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Choosing Embodiment:
The Effects of Technology-based Interaction on the Experience of Relationship

Tenaya Cowsill

Sarah Lawrence College

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Abstract

The purpose of this paper is to review and consider the way in which both interpersonal and intrapersonal relationships are affected by technology. As commentary surrounding an epidemic of loneliness becomes increasingly common, this paper looks to identify and understand what it truly means to be connected. By bringing awareness and understanding to the effects of technology on the experience of relationship, and by offering a deeper understanding of the role of embodiment, it is possible to work towards balanced and healthy relationships that satisfy in quality rather than quantity.

Keywords: technology, social media, instant gratification, connection, disconnection, loneliness, communication, relationship, embodiment, empathy, kinesthetic empathy, body-mind connection, body-mind centering, group work, dance/movement therapy, Ohad Naharin, Batsheva Dance Company

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Prologue

Find pleasure in your ability to feel, your ability to move, your aliveness...

—Ohad Naharin

Artistic Director of Batsheva Dance Company

The words of Ohad Naharin sound casual in contrast to the weight their echo carries in the room. He is speaking to 142 individuals from 27 different countries exquisitely devoted to their own surrender, and I am one of them. The duality of wild aliveness and modest humanity is thick in the studio as we commit to the process of moving with the realization that the edges of our weakness and our strength are actually one. Work and effort and passion intertwine to create something moving and we ride each other's momentum, borrowing when we need to and sharing when we can. We are all here doing the same thing: passionately sweating all over this gray Marley floor until we have nothing more to give—a point we will discover never comes.

I carry the same body now as I did in the moments I spent on that gray Marley floor, yet it feels different. Sensation, connection, and presence have dulled. There is less borrowing and sharing of momentum, fewer intertwining rides to be had. I ask myself what it is that has dulled the invigorating sense in my bones and my flesh, pulled me away from the edges of effort and process, and has made it harder and harder to access the visceral sense of my own being.

And then I see it—an image of myself, that is. A slouched-over, blob-like form, body almost entirely devoid of movement except for the fingertips that type these words; and for no reason (as I am fortunate to have a body with few physical limitations), other than distraction, habit, and a lack of intention. I step away from my own image to see it in almost

every person that surrounds me: bodies stale and thirsty for movement and connection. I take in this reality and hear the collective voices of our bones and flesh cry through the walls of my body that something must change.

Introduction

For Americans living in the year 2016, technology is an embedded component of daily living. For example, a recent Pew Research Center survey found that 73% of Americans go online on a daily basis, and that 21% of those users report being online “almost constantly” (Perrin, 2015). Today’s technology takes many shapes and forms, thus it is available to users at any time and in any place. Handheld devices, for example, allow access to calls and texting, social media networks, search engines, and other applications that grant instant connection to people, information, and entertainment. This type of access has brought about considerable convenience, medical advancements, and opportunities for connection, that transcend the limitations of proximity.

The extensive number of benefits technology has brought about is inarguable. However, such widespread access to a virtual world of growing convenience and limitless contact does come with consequences. For example, in-person communication has declined, while research has found distraction and anxiety to be on the rise among children and young to middle-aged adults (Medco, 2010). In order to maintain healthy, balanced lives, it is paramount that these ramifications be considered, while the instant and virtual realities of today’s America continue to grow rapidly.

Built into the infrastructure of these artificial realities is the consistent presence of instant gratification. Consumers of technology desire it to the point of necessity, and providers supply their appetite with consistency. This exchange creates a feedback loop

wherein the more consumers are allotted the commodity of hurried fulfillment, the more they expect, want, and eventually rely on it. Once a dependent relationship has been established, it becomes increasingly difficult to tolerate experiences that do not supply the same type of immediate satisfaction (Muther, 2013). For example, in a recent study by Ramesh Sitaraman, researchers examining the viewing habits of 6.7 million internet users, found that subjects would wait only two seconds for a video to load before abandoning it; after five seconds the abandonment rate was at 25% and at ten seconds it was at 50% (Muther, 2013). Consumers become less likely to partake in experiences that require the endurance of a process and therefore drastically limit the range of experiences available to them (Muther, 2013).

Because confronting this rapid decrease in frustration tolerance would require its own enduring process, doing so does not usually seem to be a viable option to those who are technologically reliant (Muther, 2013). Still, to satisfy the need for instant gratification, consumers find ways to create the illusion of the former experience. This phenomenon materializes in a number of ways, but occurs primarily and consistently, on social media platforms. For example, those without the time to invest in in-person friendships can still invest in finding a virtual rapport on Facebook, Twitter, or another social media site. This crafting of illusion is not limited to interpersonal exchanges, but is additionally applicable to experiences that are intrapersonal. For example, those without the discipline or the means to care for their health through nutrition and exercise can access diet pills and post healthy propaganda on a public profile. These mediums all offer the opportunity to immediately appear the way one hopes to someday to feel. Appearance, however, can be an invented projection of self-perception and in many cases lacks the foundation from which fulfillment grows (Green, 2013). In the above-mentioned examples, the quality of each sought-after

experience has been drastically changed: quality of relationship, both interpersonal and intrapersonal, has been affected.

