very underprivileged areas so krumping became something like a safe haven for people to not involve themselves in what is not good for them, in what they know is not good for them in the long run. I’m not sure what kept us, as krumpers, to be a part of that mindset, because there really was no example of what ‘if you do this, this is going to be better’ .. there wasn’t anybody telling us that there were many more options, but it was something that a lot of us knew, whether subconsciously or consciously, that this was going to be something way better for us than robbing, or stealing, or anything else, and those things are always in your face.”

Another describes his years-long struggle with addiction to crystal meth with respect to his relationship to dance: “I think dancing ... was keeping me alive. It was keeping me present even though I was high. It would bring me back.” One individual describes how he “used dance as a crutch for being a minority ... as a way for me to **not** feel like a minority ... because dance is such a minority culture that I immersed myself into it and became part of that majority within that minority ... Being gay is totally accepted there.”

Several dancers told stories of enduring significant loss via creating pieces to honor the death of a loved one, to anticipate and express a grief process:

“My grandfather was dying, I created a piece wishing him a smooth transition to death ... it was an offering to him, whether he knew it or not, so yea ... I think it’s a great ... conversation element that I would have with my life in order to understand and feel better about it, even though ... gosh how would I explain it? ... I mean, it’s a dialogue, but it’s more of a departure point ... more than an inner dialogue, but once you started creating and morphing it (challenge/grief) into an art, or a piece of art, that it changes the actual element that has been so challenging. It becomes something else, so it makes it a little bit easier to deal with, so not only are you associating it with what it is, but, ‘Oh I have this piece that is connected to this issue, and that brings me joy. ...’ So it’s a good bridge to addressing and feeling different about life’s traumas.”

However the struggle manifests, dance appears to provide the dancer with the opportunity to find and employ one’s voice, express and expel distressing internal processes, and to do so often within a supportive, containing interpersonal context.

Subtheme 4: Transcendence. Tangential to participants’ poignant descriptions of coping with adversity and trauma via dance, many describe the process by which they use dance to achieve transcendence. Some discuss this in terms of dance as “a moving meditation” – the “cleansing”, releasing properties of dance by which one can release negativity and discomfort. Dance is framed as a means to escape insecurity and combat the accompanying distress: “allowing you to let go of the negative dialogue and let it move through you.” Dance may be the means by which the dancer escapes the flawed, socially-constructed self: “All this time, I’ve been utilizing it [dance] as a way to remove myself from my own self and just be in a state of pure awareness.” One describes his experience of transcendence: of pushing the body to its limit, paired with music, observed by an audience within the context of performance and how:

“...it becomes this glossy, glazed sense that doesn’t feel physical; it’s too heightened, physically and emotionally, because you’re pushing so hard ... that it changes what it is and it becomes transcendence. This transcendence isn’t maintained, it’s released, and it affects other people in the

room. You let it go, and I think that's what people sometimes respond to, it's that they see someone transforming onstage."

Having dance allows the person to enter a different space, one without problems or adversity, and experience a range of positive emotions, including the cultivation of hope:

"Dance is therapy, and what that means to me is that for many times in my life, being younger – very young – being in high school, being an adult and going through hard times, breakups, really seriously challenging moments where I didn't have a community or I didn't have parental guidance and dealing with abuse issues and had no one to talk to ... Allowing myself to go to dance was my safe haven, and I would literally forget about anything that has happened to me."

Some participants discuss dance as indispensable to transcending and healing cultural trauma. The healing mechanism comes from authenticity of the movement expressed – externalizing anger and rage in the form of strong, aggressive movements, instead of silencing, swallowing or accepting the violence. "Once people started going through adulthood, and their mind started to develop to where you see how your parents are really living, you got a chance to see how your society really is ... those happy movements turned more to aggressive, stronger movements." When disquieting truths dawn upon the growing dancer as they mature, a dynamic relationship to one's body and to expressive movement affords a chance at expressing, processing, and releasing what might otherwise be devastating disillusionment. "I think of it as much more of a necessity for my personal well-being as opposed to something that was for leisure time, or a hangout. Dance was something I really needed. And is what I still need."

Theme 5: A Hunger for Other. Dance culture brings the dancer in constant contact with novelty – new cultural experiences, other artistic individuals bearing fresh perspectives, distant terrain spanning the globe, diverse dance styles that one can tuck and blend into one's own unique iterations: "Just getting to encounter more people that inspire me ... in

different styles, and being able to exchange with them.” Traveling for the sake of dance “broadens horizons” and “opens doors to perception” as experiencing new environments and cultures has a self-reflexive property of producing a more refined understanding of self. Many participants describe how the countless experiences of encountering difference have contributed to their personal growth and produced a better-articulated individual overall: ““It gives me a chance to feel my body in a new way, as opposed to the repetitious movements that you might have in a foundational freestyle ... opening up to new choreography, new styles, helps me realize, ‘Oh I can go up here, I can move over here, down here.’ I can still keep my base, but there’s no box you can put me in.” This understanding appears to undergird an ongoing interpersonal stance of approaching difference –and embracing the Other—as a means of furthering personal evolution and artistic growth. This yields the additional benefit of reducing anxiety when encountering newness or Other – be it new skills to be mastered (e.g. contact partnering improvisation for a more structured, individualistic dancer), experiences that might otherwise be anxiety-provoking (high intensity performance; new work environments), or individuals from unfamiliar cultures. Engaging with unfamiliar Others is described as intrinsically rewarding, a way to fuel creativity and add vocabulary to one’s expressive language by “... just getting to encounter more people that inspire me, in different styles and being able to exchange with them.” Allowing oneself to be affected by exchange with others may produce a unique, adaptive individual: “I find myself everywhere, in a lot of different communities. I think that weaves a unique insight to dance and then also to who I am.”

As a result of seeking out novel social and creative situations, dancers describe an enhanced interpersonal agility they possess and value. This includes placing importance on “emotionally-based connections” to others, approaching new situations with humility and gratitude so as to optimize outcomes for all those involved:

“When I’m trying to enter a new community, in order to do it well, I must assess first .. my job is not to immediately voice my opinion or identity right away, because I don’t think that’s the best way to communicate with someone who has set up that environment.”

Some describe their own experiences of identifying as Other, and therefore consciously approach others with inclusiveness and openness: “I fit in nowhere and everywhere at the same time ... I fit in with everyone, I always was that person that gelled between everyone, and I still think that’s the case.” Dancers identify as constantly attuned to those around them. Dance produces masterful sculptors of nonverbal communication as a means by which they effectively engage with others: “Body language is huge – what you feel from people, how they hold themselves.” Many speak of savoring the nuances of communication, by which they can deepen existing relationships and connect broadly to others whom they encounter along their journey. One dancer articulates the role of dance in her relationships as:

“It plays the heaviest hand in my closest relationships, because they’re all people I’ve met through dance, but that is not our only language ... There are a lot of people that are friends, and we align on this plane of dance and that will immediately connect you. Sharing a physical experience or moment through movement: it weaves you together in a way that other experiences might not, so that already is such a strong bond ... It truly is an unsaid language, not only in what we’re doing because very rarely do you speak (in dance) but, how I come to understand you by how you move, even through your normal day ... it’s such a beautiful dialogue.”

Theme 6: Awareness of Self Via Sociocultural Context. Tangential to the dancer’s quest for encountering difference is an awareness of the socially-constructed self. Many dancers provide sociocultural, historical contexts as a way of explaining their current

understanding of self: describing dance as “in my lineage to express”; “My (Peruvian) culture - the different types of salsa and African-based movements – is why dance came so easily to me”; “the city inspires my work ... every time I look at the landscape, I see something different.” One dancer cites the influence of original voguing culture in his hometown of NYC as integral to illuminating directions his career could possibly take, as well as informing much of his choreography, “I saw that these are my people, I was moved by their heroic brilliance. It was so powerful, so unprecedented. I connected to that struggle and that feeling.” Several participants explicitly describe an understanding of selfhood as cumulative: “I am the result of all my experiences, all that I’ve been through, that I’ve known.” They acknowledge a gratitude for the influences that have shaped them as well as a willingness to be shaped by those they encounter – either by choice or chance. “We are social creatures”; “Just the coming-togetherness of dance is really special.” Whether described as “just in us (family/bloodline)” or “part of my DNA to express”; many participants see culture as essential to priming them for the rhythm and musicality they cultivate in the realm of creative movement. One tells of attending an international dance conference in Brazil celebrating African-American dance, and witnessing a group from a small province of Africa of whom he had no prior knowledge “performing the same exact movements that we were doing! But it was not called [his dance style], it was something completely different!” Another speaks of how easily hip hop movement came to him as an adolescent because of his exposure to different varieties of salsa dance, and the pervasiveness of rhythmic music woven throughout his early memories of life in South America before immigrating to NYC: “There were so many varieties of salsa, and people are always dancing at parties and social gatherings. At

a young age, I was dancing with family and friends. Constantly.” Dancers speak about the value they place on having porous interpersonal boundaries: “One thing I try to do is learn from people”; “dance for me is communication ... it’s important, I want to be able to dance with (the people I care about), to share that part of me since it’s a big part of me ... it’s a big part of how I like to share time and connect.”

Theme 7: Dance Mentors as Formative, Parental. Positive figures encountered through dance, be it in a teaching or mentor role, are acknowledged as highly influential in development of dancers’ self-esteem, sense of agency, and prosocial values. Many participants cite specific individuals whose presence and encouragement propelled them forward into a more confident, capable position, in addition to motivating them to pursue dance as a career. Dance teachers are described as “surrogate parents” for those hailing from negligent, chaotic, or abusive childhoods: “Dance teachers were my most formative figures, because my dad wasn’t around and my mom was just never a mom”; “They (two main dance teachers) parented me, really mentored me and gave me attention, when I was basically ignored by my own family.” The dance studio comprised a reliable and positive space throughout the formative years—a safe haven where their primary caregiving environment was either unsafe or deficient—while teachers often performed nurturing and limit-setting functions: “Brian and Beth [main dance teachers] played major roles in developing my attitude about everything, shaping me, and guiding me.” One dancer describes how his home life was so dangerous and negligent that he left at 16 with nowhere to go, only to be taken in by his tap dance teacher at his performing arts high school, who provided him with “the first sense of normalcy, containment, and peace” he had ever experienced: “And that’s why I left home so early, because dance was really a

way to get me out of the [expletive] that's still going on.” For one dancer from a notoriously impoverished Los Angeles neighborhood, dance “filled the void left by our parents who were so preoccupied with their own well-being and how to survive and how to handle things.”

All of the dancers interviewed spend at least part of their work-week functioning as teachers themselves, and many reflect on desiring to pay forward to their students the same developmental support, nurturance, and encouragement they once received. They speak of the responsibility that comes with this role: “I think being a teacher of dance ... means having that consciousness of ‘what we’re transmuting to young people,’ not only through movement but through words.”; “Our job as a teacher is to be very sensitive to the seeds we’re planting in young people.” Being able to observe and identify individuals who came before oneself, to show you what is possible, is described as integral to the strengthening of self-concept and personal agency: “If you see somebody like me doing something in this particular field, it’s going to motivate you ... and I think that’s the only reason why I continue to do it professionally.”

Theme 8: A Tight-Knit Weave of Humanity. Dance delivers the dancer to some of her closest, life-long relationships, and allows her access to a much broader scope of people due to training, teaching, and performance. Dance transcends boundaries established by language – it is the “universal unifier, regardless of your culture” – and therefore affords privileged access to others where verbal modes of communication alone might present barriers to connection. “Now I use dance to grow closer to people.” One participant speaks about setting aside competition, on dance jobs, to take care of others via a leadership role: “I am a leader by my own right because I will nurture people if I can ... I

represent (the people I work with), I work hard to be that leader. I'm a loyal person, I just don't want to let anybody down. And I like people to know I'm there for you, no matter what." In this vein, many participants describe themselves as engaging in leadership, having a desire to unify, empower, and carve out space for others through dance: "It's important for me to reach out into the community and take what I've learned and bring it to the wider community, to the young inner city kids."; "It's not about the technique, it's not about what I've created, it's about my freedom that comes when certain elements collide... And it happens in class too, and I feel that since I go there (as a teacher), naturally, that it's permission for other people to go there. And I think that's very unique and special as an instructor."; "The universal element of the common struggle draws dancers in .. to know that we're all one and you are not alone."

One African American dancer from an underprivileged neighborhood in Los Angeles specifically identifies his involvement in dance as a means of avoiding "sinking into" the negative pathways witnessed in his wider impoverished community:

"That's why I always give my accolades to my mom: I think if I wasn't exposed to the performing arts over the weekends, I probably would have sank in (to the negativity). But because I was, and I went back to those areas, and seen the things I didn't want to do, it opened me up ... you get what I'm saying? It was going back to what wasn't ... what wasn't cool? I guess I just realized I had options. 'Okay, while you guys are doing this, I can go and do that.' What I learned on Saturdays and Sundays (at dance conservatory) was [makes a clicking noise, falling into line] and I really honestly enjoyed it, Megan, it was super cool. And me and my sister loved it ...Because the performing arts is something cool to put your kids in, as opposed to sports. Sports is cool, but you're still gonna be hanging around people who are still in certain environments that they can bring to the field or the sports. It can probably be like that in performing arts too, but where we were, it was very far and in between. So... I think what kept me out of the craziness was the fact my mom gave me options."