Current technology allows those who use it to disconnect from the physicality of their daily experiences. Doing so inherently allows one the separation needed to orchestrate desired life-outcomes without having to fully commit to the process of achieving them. This disconnection from one's own physicality grants escape from effortful work: the doing, the action, and the movement. When this disconnection occurs, drastically limiting the sensory feedback systems of sight, smell, taste, hearing, and touch, it is essential to explore and uncover what is lost.

This paper will explore the ways in which technology and the culture of instant gratification it has ushered in, affect interpersonal and intrapersonal connection and communication. In this exploration, theory from the practices of Dance/Movement Therapy, Neuroscience, Group Work, and Body-Mind Centering will be integrated with my personal experience as a mover and observer. The purpose in doing so is to bring awareness to the effects of technology-based connection and to offer resources for balance.

Effects of Technology on Interpersonal and Intrapersonal Relationship

In today's America, the quantification of everyday experiences has become a cultural phenomenon. As an example, it is estimated that one in every ten Americans owns a wearable fitness band (Geggel, 2015). These bands, capable of tracking things like sleep, diet, and fitness activity, quantify all information into graphs and trends for the users' own knowledge. While this technology has offered many people resources for a healthier lifestyle, it is worth noting that quality has been removed as a measuring factor for success. The measure of success for a walk, for example, is now reduced to how many steps were taken. In

previous years however, a walk may have been given value based on what was seen on the walk, who the walk was shared with, how the weather felt, or how the walker felt during or after the activity.

Health trackers, despite their overwhelming growth in popularity, are not the only widespread quantifiers of life's daily occurrences. Content shared through social platforms like Facebook, Instagram, and YouTube is most often given value based on how many "likes" or "reactions" it garners (Mulvihll, 2011). These "likes" and "reactions" offer very little in the way of rich or detailed feedback and limit the scope of expression available to the user. While comment sections are a place for that detailed feedback to be shared, it is easy for the attention to remain focused on the "how many" rather than the "what." While this style of communication may be valuable for advertisers and promoters seeking subscriptions, it has become a way even close friends interact.

The need for quantification carries over into the way relationships have developed within the world of social media (Grosser, 2014). The interpersonal exchanges within these platforms largely reflect those between vendors and consumers, only in this case, users can be both vendor and consumer. Users share and access demographics, images, status updates, and locations while also exchanging commentary. This display and exchange of information is what many have come to define as "friendship." However, it is important to acknowledge the differences between these cyber connections and relationships that are shared in person. For example, users are able to carefully craft and control their online presence and choose what others are able to view. This limits the view in a way that is comparable to looking through a keyhole, even in the case of users with the most genuine intentions. Inherently, a highly constrained and biased picture is being presented (Green, 2015). When in person,

individuals must interact without the buffer of time or the luxury of editing. They are also able to make their own observations and form opinions based on a more complete sensory experience. This sensory experience allows for nonverbal cues and communication, kinesthetic empathy, and visual/auditory context to contribute to the development of the relationship.

Apart from, but related to, the effects on interpersonal relationship with cyber communication, is the effect on intrapersonal relationship. For the individual acting as vendor, it is easy for online activity to become more about other users' reactions to the experience and less about the users' actual felt experience. When an experience is being had for the sake of publicizing it online, it becomes something different entirely. Take the following brief scenarios for example: 1. Sally decides to take a morning hike to get some fresh air and enjoy the sunshine. She finally reaches the summit and snaps a picture to share her accomplishment and the beautiful view with her friends. 2. Jane notices that a lot of the people she is following have made posts about getting fit and being outdoors. Jane is working on building a following of her own and decides she'll go for a morning hike to get some fresh air as well as some footage for her online profile. She takes snippets of video every so often in order to track and document her journey, and eventually compile a montage of her hike.

Neither of these scenarios is right or wrong, but it is important to note that they are different. While these scenarios are simplified and limited, they are meant to highlight the difference in intention and therefore in experience, as well as in the potential kinesthetic and emotional benefits one might hope to reap. It is reasonable to estimate that during the hike, Sally had a much more visceral experience than Jane. Because her intention was focused on having an experience, she was most likely taking in her surroundings through her sensations.

She may have noticed the smell of the orange blossoms, felt the cooling breeze against her skin or heard the blue jays singing. These are sensations that support embodiment and a deepening sense of self. It is reasonable to think that Jane's experience may have been different given her attention was focused on showing others her hike, rather than simply experiencing the hike for herself. Because of Jane's intention, she was focused on the documentation of the hike, which required a preoccupation with filming, appearances, and a quantified response, such as a "like." It is probable that Jane was less connected introspectively to her sense of self, given that her attention was elsewhere. It is impossible to be fully present when the mind is in two places at once (Helgesen, 2001).

Without recognizing and acknowledging that Example One and Example Two are not interchangeable experiences, it becomes remarkably easy to act as if they are. Experiences directed at a representation of experience rather than the experience itself, such as Jane's in Example Two, take people out of the present and preoccupy them with a virtual world, replacing experiences that bring people into visceral connection with themselves and their physical surroundings.