Another dancer describes how collectively going through the "struggle" with fellow dancers in his neighborhood helped him ascribe growth-promoting meaning to challenging circumstances, cultivate inspiration for self and others:

“I have learned personally how to embrace the struggle. All that we went through when we were starting to (dance) and people getting kicked out of the house, and you’ve got parents saying ‘Dance is never gonna go anywhere’ – you know, that mentality, it built our character. It put us in a space to where if anything came our way, we would know how to balance it based upon what we had been through ... or at least I can say that for myself. So I learned not to separate myself from the struggle, but be a part of it, and embrace it, and hug it and see what it’s all about, and see how it can build me. Almost like eat the meat and through away the bones.... And I had to learn that in the last three years, you know, ‘Hold up: This (struggle) is actually a good thing.’ Because now people can relate to you, and you can relate to other people, you know what I mean? And this whole situation that we got, this life thing that we got, is all based upon experience. And, ‘How can I inspire you based upon what I’ve been through?’ And, ‘How can we inspire each other?’... And so on and so forth.”

One older participant explains how he felt marginalized as a young gay male dancer within his performing arts high school, and how once peers actually saw him perform, it drew them in to closer relationship:

“When I go back to my high school days ... little boys that dance, there’s always something surrounding that – you’re automatically gay, or you’re automatically this or that – I found that the relationships with my peers in high school, that when they saw what I did, when we went out into the community, and would do performances... I think when people saw what I did and got it out of their head, ‘Oh he’s just a dancer’ – they were able to appreciate really the art of it, and the hard work and that it’s not easy. And so that helped in some of my friendships, because I’d see some other people from the music or theatre departments and they’d say, ‘Oh my god – you’re so good! You can really dance!’ And so that sparked a conversation, which sparked a friendship ... that’s kind of what started it. So that’s how we connected.”

Dance is mentioned as being egalitarian, inclusive, and therefore accessible by everyone in unique ways: “You don’t have to be skilled at it, that’s the thing. Like, singing – there’s a level of skill required, there’s a level of experience that makes you a singer. Or like, sports, or playing an instrument – there’s an amount of skill that has to take place. But dance, I don’t think that’s the case, so it’s different in terms of an art-form.” Participation in dance can constitute a supportive, safe environment by which unity, positive reflections of self, and surrogate family create a sense of belonging and security for the individual within the gestalt of the whole.

Theme 9: Acknowledging Spirituality and Morality Through Interconnectedness.

Awareness of one's interconnectedness with others and the implications of one's actions upon the collective arose as a strong themes across interviews. A sense of acknowledgement and consideration of other beings, with respect to the self, pervades the dialogue of the dancer. Acknowledgement of interconnectedness with others begins with self-awareness: understanding the continuum of self-awareness, a journey of refining one's place in the world within a context of cumulative experiences and time. This manifests as a general collectivism – “If one person does something, it's a ripple effect out to everyone” – as well as a genuine desire to be of service to others, in dance and beyond. Loyalty and dependability are vital as one builds and fosters relationships within a niche industry: “I like people to know that I will be there for you, no matter what. I will help you as much as I can.” One dancer describes her interconnectedness as “having an open flow of exchange” between people, vital for personal growth and maintenance of the homeostasis of the organism, to combat stagnation or staleness. In order to participate in this open exchange, “dance necessitates generosity ... as a dancer you must be very, very generous.”

One dancer/choreographer describes the intrinsic pleasure she derives from traveling, encountering and connecting in meaningful ways to others through her dance career, which gives her a sense of expansiveness as she “broadens the constellation” of those she knows, and how this relates to her self-concept: “The more people you get to encounter and meet, the more you get to learn about yourself.” This contributes to what one participant describes as a “together-we're-better mentality”, as the experience of the individual is inseparable from that of the whole: “almost like the rose that grows in the

concrete, because we're all trying to figure this thing out together ... and there's no such thing as separateness, we're all in this organism of life." Perhaps these values influence many dancers' decisions to pass along dance to up-and-coming generations as a means of doing their part to empower and foster the growth of others just as others had done for them. All dancers interviewed identify as teachers, and many see the highest function of their work as dancers is that of seeding art and creativity and connection in those they teach. One choreographer speaks of creating work as "that which connects me to the divine." Another well-known contemporary choreographer acknowledges that his work has the power to evoke strong emotional resonance with others, "transcending the barrier between (my)self and the world." Many dancers attribute a well-developed sense of spirituality, comparable to a transcendent experience, to the presence of dance in their lives: "The spirituality you can gain from it, personally and collectively, is very powerful."

Table 4.1 – Themes and Frequencies

Theme	Number of Interviews Where It Appeared
Theme 1: <i>Self-Attunement as Primary</i> Subtheme: <i>Importance of Balance</i>	10 of 10 6 of 10
Theme 2: <i>A Means to Build Confidence, Engender Agency</i> Subtheme: <i>Freedom of Expansive Expression</i>	9 of 10 7 of 10
Theme 3: <i>Discipline, Stamina, Physical and Emotional Pain Tolerance</i>	9 of 10
Theme 4: <i>Dance as Therapy</i> Subtheme: <i>Transcendence</i>	9 of 10 7 of 10
Theme 5: <i>A Hunger for Other, Active Seeking of Difference</i>	9 of 10
Theme 6: <i>Awareness of Self Via Sociocultural Context</i>	10 of 10
Theme 7: <i>Dance Mentors as Formative, Parental</i>	9 of 10
Theme 8: <i>A Tight-Knit Weave of Humanity.</i>	10 of 10
Theme 9: <i>Acknowledging Spirituality and Morality Through Interconnectedness.</i>	10 of 10

Chapter 5 Discussion

In this study, career dancers hailing from the non-dominant cultural discourse were challenged to articulate their understanding of themselves, and their world, with respect to the organizing presence of dance in their lives. These dialogues centered around the emergence of self-identity, the lessons and tools acquired throughout personal development alongside the development of one's artistic skill, and the ways in which dance may assist – or, conversely, hinder – a sense of integration. Results from these interviews reveal that dancers seem uniquely positioned to reap the multifaceted beneficial properties of dance, especially when encountered during one's formative developmental years: a means to build confidence and agency, inculcating discipline and a familiarity with regulating uncomfortable physical and emotional states, providing the dancer with an accessible, therapeutic outlet, and creating opportunities to connect with and maintain positive social support, just to name a few. Broadly-speaking, this can be conceptualized as helping the individual achieve an integrated sense of self. Thematic elements, such as the importance of balance in optimal functioning, the understanding of self within an interpersonal context of history and culture, and a relational orientation, stood out consistently across interviews with participants, and are discussed specifically with relationship to involvement in dance.

The findings from this study connect, in many ways, to a broad swath of previous literature. The benefits of attuning to the self and importance of balance (*Theme 1, subtheme 1*) echo works by Siegel (2007a, 2007b, 2009) on the benefits of mindfulness in service of neuronal integration; Mitchell et al. (2015) in correlations between the capacity

for self-referential thought (primarily a prefrontal cortical activity) and social cognition; and research on fostering mindfulness and the mind-body connection to combat the disintegrating effects of traumatic stress (Dale et al., 2011). Seminal work by LeDoux (1994; 1998; 2000) on fear conditioning and emotional regulation can be applied to the finding that dancers in this study attribute the development of discipline and physical/emotional pain tolerance to their life-long dance conditioning (*Theme 3*). Awareness of the self within a sociocultural context, as well as acknowledging spirituality and morality through interconnectedness – *Themes 4 and 9*—emerged as strong themes in this study, connecting to the expansive body of research on the development of mirror neurons (Berrol, 2006; Damasio, 1999; Gallese, 2003; Gallese et al., 2003; Iacoboni et al., 2005), empathic processes (Decety & Jackson, 2006), social cognition (Frith & Frith, 2012), and kinetic empathy (Fischman, 2009). Discussions in previous literature on the importance of formative figures in development of the self (Mahler et al., 1968; Pallaro, 1996; Tronick, 1998), in the capacity to regulate affect (Gunnar et al., 1996; Kossak, 2009; Schore, 2001 & 2003), and in shaping the quality of interpersonal relationships later in life (La Barre, 2001; Main, 2000; Porges, 2003) illuminate the roots of *Themes 6 and 7*: Awareness of self via sociocultural context, and Dance mentors as formative, parental. The broad field of literature on the healing properties of nonverbal and somatic interventions provides a strong context within which to consider *Theme 4*: Dance as therapy. This topic has been effectively addressed, and illustrated in empirical research, by a wide array of authors that focus specifically on applying nonverbal interventions (especially dance/movement therapy) in service of healing trauma (Cohen et al., 2001; Cohen et al., 2006; Descilio et al., 2010; Gray, 2001;

Fava & Sonino, 2000; Koch et al., 2009; Levine, 1997; Myers et al., 2015; Ogden et al., 2005; Ritter & Low, 1996; Rothschild, 2000; Stromsted, 2001; van der Kolk, 1994, 1996, 2001). These are but a few examples of how thematic elements of this study corroborate earlier findings across broad domains of research.

Recall that integration refers broadly to the capacity of an individual to acknowledge and harness the differentiated aspects of the self into a coherent, adaptive working whole: the individual organism. Siegel (2009) outlines nine ways the phenomenon of integration might be observed within an individual, beginning with the most basic, corporeal functions of the human body up through advanced cortical functions of our contemporary human brain. *Body regulation* refers to basic coordination of executive functions, typically automated and oriented towards the maintenance of homeostasis of the organism, including coordination of respiratory, cardiac, metabolic, endocrine, and neuronal functioning. *Attuned communication* refers to the capacity of an individual to a) observe and respond appropriately to inner states – in service of achieving physiological homeostasis in relationship to the wider environment that's required for survival and, b) engage in effective, congruent communication with others in the environment that may affect one's need states and/or access to physical and emotional resources. *Fear modulation*, a vital component of emotional balance, contains cognitive (e.g. perception of threat), physiological (e.g. stress response), and emotional components that are required in order to maintain optimal functioning within a context of stimuli to which the individual differentially ascribes positive or negative valence. *Emotional balance* entails harnessing the first three manifestations of integration – body regulation, attuned communication, and fear modulation – in maintaining affective states within

tolerable levels required for adequate functioning. *Response flexibility* ensures agility within a dynamic, constantly-shifting world: being able to accurately appraise a situation, regulate emotions in service of appropriate response (e.g. mobilization for flight, or prosocial/helping behaviors), and execute the desired response so as to maintain the integrity and survival of the organism within a social context.

The final four manifestations of integration involve an expansion from subcortical activity up and out, yoking frontal and parietal lobes to more primitive functions so as to enlist the unique powers of our higher cortical functioning. *Insight* refers to the capacity of the individual to ascribe meaning to historical experiences and connect this meaning to one's current understanding of self; this, additionally, functions in service of facilitating personal growth and cultivating adaptability in the face of future challenges. *Empathy* describes the process by which we are able to infer the inner states of others – through various modes of nonverbal communication – based upon our own self-attunement and awareness, a process vital to the cultivation of prosocial mindset and corresponding helping behaviors. These prosocial values and helping behaviors constitute the eighth manifestation of integration: *morality*. Morality nods to our construction as social creatures, with socially-constructed identities that develop within a context of other people, necessitating other-oriented and cooperative behavior to ensure survival of both the individual and the community to which he or she belongs. Finally, *intuition* is a complex higher cognition function that entails applying emotional memory templates—constructed from the accumulation of personal experiences—to heuristic decision-making made on a moment-to-moment basis in the present, coupled with the prefrontal cortical

capacity to imagine, evaluate, and entertain future possible outcomes of said decision-making.

Thematic Elements

Results of this research highlight growth-promoting phenomenon facilitated by long-term involvement in dance, be it formal or street, that can easily transpose upon a lifetime of development for the individual. All dancers interviewed describe gratitude for the discipline, stamina, and hunger for continual refinement and self-betterment ignited by their dance training (*Theme 2, 3*). Refinement in technical skill and performance is a never-ending process, one without a discreet destination where one can rest on their laurels and be satisfied that they have “arrived.” Many participants articulated the awareness that driving the relentless refinement and hard-work is the knowledge that, in general, “someone will always be better than you, and you can always be better.” Developing within the context of structured dance training is viewed as responsible for instilling within the individual the virtues of “constantly seeking knowledge, exposure, information and training” as a means by which one navigates the world (*Theme 3, 5*). Necessarily, for one to be successful in the field of dance, one must be prepared to work relentlessly hard. This hard work is often accompanied by a diverse array of other ancillary coping strategies; adopting a sense of humor, articulating a unique sense of identity to stand apart from the crowd (e.g. competition in the dance world), and turning one’s quirks into marketable aspects of the self (*Theme 2*). Furthermore, those that outlast the competition within dance inevitably face a great deal of rejection on their way to hard-won success, which creates a familiarity with – and acceptance of – rejection and frustration tolerance (*Theme 3*). These elements combined lend themselves to a belief that

if one works hard, one can achieve one's goals, and an understanding that the pain and discomfort of growth are mere stepping-stones to a higher objective. Many dancers cite the attitude that "pain is good" – that pain is a precursor to growth, progress, and even success. These dancers describe a process by which they greet and endure challenges throughout their development as a dancer. As one dancer states, "I know I can overcome certain things ... if I feel afraid of something, or if I'm not comfortable, I can overcome." These dancers describe the use of physical sensation as a trusted source of information, used in service of self-attunement as well as something to befriend as opposed to recoil from (*Theme 1*).