The desire to show experiences online is rooted, in part, in the earlier-mentioned desire for quantification and instant validation. Gathering "likes," "comments," or "shares," offers the immediate gratification of acknowledgment for the posted content, but also of the individual posting (Grosser, 2014). Platforms of online praise or criticism have become a currency of validation that social media uses to pressure its users to collect. Without the collection of acknowledgements, users may question the value of their post, and thus of themselves, which is to say, the posted content risks being perceived as an extension of the poster as an individual. As Taylor (2011a) writes, when the "line between person and persona,

private and public self, become blurred or erased completely, the so-called self-identity becomes a means of our acceptance and status” (para. 9). This framework restricts the possibilities for self-validation, placing the power to determine value in the hands of an online community.

A common social media phrase that captures this dynamic is “pic or it didn’t happen” (Silverman, 2015). While this phrase was initially used in the spirit of holding users accountable for lofty or unrealistic claims, its sentiment appears to have spread even to the mundane. Excessive documentation of this nature can undermine the validity of events experienced offline, offering value to events only if they are recorded, publicly displayed, and given attention. The scope of these postings ranges from extravagant adventures to ordinary meals or everyday interactions. Although this source of validation may not be as rewarding as others, it is instant. There is no need for the difficult process of developing resources for self-validation or for earning validation from valued and respected friends and family, both of which are things that may require time or persistence.

The comfort and convenience of instant gratification is not only available in these online “sharing” scenarios, but is plentiful throughout many other areas of daily life; take for example, medications offering instant relief, sites or programs offering access to virtually any song or film, and companies like Amazon offering same-day shipping. While this instantaneous access is generally productive and helpful, it can become overwhelming. Given that tasks such as these can now take so little time, it is easy to begin engaging in them simultaneously. However, the American Psychological Association (2006) reports that psychologists have found the mind and brain are not properly equipped to handle such tremendous multitasking.

In her book, *Thriving in 24/7: Six Strategies for Taming the New World of Work*, Helgesen (2001) explains that multitasking, by definition, requires an individual to fragment their attention by focusing on several different things at the same time. She continues by stating that multitasking is therefore “the ideal means for putting ourselves out of sync with the present moment ” (Helgesen, 2001, p. 237).

Studies have shown that although multitasking makes individuals feel more productive and efficient, the opposite is true (Taylor, 2011b). Most individuals that engage in multitasking believe themselves to be performing tasks simultaneously, however, in actuality the brain is working to transition between tasks at high speeds (Taylor, 2011b). While these transitions may feel instantaneous, the time they actually take equates for a 40% increase in task-completion time when compared to single tasking (Taylor, 2011b). It was also noted that those who rated themselves as “chronic multitaskers” made more mistakes, remembered fewer items, and took longer to complete a variety of focusing tasks (Taylor, 2011b). Despite the evidence against it, individuals continue to engage in multitasking at an all-time high (Taylor, 2011b). Similar to other instantaneous entities, multitasking allows individuals to perceive themselves as they aspire to be. For example, multitasking gives an immediate illusion and feeling of productivity, even if the productivity is not rooted in reality. This offers short-term satisfaction, as the desire to feel productive is met, but may offer less satisfaction in the long-term given that the quality of what is being produced may not be as large a focus.

The above findings and observations provide evidence of a social paradigm in which short-term goals that are congruent with the fast-paced, instantaneous nature of technology, are habitually sought after over long-term goals that require time and a commitment to

process. Consequently, an attention to quality can become unlikely; as it is within process-oriented activity that priority is placed on the *way* things are done. Ideally, a balance between short-term and long-term goals could be established, shifting back and forth based on need and circumstance. However, while functioning in an environment driven by instant gratification, it can become difficult to engage in the latter.

The challenge of engaging in long-term goals, and thus process-oriented activity, is understandable when it is recognized that engaging in such a process goes against the phenomenon and pressure of instant-oriented culture. For example, it was demonstrated earlier in this paper, through a study examining the viewing habits of internet users, that as individuals become more accustomed to and more reliant on instant gratification, their thresholds for attention span decrease, making experiences that demand a long-term process more of a challenge (Muther, 2013). Because of decreasing tolerance for delayed gratification, it is likely for individuals to avoid or abandon the processes, or goals, that take time and offer no immediate result or reward, drastically influencing what types of experiences individuals engage in. This has the power to affect introspective experiences, but also to affect interpersonal experience and relationship.

Over the last twenty years, there has been documented attention to the relationship between online social engagement and cases of isolation and depression (Young & Rodgers, 1998). While studies have varied in their findings, there has been a significant and widely recognized relationship between internet-use and feelings of isolation. The significance of this information is heightened when recognizing the vast and growing number of individuals who are engaging in social media on a daily basis. The relationship between mood and internet use raises questions about the quality of connection people are experiencing while

engaging in these online communities. It is highly ironic, and concerning, that so many can feel alone at a time when connection to others appears so limitless.