This discipline and commitment to the process of training and refinement, one that embraces pain and rejection as inevitable, appears to endow the individual with a sense of agency, as well as building tolerance for discomfort. This may inculcate an approach strategy to discomfort, versus one of avoidance; proactively approaching challenge and difference, accepting the pain and discomfort deemed integral to self growth and mastery of technique, all in service of development, progress, and accomplishment of one's goals (*Theme 3, 5*). Neuroimaging research (Eisenberger & Lieberman, 2004) illustrates that the same neuronal substrates used to process physical pain are the same as those occupied by emotional pain processing; approach to pain versus avoidance of pain as a way of being in the world potentially primes a dancer to better modulate anxiety and fear over encountering uncomfortable situations in life. Pain is classically understood to be a powerful mechanism of learning in the animal world (LeDoux, 1994). This is no less true for the human animal. Therefore, the capacity to assume a proactive stance towards modulating pain and fear, instead of defaulting to

conditioned avoidance or anxiety responses, can result in an individual who is prepared to embrace the full spectrum of emotional experiences – the pain along with the joy – and one who is arguably more flexibly responsive in navigating life’s challenges.

The rewards of assuming an “approach” mindset, for the dancer, can be vast. Dancers proactively approaching newness – new dance techniques, new work environments with each performance, new dance styles, new choreographers under which to train – describe feeling comfortable and competent when encountering novel situations as they progress along their dance trajectory. This comfort correlates with confidence and self-efficacy, as well as a positive framing of encountering new situations and novel challenges as one of, “I can learn from this.” Encountering different perspectives and cultures bestows the dancer with the trappings of more interesting artistic choices and more effective, resonant storytelling. Indeed, many self-identify explicitly as storytellers (*Subtheme 2*). This stance also fosters a curiosity and inclusiveness towards others. Some describe the intrinsic satisfaction and joy they derive out of studying new styles, especially during their travels abroad, as this extends one’s range of physical motion that can be applied to generating spontaneous creative movement or freestyle. One dancer describes how dancing outside of his innate style gives him the opportunity to experience his body in a different way than what it instinctively chooses, and how this process leads to a broadening of the foundation of his freestyle and essentially, his intuition. This dilates his potential options for movement, thus responses to the environment and internal states—swift choices made on a heuristic, implicit level. Furthermore, as most dance training and performance occurs within an interpersonal context, dancers can develop a heightened proprioception that necessitates awareness of physical and energetic dynamics

in the vicinity (*Theme 6, 9*). Awareness of, and responsiveness to, others may produce a more flexible interpersonal stance, perhaps even an enhanced interpersonal efficacy; “Even just in conversations, or some sort of issue comes up, I think that having to move with the ebbs and flows, with the ways a conversation is moving is essentially improv (improvisational dance).” Attunement to others, especially when unfamiliar, creates conditions by which one can be at ease with encountering difference and also with one’s capacity to respond adaptively to it. Many dancers attribute their self-assurance to this constant contact with difference, with Other, early on in life due to the presence of dance in their childhoods (*Theme 5*). Difference and novelty are no longer viewed as threats of the unknown; to these dancers, they are mechanisms of learning, play, curiosity, evolution of perspective, an enhanced articulation and increased versatility of individual style, and the means to discovering new relationships. Dance teaches the dancer how to connect with others with different worldviews on a very essential, nonverbal level (*Theme 8*): “Sharing a physical experience or moment through movement weaves you together in a way that other experiences might not, so that already is such a strong bond, such a beautiful dialogue that naturally comes out because we are movers!”

Beyond influencing the dancer’s artistic and interpersonal agility, encountering difference refines the dancer’s understanding of self. Many participants expressed the high premium they place on encountering new styles, new teachers, new geography, new relationships: they describe their own understanding of selfhood as constructed within a sociohistorical context, an amalgamation of all their cumulative experiences and relationships (*Theme 6*). A hunger for seeking out diverse experiences is discussed as being rooted originally in the student/mentor dynamic of formative dance experiences:

“Fearless teachers give the student permission to be fearless” (*Theme 7*). The alternative – a shirking from the unfamiliar, limiting one’s world to what one knows, a preference for predictability – can lead to stagnation, foreclosure on identity formation, and a rigid posture in the face of an ever-changing environmental system. In this sense, the approach mindset described by many of these interviewees can be seen as contributing to a flexible interpersonal stance, increased social competence, and the capacity to affectively modulate fear-based responses to unfamiliar situations (*Theme 5, 6, 9*).

The perspectives of these research participants reveal that dancers are overwhelmingly relational creatures. A sense of spirituality, interconnectedness, and awareness of the well-being of others alongside one’s own frequently arose in dialogues as dancers reflected upon their personal development and preferred modes of navigating the world (*Theme 9*). Countless hours spent attuning to self while dancing – observing, responding to, and mapping out inner states as well as physical templates for kinetic expression – coupled with the social nature of dance training appears to ignite empathic neuronal circuitry within the dancer brain (*Theme 1, 8*). This could be a key factor contributing to the dancers’ heightened awareness of others, accounting for their frequent discussion of self-identity a function of social context. Successful dancers learn to access and sculpt affective experiences explicitly to resonate and connect with others: “You don’t have to be skilled ... It’s the emotional connection behind it that makes dance effective.” Most participants offer their insights about the development of their own identity within a social context, which includes primary caregivers in early childhood, mentors encountered within the realm of dance, and the an ongoing influence of those with whom they interact throughout the lifespan. Many specifically reference the vital

role dance teachers played in supplementing deficits in their caregiving environment, be it due to neglectful or abusive caregivers, environmental poverty, isolation within one's family of origin or wider system, or systemic oppression (*Theme 7*). For some, dance mentors assumed actual surrogate parent roles to interviewees, while others attribute their own confidence and positive self-concept to reflections modeled by mentors towards them, in a manner not received in home or academic environments. In turn, these same individuals express a deeply-rooted moral imperative to fulfill this role for subsequent generations of students via dance: a chance to foster the personal development of youth within an arts context, as well as illuminate the realm of what's possible in a manner similar to what was done for them. Teaching, as well as performing, dance is discussed philosophically as a means by which to create acceptance and space for others, an invitation for inclusiveness. These dancers understand they have a unique opportunity, by being visible and creative and amplified, to motivate other young people by example, simply providing them with the option of artistic expression. This understanding endows the mature dancer with a wider purpose: "If you see somebody like me doing something in this particular career, it's going to motivate you ... and I think that's the only reason why I continue to dance professionally."

Research on psychological development of human infants highlights the importance of the quality of consistently present and appropriately responsive caregivers in service of development of a healthy self-concept (Mahler et al., 1968; Pallaro, 1996). Literature on beneficial elements of dance/movement therapy illustrate the therapeutic properties of having witnesses to one's process of discovery and development, similar to the relationship of mother to infant in eliciting and constructing a healthy sense of self.

Both bodies of research should be considered with respect to a young individual developing within a context of a supportive dance environment, in highlighting the formative role of having witnesses to the young dancer's developmental process. Dance, according to many dancers interviewed, fills the void left by marginalized parents preoccupied with their own survival, as articulated by multiple participants whose childhood environments were marked by pandemic urban poverty and the constraints of systemic discrimination (*Theme 4*). For individuals classically excluded from majority cultural dialogues, being able to observe and identify individuals who came before, to illustrate what is possible, is described as vital to the strengthening of self-concept and agency. This motivates the dancer to actively contribute to making space for others from similar backgrounds: "If you see somebody like me doing something in this particular field, it's going to motivate you ... and I think that's the only reason why I continue to do it professionally." Dance becomes an ethical imperative to disseminate carefully, with awareness, with an explicit purpose of empowering others in a manner similar to that which was done for them. Having an audience of mentors and ultimately peers with whom to participate in a collective conversation of creative expression, to process individual distress within an emotional container of other dancers engaging in similar processes, can provide vital emotional validation to the dancer and a sense of containment.

A Voice For the Voiceless, For the Unspeakable ...

For an individual whose cultural identity may not align with that of the majority voice, the prospect of achieving integration may involve additional barriers. These barriers may include higher overall stress, systemic discrimination, unequal access to

resources, unstable caregiving environments, poverty, higher risk for substance abuse (self or caregivers), and the perception of diminished social support, just to name a few. Dancers interviewed describe personal histories that have been punctuated by incidents of physical abuse, abject poverty, discrimination, depression, caregiver instability and neglect, mental illness, fractured families, and trauma. Many articulate the painful experiences of feeling marginalized by their own families and also by society at large, due to aspects of their own cultural identity. These dancers speak of dance as their sacred space, their therapy, their voice, their vehicle for navigating the world (*Theme 4*). “Dance is what I run to.” They appear to be uniquely benefited by their involvement in dance, as a means to help them cope with significant loss, adversity, and inherent inequities built into their lives by virtue of their cultural membership. The realm of dance is revered as “the only safe space” for many of these individuals grappling with the trauma of their youth. The unique medium of creative movement supplies the dancer with an accessible entry point to processing painful emotional experiences, negotiating the unspeakable, reclaiming the body as an ally instead of an enemy – what once may have been a theater for violence and abuse (*Subtheme 4*).

Dance culture, for many interviewed, provided the dancer with the only supportive social context where he or she felt free to expand into their most authentic, unbridled selves, unbound by the constrictions imposed by majority cultural norms of acceptability and propriety. For those inundated by violence during formative years, aggressive movements could be harnessed as creative movement to express the unspeakable, to process trauma and therefore gain mastery over it, to exercise control over the rage and chaos instilled by the violence: “giving a voice to the voiceless.” For

those without a present parent to foster a healthy sense of self and contain them, relationships formed via dance provide positive identity reflections, emotional support, and a space of belonging (*Theme 2, 7, 8*). For those raised in hostile environments with few positive social outlets, involvement in dance provides a means of avoiding the pitfalls of gangs, drugs, and incarceration. Autobiographical tales of our youth are etched deeply into the nonverbal realm of the senses, the corporeal and the kinetic: the body indeed keeps the score, especially when words fall woefully short in encompassing complex emotional experiences. By discovering this alternative, more articulate language of the body, many dancers have an opportunity to foster efficacy and agency as an antidote to learned helplessness; to grapple with difficult experiences via a kinetic conversation, which may deliver the dancer to a more integrated understanding of the situation. The capacity to transcend the negativity of one's most challenging experiences becomes possible.

Thematic Elements as They Relate to Siegel's 9

Siegel's aforementioned manifestations of integration are strongly, but not entirely, reflected across the common themes of this study. Acknowledging the importance of balance within any system (*Subtheme 1*) and cultivation of discipline and pain tolerance (*Theme 3*) are components of *body regulation* as the most basic, corporeal manifestation of integration. *Attuned communication*, Siegel's second indicator of integration, can draw parallels to the importance of mentors as formative and parental (*Theme 7*) in the sense that these mentors may, at times, provide surrogate parenting to dancers via attunement. Aligned with this concept, as well, are *Themes 6* and *8* –

awareness of self within a sociocultural context, and a tight-knit weave of humanity. The phenomenon of attunement may facilitate a heightened awareness of others, and identification of oneself in relationship to others. Achievement of *emotional balance* and *fear modulation* – two of Siegel’s categories of integration with considerable overlap – can be seen in dancers’ discussion of physical and emotional pain tolerance (*Theme 3*), the categorization of dance as therapy (*Theme 4*) and the means of transcendence (*Subtheme 4*), and active seeking of encounters with Other (*Theme 5*): these three factors help the dancer negotiate trauma, adversity, novelty and even distress, providing opportunities to acclimate and enhance one’s tolerance for emotional and physical discomfort in service of rectifying dysregulation or disintegration of overwhelming experiences.

Empathy and *morality* can be discussed in light of the final three themes – dance mentors as parental figures, a tight-knit weave of humanity, and acknowledging spirituality and morality through interconnectedness. These three phenomena are certainly interwoven. Empathic neurocircuitry is sparked and cultivated through sensitive and appropriate interactions with formative figures across time (*Theme 7*). Furthermore, the capacity for empathy is foundational to acknowledging the effects of our actions upon others, as well as a sense of moral obligation to engage in prosocial cognition and behaviors as a means of cooperating within a social context.