Connection and Disconnection: An Epidemic of Loneliness

Due to the increasingly limitless forms of electronic communication, individuals are in many ways more connected than ever before. In spite of this widespread connection, Turkle (2011) states that people are actually “more lonely and distant from one another in their unplugged lives” (para. 1). Turkle (2011) then adds, “people who choose to devote large portions of their time to connecting online are more isolated than ever in their non-virtual lives, leading to emotional disconnection, mental fatigue and anxiety” (para. 3). Turkle is not the only one writing about this social phenomenon. Bingham (2014) notes that, “young people are suffering an epidemic of loneliness on a par with the levels of isolation experienced by the elderly, despite being more connected by technology than any previous generation.” Harris (2015) adds that while “loneliness is typically associated with being alone, it also affects people when they are surrounded by others...this is because loneliness is about the quality rather than the quantity of relationships” (para. 8). The widespread reality of increasing disconnection raises the question of what it truly means to be connected. In order to approach this question, it is imperative to limit the quantitative perspective and reintroduce quality as a measuring factor. Turkle (2011), Bingham (2014), and Harris’ (2015) reports demonstrate that it doesn’t matter how many people one is “connected” to if those connections are not satisfying.

Connection versus Relationship

To begin with a foundation of basic understanding, “connection” is currently defined as “a relationship in which a person, thing, or idea is linked or associated with something else”

(“Connection,” 1989). This definition marks the concept of connection as being a quantifiable entity in that it is easy to count how many items a person is linked to without having to clarify what the nature of the link is. It is common in today’s technological world to be linked to many things, or people, that one has no real relationship to. A recent online commentary reported that most Facebook users don’t even know one-fifth of their Facebook “friends” (Cohen, 2011). The acceptance of Facebook friendships with unknown people was found to be partially rooted in a desire to appear more popular and to expand one’s network for opportunities such as employment and dating (Cohen, 2011).

While connection can be viewed as a quantifiable state by society, “relationship,” a key word in its definition, introduces the opportunity for a qualitative understanding. In contrast to the definition of connection, relationship is defined as “the *way* in which two or more concepts, objects, or people are connected” (“Relationship,” 1989). This difference in definition marks an emphasis on quality of connection, focusing on *how* one interacts with and relates to another, rather than the concepts of “who” or “what” or “how many.” Focusing on the “how” rather than the “how many,” immediately requires a slowing down, a reflection, and an awareness. Understanding how one relates to those around them requires time and presence. Just as the earlier examples of Sally and Jane’s experiences were not interchangeable, neither are these two understandings of connection and relationship, despite modern vernacular’s blurring together of the two. While relationship is at the root of connection, exemplified by its presence in the definition, it appears to be increasingly disconnected or misused in modern vernacular. Because of this disconnect, it is of the utmost importance to re-distinguish these two concepts as differing entities. By making the

important distinction between the two definitions, greater satisfaction may be achieved through deemphasizing quantified connection and refocusing on quality of relationship.

Relationships and social groups are an inherent part of human existence (Yalom, 2005). As such, it is imperative that individuals are always considered within the matrices of their own interpersonal relationships (Yalom, 2005). As Yalom states, “interpersonal relatedness has clearly been adaptive in an evolutionary sense: without deep, positive, reciprocal interpersonal bonds, neither individual nor species survival would have been possible” (p.19). Yalom continues on to reference Bowlby’s Attachment Theory as an example of the innate and essential need for bonding, powerfully conveying the consistency of the presence and deep meaning of these bonds from the moment one enters the world. While the nature of bonding shifts and evolves with age, meaningful bonds remain essential in some form throughout one’s lifespan.

Formation of Groups

Out of these interpersonal bonds, or relationships, groups are formed. It is through the lens of these groups that one experiences life-events and develops a unique sense of self—an identity (McGoldrick, 2008). Groups serve as a frame of reference for normalcy and a gauge for acceptance and rejection. Their presence, or lack thereof, carries great weight, serving as a context for most emotional content (McGoldrick, 2008). In this age of internet-based group formation, the make-up of groups and therefore the way they inform self-identity and bonds, has drastically shifted.

Historically, the formation of groups has been dictated by geography. Groups have long been formed based on neighborhoods, schools, and extracurricular activities - all things relevant to proximity (Preciado, et al., 2012). However, due to current internet-based social

platforms, proximity is no longer seen as a barrier to group formation. Individuals from all parts of the world can now come together to form virtual groups based solely on similar interests or common characteristics (in the past, people of the same ethnicity, culture or religion lived near each other). While this social phenomenon has allowed for individuals who would have been unlikely to exchange information in the past to now do so, its widespread popularity and availability raises questions about the impact online groups have on an individual's engagement in in-person groups and communication.

Advancements and Barriers to Communication

Communication is the sending of an intended message and the receiving and interpreting of said message through verbal and nonverbal means (Burgess, 2013). Despite their convenience, technologically advanced modes of communication do not allow for a full scope of expression and interpretation. While telephones, texting, email, and other message-sending programs eliminate the barriers of proximity and time, they simultaneously introduce other barriers not previously present. The first of these barriers manifests as a user's ability to engage in a virtually unlimited number of conversations simultaneously. While this capability may at times seem a feat, it has already been established within this paper that multi-tasking has a negative effect on the quality of task performance (Taylor, 2011b). Based on the argument presented by Taylor (2011b), if the task in question is engaging in multiple conversations at once, it can be inferred that doing so will be detrimental to the quality of each of those conversations.

In addition to the barriers that simultaneous conversations present, are the barriers presented by limited face-to-face interaction and reduced sensory input. Interaction and communication through internet-based mediums eliminates the key sensory input working to

foster healthy and authentic communication. Essential to communication is sensory context—seeing and reading body language, hearing and processing tone, and experiencing and registering contextual information such as setting (Cozolino, 2010). Communication over current technological mediums generally causes the sending and interpreting of messages to happen independently, where messages are sent and received through two separate personal paradigms with no physical or emotional confirmation or congruence. Without that information and feedback, it is likely for messages to get misconstrued, especially when concerning emotional content. As Gunther (2011) explains, “Machines cannot translate those emotions...they can only repeat exactly what they are programmed to do” (para. 2). Gunther (2011) continues on to explain that because of this, she has found it to be true that “more misunderstandings and miscommunications are happening, markedly lessening the potential of a [successful] relationship” (para. 2). While more recent programs like FaceTime attempt to create a more sensory-rich experience through use of video correspondence, the visual and auditory inputs remain limited and contrived by their very nature.

These findings begin to shed light on how such an anomaly of loneliness as the one presented by Turkle (2011), Bingham (2014), and Harris (2015) could be possible in this age of “connectedness.” In turning away from a quantified focus and continuing to explore the quality of relationships individuals engage in, it is possible to gain a better understanding of where and why quality, and therefore satisfaction, is lacking. As an investigation of the effects of limited sensory input on communication continues, the role that sensory input does play when present should be understood.

The Social Brain: Face-to-face Communication and Empathy

Psychologist Louis Cozolino (2010), states that from the moment one is born, survival is contingent upon connecting to others through touch, smell, sights, and sounds. That is to say, sensory stimulation and connection is vital to life. These sensory connections and transmission of messages manifest in a vast number of ways, through verbal and nonverbal means. Cozolino (2010) continues on to explain that the human brain is the social organ dedicated to receiving, processing, and communicating these messages, which bridge the space between individuals. As synapses are mechanisms in the brain that allow neurons to transmit signals to one another, Cozolino (2006) refers to this space between individuals as the “social synapse.” In speaking of this space, he writes:

Communication across the social synapse is extremely broad and includes unconscious messages sent via posture, facial expression, eye gaze, pupil dilation, and even blushing. One’s inner experience becomes more visible through these means of communication in order to strengthen attachments (Cozolino, 2006, pp.179-180).

The nonverbal expressions that Cozolino refers to are only a small example of what is lost or obscured when communicating through a technological medium. As the above excerpt explains, these physiological cues are expressive and reactionary measures that serve to create intimate bonds between individuals.

As a largely social organ, one of the brain’s vital functions in its processing of messages, is to recognize the faces of others and assign value to them (Cozolino, 2010). In fact, neurons specifically dedicated to this singular function have been detected in the amygdala and the temporal lobe (Cozolino, 2010). These neurons contribute to identifying, processing, and deducing another person’s emotional state or intent, and thus are “essential in

the ability to relate to others” (Cozolino, 2010, p.187). This process in turn affects “the perceiving individual’s autonomic response in terms of reaction, emotion, and [even] behavior” (Cozolino, 2010, pp. 186-187). This cause-and-effect cycle of autonomic response is a rich component in communication, but only takes place when individuals are face-to-face.

In addition to the neurons in the amygdala and temporal lobe, is the presence of Mirror Neurons. Although their legitimacy is currently debated given their fairly recent identification, mirror neurons are recognized by many in the field of neuroscience as, “a special class of brain cells that fire not only when an individual performs an action, but also when the individual observes someone else make the same movement” (Society for Neuroscience, 2008, para. 2). This suggests that one is able to experience another’s felt experience simply through observation. In regards to this concept, Cozolino (2010) writes:

The internal emotional associations linked to mirror circuitry are activated via outwardly expressed gestures, posture, tone, and other pragmatic aspects of communication. Thus our internal emotional state - generated via automatic mirroring processes - can become our intuitive “theory” of the internal state of the other. These structures are at the core of our ability to develop intimate relationships, be attuned to one another, and...[shape] a healthy and balanced sense of self (pp. 188-189).

Another way of naming this intuitive sharing of emotional states is to call it empathy: the ability to understand and share the feelings of another (“Empathy,” 1989). When empathy is formed through the bridging of the “social synapse” by means of face-to-face, or body-to-body, communication, it can once again be renamed as “kinesthetic empathy.” The attunement and reciprocity that kinesthetic empathy allows for are foundational to the

development of relationships, as they offer “mutual awareness and emotional resonance” (Cozolino, 201, p. 187).

Kinesthetic Empathy and the Discussion of Embodiment

The concepts of kinesthetic empathy and attunement are especially prominent in the practice of Dance/Movement Therapy (DMT), a Creative Arts Therapy that uses movement to promote the emotional, cognitive, physical, and social integration of an individual (“About Dance/Movement Therapy,” 2016). In the practice of DMT, kinesthetic empathy, (a concept and phrase coined by Dance/Movement Therapist Mimi Berger [Cruz, 2011]), is inherently used by the therapist as a means of attuning to the client’s needs and developing a rapport. While in this practice the engagement in kinesthetic empathy and attunement are intentional aspects and tools of therapy, the concepts themselves transcend client-therapist dyads. As Cozolino (2010) has highlighted, these embodied experiences of empathy and attunement are innate on a physiological level to the human experience of relationship.