Not all themes arising from participants’ statements, however, speak to Siegel’s categories. *Insight* and *intuition*, both emergent functions of lower order capacities of the organism, aren’t directly discussed by most of the dancers interviewed. Overall, dancers speak with self-reflection, self-awareness, and insight into their experiences, however

most of them didn't explicitly mention how they apply their own experiential wisdom and implicit knowing in service of enhanced self-understanding (insight) or more deft navigation of life in the present and future (intuition). Due to the complexity of both these concepts, it was determined to be beyond the scope of this study to effectively address them. Additionally, perhaps interview questions did not effectively facilitate participant contemplation of intuition and insight, or participants don't explicitly experience these phenomena as integral to their daily lives or self-identity.

Benefits Unique to Dance?

When considering the themes that have emerged from these dancers' dialogues, one can imagine there might be overlap with other activities in terms of integrative benefits gleaned. For instance, self-attunement (*Theme 1*) is an explicit objective of mindfulness activities such as breath work, yoga, or other forms of meditation, whether religious or non-secularly affiliated. Confidence-building and agency (*Theme 2*), cultivating discipline and stamina (*Theme 3*), having access to positive mentor figures (*Theme 7*), and connecting deeply with others (*Theme 8*) can all result from participation in team (or individual) athletics, youth groups that have focus on philanthropic activities, forensics or debate teams, or even participation in organized religion. Mindfulness practices as well as participation in religious or spiritual communities overlap with *Theme 9* in engendering a sense of interconnectedness, spirituality, and morality.

While other outlets available to developing individuals may yield overlapping benefits to those described by dancer participants, dance appears to singularly give rise to the unique breadth of growth-promoting outcomes. This is even addressed by several

dancers within their interviews; comparing sports to dance, for instance, one dancer explains that dance class – for him – provided a buffer from the wider environment of aggression and violence that participation in sports could not. Two gay-identified participants each describe encountering sports during early childhood and not feeling connected to the dominantly masculine values purported by athletics, while conversely feeling a sense of belonging and freedom of self-expression when engaged in dance. While sports can yield social and individual benefits, the application of artistic expression and creativity within the theatre of dance adds dimension to its unique capacity to promote self-development, expression, yoking of the mind and the body, and ultimately, integration.

Implications for Clinical Practice

It has long been established that diverse populations face inequities in accessing formal medical and mental health services (Center for Disease Control, 2012; Smith & Trimble, 2016). Barriers to access for these individuals include financial and transportation barriers, limited funding for quality resources available within a given neighborhood, higher risk in accessing services, poorer overall quality of services made available, and, specific to mental health services, the additional obstacle of stigmatization and further marginalization. There are consequences to these unaddressed barriers: ample research demonstrates the robust link between the higher levels of chronic stress marginalized populations disproportionately face –when compared to moderate-to-high socioeconomic classes, for example – and long term negative physical and mental health outcomes such as cardiac events, stroke, diabetes, depression, and chronic anxiety (Kendall-Tackett, 2009; Kendall-Tackett & Klest, 2009; McEwan, 2006; Nivision et al.,

2010; Suarez & Goforth, 2010; Segerstrom & Miller, 2004). The effects of chronic stress and unaddressed mental health needs are subsequently paid forward: children raised in underprivileged communities uniquely shoulder this burden across the lifetime, as caretakers who are chronically stressed and struggling with various states of dis-ease may be that much less physically and emotionally accessible to their children. Considering the higher risk of negative health outcomes coupled with a decreased likelihood of accessing traditional mental health services, such as psychotherapy and psychiatry, creative and accessible interventions are desperately required for these communities.

The participants in this study articulate the powerful formative and protective functions that involvement in dance can fulfill. Many describe how dance captivated them immediately, delivered them to emotionally supportive relationships, facilitated construction of a secure sense of self, and provided them with an expressive voice and the means to transcend adversity and inequities they face due to their cultural makeup. Although they did not seek it explicitly for therapeutic purposes as children, they have nonetheless unwittingly reaped the therapeutic benefits of creative movement. These dancers overwhelmingly refer to dance as their therapy, their spiritual forum, their preferred way to connect with others and navigate their world. Many participants cite the universal accessibility of dance as a large part of its healing power for connection. Essentially, interviewees described a process by which they work towards, touch, and intermittently achieve integration by way of a lifetime involvement in dance. This may contribute to the development of resilience, which ultimately may buffer against the potentially disintegrating experiences of cultural marginalization.

Of vital importance, dance was accessible for these individuals: affordable if not absolutely free, existing already in the environment – be it structured into academic curriculum or spontaneously occurring in the form of street styles and social dance, as well as a culturally-sanctioned activity. Dance transcends the need to harness words in order to express one’s inner experience; instead, the dancer might attune to the self and express innate movements one feels organically compelled to articulate, eliciting one’s personal truth via the theater of the body. Considering the mounting evidence of therapeutic benefits of expressive arts in addressing a broad range of psychological symptoms, it seems that increasing access to dance within diverse populations could be a powerful solution to the aforementioned barriers these communities face when accessing formal mental health services. Prioritizing the presence of expressive arts such as dance within academic curricula across the developmental trajectory, from elementary throughout high school, can expose underserved children to the arts and add to their future career possibilities. Beyond the implicit pleasure to be derived through creative movement, children can embark on a lifelong journey of self-exploration, resilience, relationship, and ultimately, integration via dance.

Future Research

Research on therapeutic properties of dance and movement has focused overwhelmingly on a specific cultural demographic – moderate to high socioeconomic, Caucasian, female – to the exclusion of the spectrum of culturally diverse populations, who evidently are positioned to benefit from dance in unique ways, as discussed above. This study expanded upon the body of existing research by explicitly selecting participants who hail from some dimension of cultural non-majority membership, or who

identify as having endured childhood adversity across a broad range of potential experiences. This aspect of the research was purposeful so as to dilate space for the inclusion of these voices, to value and amplify the perspectives of those who have historically been excluded from research in this domain and from media representation in general. Future research can continue this expansion and inclusiveness to reach dancers from all background cultures, both within the western world and without. This study was limited in size (ten participants) and scope (dancers currently living in Los Angeles), and therefore the findings may not readily generalize to dancers from different geographic regions within the country. As this is a qualitative study, future research might also incorporate a longitudinal component – tracking dancers across their lifetimes and developing measurable dimensions of integration versus the conceptual ones delineated here.