In her book, *Kinesthetic Empathy in Creative and Cultural Practices*, Reynolds (2012) comments on this innate experience within the context of virtually interactive environments, saying:

A particularly striking [concept]...is how evolving technologies affect both our experiences and our conceptualizations of kinesthetic empathy. For instance, today we have a whole range of digital media with which to be...in constant ‘contact with’ people we have never met, across vast distances. It has become common to live in a state of digital connectedness and to regard this as a default way of being (p.259).

This observation resonates with those of Turkle (2011), Harris (2015), and Bingham (2014) in that it challenges the way the concept of “connection” is understood within a

technologically reliant age. Reynolds' perspective however, additionally raises questions about the role of the physical body in these connection-experiences.

Through the observations and evidence outlined in this paper, it is clear that disconnection from physicality is a widespread tendency in today's technologically reliant culture; a tendency which most often affects the quality of relationship and communication in a negative way (Turkle, 2015). Many barriers to meaningful connection are found in the day-to-day practicalities of technology-based living: communication through limited mediums, multitasking beyond the brain's threshold, and the preoccupation with showing rather than experiencing. In addition to their foundation of a quantified framework enabled by technology, these barriers share the over-arching commonality of disembodiment. Disembodiment in this case, is another way of describing the disconnection from the physicality of experience. When operating in a disembodied state it becomes impossible to engage in attunement, reciprocity, and kinesthetic empathy, which Cozolino (2010) marks as being foundational to the development of relationships. Consequently, the physiological connection and communication that Cozolino (2010) describes calls for a state of embodiment.

Embodiment allows individuals to gain a sense of their own felt-experience through noticing and processing physiological cues that arise as a response to their environment or to another person. These responses, often informed by mirror neurons, offer the individual information about whatever it is they are responding to. In speaking of embodiment, Bonnie Bainbridge Cohen (2012) writes, "embodiment is, in a way...feeling the force that is in this body. In order to embody ourselves, we need to know what is not ourselves. It's a relationship... 'This is the end of me; this is the beginning of something else'" (p. 63).

Cohen's (2012) commentary speaks to the role that embodiment, and therefore kinesthetic empathy and attunement, play in the navigation and establishment of interpersonal boundaries.

Establishment of Boundaries

Establishing clear and healthy boundaries is imperative in cultivating satisfying relationships that are respectful and supportive (Collingwood, 2012), but doing so over technological mediums can be difficult. In a study exploring the relationship between self-disclosure and computer-mediated communication, it was found that individuals generally disclose more private information online than they would in person, due in part to the visual anonymity (Joinson, 2001). While it's difficult to place a positive or negative value on this behavior, it is worth exploring the differences between establishing boundaries online rather than in person, where a more complete sensory experience can be had.

When in person, boundaries and limitations can be informed by physiological cues. For example, responses like blushing, "butterflies," tension, or a change in breathing, all serve to inform an individual of their feelings, their needs, and their limits. Additionally, kinesthetic empathy and other subtle cues perceived by the brain during face-to-face communication, help to inform the perceiving individual of the other's intention. Having a viscerally informed sense of the other person's intent serves as a gauge for boundary setting and the development of trust. Ideally, when attuning to one another in a relationship, boundaries can shift and evolve in conjunction with the developing relationship.

The issues of self-disclosure and the navigation of boundaries and trust inherently require vulnerability and risk. The sense of vulnerability is only heightened when experienced face-to-face with another person and in real time. In moments such as these, the

buffers of distance and time that allow for careful editing are not available. It is reasonable to infer that vulnerable communication may at times feel safer where buffers, offered through technological mediums, are in place. However, if quality of communication and relationship are to be considered, it is imperative to acknowledge that these buffers actually limit and obscure the key information that informs safe and healthy development of boundaries.

“Finding boundaries that are strong enough to protect...but flexible enough to allow healthy connections to others, is key to psychological and emotional health” (Barth, 2012, para. 6).

Moving toward embodied interactions in this way, may serve to move past being “more connected than ever” and move towards being in meaningful relationship.

Reintegration and Reconnection through the Embodied Practice of Dance/Movement Therapy

In commenting on a rediscovery of embodiment and balance, Somatic Psychologist Susan Aposhyan (2007) writes:

Perhaps it is quite natural that the unique capabilities of our species have led us to explore a lifestyle in which the mind dominates and ignores the body. It may be an evolutionary process to go through this phase of disintegration and reemerge into a new period of greater integration. Perhaps, by setting the body aside, we have been able to develop the full potential of our nervous system...Perhaps now that we are both confident in our intellectual abilities and cognizant of their limitations, we can enter a new phase of evolution, moving toward a reintegration of body and mind.

Now that we have taken our natural intelligence apart, it may be time to put it back together (p.7).

Helgesen (2001) also notes a need for reintegration of body and mind, and identifies spiritual and ritualistic practices as an avenue for doing so, stating “the need to connect with timeless rituals in a world of constant change is a major reason that so many Americans and Europeans have begun practicing Buddhism, visiting retreat centers, and incorporating meditation into their daily lives” (p.234). This rise in a pursuit of mindfulness and meditative practice might suggest an awareness of the problematic consequences technology has introduced to the environment as well as a willingness to take measures toward rediscovering balance.

Expressive Movement as Ritual

A timeless ritual that looks to achieve the type of integration Aposhyan (2007) refers to is the practice of dance. Chaiklin (2009) writes that “movement and breath signify the start of life,” (p. 3) preceding language and thought. She continues on to state that gesture, an action performed through use of the body, promptly manifests as “the means for expressing the human need for communication” (Chaiklin, 2009, p.3). This speaks to the truth that expressive movement - the origin of dance - is inherent to human nature.

Historically speaking, dance can be seen within the earliest tribal communities as a way of understanding, interacting with, and directing the natural world (Chaiklin, 2009). For example, dances were ritualistically performed as a plea for rain or successful hunting, or to give thanks for an abundant harvest (Chaiklin, 2009). Dance rituals also served to both mark and celebrate major life events such as birth, puberty, marriage, and death (Chaiklin, 2009). In these ritualistic practices, body, mind, and spirit were recognized as integrated entities.

It was not until late into the Middle Ages that the separation of body and mind became an upheld ideal (Levy, 2005). As Levy writes:

Much of turn-of-the-century Western thought subscribed to the credo of dualism, or the distinct separation of body and mind. Formal dance developed as a performing art...with little attention to how it affected the dancer. Medicine and psychotherapy became treatment, with the former focusing on the body and the latter on the mind (2005, p.1).

This dualistic perspective was further supported by the Christian belief that the body was impure, as well as Descartes' 17th century teachings that the mind and body were distinct entities, separate from one another (Levy, 2005).

The Practice of Dance/Movement Therapy

In contrast to these perspectives, the practice of Dance/Movement Therapy (DMT) is founded on the basis that "all elements and components of a human are a set of related systems" (Chaiklin, 2009, p.5), a concept that is being increasingly supported by scientific study. That is to say, DMT recognizes the mind and body as an inherently integrated system and the individual as being whole. Although integration and a sense of wholeness are recognized as innate, individuals may lose access to that sense due to injury, mental illness, trauma, or distraction and loss of awareness, which is increasingly present due to technological over-stimulation. Because of this, the ultimate goal of DMT treatment is to regain a sense of wholeness through the process of reintegration (Levy, 2005).

DMT is largely impacted by the work of Psychologist Carl Jung. Jung is credited as "[bringing] attention to the therapeutic value of the creative act" (Levy, 2005, p.6). In his work with "Active Imagination," he developed techniques that gave the client a vehicle for expressing unconscious material. These techniques helped to pave the way for DMT (Lewis, 1986). "Active Imagination," is the accessing of unconscious content through a means of

artistic expression for the purposes of bringing it to light and finding within it the symbolic meaning. DMT pioneer, Mary Whitehouse, credits this process as being foundational to her own movement-based work (Chaiklin, 2009). Chaiklin writes of Whitehouse's work, "by making use of spontaneous body movement that arose from inner kinesthetic sensations, individuals recognized the symbolic nature of their communications, which then opened the door to self-awareness and possible change" (2009, p.7).

DMT, much like the work of Jung, calls for the client to engage in a process. This engagement requires an embodiment of the experience. In speaking about the role embodiment plays in body-based therapies, Aposhyan writes that "by living *in* our bodies, [that is] being engaged and aware at the sensate level, we can feel both the sensations that arise from internal events and our responses to external events" (2007, p.37). When engaging at this level, it is also possible to feel the ways in which internal and external sensations work together to express a unified response that harmoniously balances internal and external needs (Aposhyan, 2007). The internal and external balance that comes from an embodied perspective simultaneously supports interpersonal relationship and the sustainment of a process.

Conclusion: DMT as a Resource for Balance in the World of Technology

As an embodied practice that integrates the mind and body, DMT works to cultivate meaningful connection introspectively and interpersonally. The experiences of embodiment and attunement, and the development of kinesthetic empathy, which lie at the heart of DMT, make it an appropriate and effective means for reestablishing balance and quality in an increasingly disembodied and quantified world.

As previously stated, DMT calls for the client to engage in a process wherein instant gratification is not promised. This inherently allows the practice to support individuals in increasing their thresholds for single-tasking and overall attention span. Based on the evidence presented in this paper, it is reasonable to infer that when individuals are able to endure and commit to long-term processes, they increase the range of experiences, and relationships, that are available to them. Engaging in a process that takes place over time is also a way of limiting the quantitative perspective and making space for quality as measuring factor. This is to say that the act of focusing on one process over time calls for the individual to let go of the achievement mindset and engage with the quality of experience; noticing the “what” and “how” rather than the “how many”.

Dropping into this level of engagement also offers the opportunity to develop resources for self-acceptance and self-validation. Given the engrained desire for instant validation in today’s culture, it is all too easy to place the power of determining one’s value in the hands of an online community. The accumulation of quantifiable “likes” and “comments” has become a way in which individuals assess their own value, however the instant nature of these acknowledgements may not be as rewarding as earning and cultivating value from other sources. By engaging in, and therefore at some level accepting, one’s own process, the individual can begin to bridge the gap between their process and their identity. In accepting a process that involves one’s whole self - body, mind, and spirit - the line between process and self can begin to blur. For example, if one can accept their body in the process of exploring movement, perhaps one can begin to accept their body in other contexts as well. This self-acceptance may serve as a foundation for self-validation. When one is not looking

to collect instant-validation and acknowledgment as a commodity, the nature of interpersonal exchanges can shift.