Concluding Words

The unique potential of dance to, in the words of one participant, “grow the self” extend far beyond what has been discussed in this current study. For those fortunate enough to be captivated by dance at an early age, this is a self-evident truth, and one that is so inherently rewarding that it propels the dancer through a lifetime organized around pursuit of creative movement, as a career, as a therapy, as a means to tie more closely into the fabric of humanity. It is the assertion of this researcher that dance uniquely offers dancers the prospect of binding, tethering and transcendence: binding together a coherent and complex sense of self via attunement and emotional processing, tethering to others within a relational context of dance, and transcending adversity through an alternative, ongoing dialogue of creative expression.

Appendix A: Proposed Interview Protocol
Based on Research Questions

Participant code:

Current Age:

Gender:

Ethnicity and/or indigenous heritage:

Nationality:

City in which you grew up:

Religion:

Sexual orientation:

- I. Please describe the nature of your dance training, including the age at which you first encountered dance, type of training (e.g. formal dance studio, street crew), and styles of dance you have studied. How/when/why did you first encounter dance? How did dance “capture” you in the beginning?
- II. Think back over the course of your life. Tell me about you, and the presence of dance in your life. Can you identify any decisive moments in the progression of your affinity for dance?
 - a. Were there any drop-off points?
 - b. Have there been times in which dance caused you pain? Torment? Discomfort?
 - c. When you have encountered difficulties in your life, how does dance moderate, contribute to, or affect those times?
- III. Describe your style of dance.
 - a. What lead you to define your style?
 - b. Tell me about some times you had to dance outside your style.
 - c. Could you articulate the relationship between your chosen dance style and your identity?
- IV. What is your understanding of the word “integration?” Do you consider yourself an integrated individual?
 - a. How do you know? On a ...

- i. Cognitive level?
 - ii. Emotional level?
 - iii. Physical level?
 - b. How might others know?
 - c. How does this come into play in your relationships?
- V. When are the times you feel most integrated?
- VI. Describe a time(s) when you have felt most disintegrated.
- VII. Are there other influences in your life (e.g. in shaping your sense of self, fostering well-being, addressing difficulties) that you feel have been important, or even more important, than dance?
- VIII. What challenges have dance helped with?
- IX. How else do you integrate yourself (besides dance)?
- X. What are your thoughts on your future, specifically with respect to decreased physical functioning and other physical limits imposed on the dancers' body with time?
- XI. Has culture played a role in your dance life?
 - a. How does this relate to your current understanding of yourself and your place in the world?
 - b. Who is that person? How would you describe yourself?
- XII. Do you subscribe to a view of yourself as "spiritual"?
 - a. How would you describe yourself in relationship to others, your connection with other people?

- b. Describe the quality of your relationships. Has dance been influential in the creation, course, and shaping of your most significant relationships? If so, how?

Appendix B: Informed Consent for Dancer Participants

Name of Principle Investigator: Megan Kain

Name of Organization: Antioch University Santa Barbara

Name of Project: *Bind, Tether, Transcend*

Hello! I am Megan, and while you may know me as a peer from the dance community, I am currently conducting research for my doctoral dissertation on the lived experience of being a dancer. I am going to give you information and invite you to be part of this research. You do not, however, have to decide today whether or not you will participate. Before you decide, ask as many questions as you believe necessary to help you make as informed decision as possible, should the information I provide not be sufficient. As we go along, please feel free to ask questions at any time or ask for clarity. Should questions arise, I may be contacted at my email: [REDACTED] or phone: [REDACTED]

Purpose of the Research:

Dancers view the world with a unique lens. The process of training, refining, and pursuing a career in dance occurs alongside many formative life experiences. Some of these experiences have an emotional charge, some are integral to who we are as a person, and many shape the way we perceive the world around us. Through this research, I am interested in understanding and articulating the lived experience of being a dancer and the relationship this lifestyle has to well-being, decision-making, interpersonal relationships, and self-regulation across several dimensions.

Participant Selection:

Sixteen professional dancers representing a diverse array of cultural dimensions have been purposefully selected for this study. You are one of those individuals. Your participation in this research is entirely voluntary. It is your choice whether or not to participate. Should you at any point become uncomfortable with participation to the degree you'd rather not continue, you may cease involvement at any time, without consequence.

Research Intervention and Procedures:

This research will involve the selection of a personal video of yourself dancing that you believe best captures your essence. You and the researcher will then view this selection together during an hour-long individual interview. The researcher will ask several questions regarding your lived experiences of being a dancer, many of which pertain to decisive moments in life and the personal significance of dance to you. Audio recordings of the interview will then be transcribed into text, coded to render the identities of the participants anonymous, and analyzed for themes common to several, or most, of the responses received.

Please note that you will never have to share any knowledge that you are not comfortable sharing. Should you become uncomfortable with a question, you may simply ask to skip it.

Your involvement in the research takes place over the course of a portion of one day (for your personal interview). After data has been transcribed and analyzed, as a way to double check the accuracy of the researcher's interpretations, you will be contacted again to go over the inferences made. At that point, the researcher welcomes your feedback on the quality of her interpretations and the articulation thereof. Any incongruencies will be addressed and rectified. It is critically important that we understand the lens with which you view your world.

Risks

We are asking you to share with the researcher some very personal and confidential information. Many of the questions pertain to personal memories and events, and this potentially could bring up emotional reactions within you. You may ultimately feel uncomfortable talking about some of the topics. It's important that you understand that you do not have to answer any question or take part in the interview if you do not wish to do so.

Benefits

There will be no material benefit or reimbursement to you to participate in this study, but your contributions are likely to contribute to the academic and therapeutic understanding of the health-promoting benefits of involvement in dance.

Confidentiality and Sharing the Results

Your personal information and perspectives provided in the interview will not be shared with anyone outside of the research team. Upon transcription and analysis, your data will be decoupled (unlinked) to your name or identifying information, ensuring your protection via anonymity. All data will be stored in a locked cabinet accessible solely to the researcher, for at least seven years. Additionally, the proposal for this research was subjected to review—and approved—by a governing body (Internal Review Board) to ensure that design, procedures, and protocol all prioritize participant protection and privacy.

Knowledge that the researcher gets from your contribution to this study will be shared with you and other participants before it is made widely available to the public to ensure accuracy. Furthermore, each participant will receive a summary of the results. A copy of the full-length dissertation will be made available upon request.

Who to Contact

If you have any questions, you may ask them now or later. If you wish to ask questions later, you may contact the researcher (Megan Kain, [REDACTED])
[REDACTED]

This proposal has been reviewed and approved by Antioch University Santa Barbara IRB Committee, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact Dr. Lee Weiser at [REDACTED]

Certificate of Consent

I have been invited to participate in research about the lived experience of dance and well-being.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Participant (Printed): _____

Participant (Signature): _____

Date: _____

Signature of Researcher: _____

Date: _____

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