In highlighting the epidemic of loneliness many people are facing despite “being more connected than ever,” Harris (2015) emphasizes that loneliness is about the “quality rather than quantity of relationships” (para. 8). As this paper has explored, moving away from the quantifiable definition of “connection” and toward the qualitative concept of “relationship,” may serve to meet and satisfy those experiencing loneliness in their lives.

DMT is able to support this shift from interpersonal “connection,” as it’s understood in this paper, to interpersonal “relationship” through attunement and kinesthetic empathy. As the work of Cozolino (2010) earlier mentioned in this paper demonstrates, attunement and kinesthetic empathy, on a neurological basis, are the foundation of meaningful bonds and relationships. Engaging in the practice of DMT, either in a group or in a client-therapist dyad, offers the opportunity to develop and experience the mutual awareness and emotional resonance that is born of full-sensory communication.

Moving Forward

Helgesen’s (2001) observation that individuals have begun to seek out mind-body practices as a means of coping with the nature of today’s environment, serves as a suggestion that many have begun to identify the ramifications of technology and desire to counteract them. Another desire for change and balance can be seen in the findings of Turkle (2012). After conducting interviews with over 300 children and 150 adults, Turkle (2012) found that in many cases, children were often the ones who took issue with their parents’ “obsession” with technology. Of these children, many felt their parents paid more attention to their

Smartphone than to them and reported that they often neglected to interact with them face-to-face until they had finished responding to messages (Turkle, 2012).

As the consequences of an increasingly technologically dependent environment continue to reach the lives and relationships of so many, it becomes ever more vital to understand their nature. When these consequences are understood, on an interpersonal and intrapersonal basis, it becomes more and more possible to meet them with a solution. As this paper has touched upon, one such solution is choosing embodiment; and one such avenue for that choice is Dance/Movement Therapy.

References

- About Dance/Movement Therapy (2016). Retrieved from the American Dance Therapy Association (ADTA) website: www.adta.org
- American Psychological Association (2006). Multitasking: Switching Costs. *American Psychological Association*. Retrieved from: <http://www.apa.org/research/action/multitask.aspx>
- Aposhyan, S. (2007). *Natural intelligence: Body-mind integration and human development*. Boulder, CO: Now Press.
- Barth, F. D. (2012). Why Boundaries are Important. *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/blog/the-couch/201210/why-boundaries-are-important>
- Bingham, J. (2014). 'Connected' generation as lonely as the elderly. *The Telegraph*. Retrieved from: <http://www.telegraph.co.uk/news/uknews/11288047/Connected-generation-as-lonely-as-the-elderly.html>
- Burgess, H. (2013). Misunderstandings. *Beyond Intractability*. Eds. Burgess, G. and Burgess, H. Conflict Information Consortium, University of Colorado, Boulder. Retrieved from: <http://www.beyondintractability.org/essay/misunderstandings>.
- Chaiklin, S. & Wengrower, H. (Eds.). (2009). *The art and science of dance/movement therapy: Life is dance*. New York, NY: Routledge.
- Cohen, B. B. (2012). *Sensing, feeling, and action*. Amherst, MA: Contact Editions.

Cohen, J. (2011). You Don't Know One-Fifth of Your Facebook Friends. *Social Times*.

Retrieved from: <http://www.adweek.com/socialtimes/you-dont-know-one-fifth-of-your-facebook-friends/332373>

Collingwood, J. (2012). The Importance of Personal Boundaries. *PsychCentral*. Retrieved

from: <http://psychcentral.com/lib/the-importance-of-personal-boundaries/>

Connection. (1989). In *Oxford English Dictionary online* (2nd Ed.). Retrieved from:

www.oxforddictionaries.com

Cozolino, L. (2006). *The neuroscience of human relationships: Attachment and the developing social brain*. New York, NY: Norton.

Cozolino, L. (2010). *The neuroscience of psychotherapy: Healing the social brain* (2nd ed.).

New York, NY: Norton.

Cruz, R. F. (2011). Introduction to Marian Chase Foundation Lecture October 21, 2011:

Mimi Berger, Lecturer. *American Journal of Dance Therapy*, 34(3-5).

Empathy. (1989). In *Oxford English Dictionary online* (2nd Ed.). Retrieved from:

www.oxforddictionaries.com

Geggel, L. (2015). Fitness Trackers and Smartwatches Attract Totally Different Groups.

LiveScience. Retrieved from: <http://www.livescience.com/49400-fitness-tracker-smartwatch-survey.html>

Green, R. K. (2013). The Social Media Effect: Are you really who you portray online?

Huffington Post. Retrieved from: http://www.huffingtonpost.com/r-kay-green/the-social-media-effect-a_b_3721029.html

- Grosser, B. (2014). What do metrics want? How quantification prescribes social interaction on facebook. *Computational Culture: a journal of software studies*. Retrieved from: <http://computationalculture.net/article/what-do-metrics-want>
- Gunther, R. (2011). Can Text messages Damage Intimate Communication? *Psychology Today*. Retrieved from: <https://www.psychologytoday.com/blog/rediscovering-love/201102/can-text-messages-damage-intimate-communication>
- Harris, R. (2015). The loneliness epidemic: we're more connected than ever—but are we feeling more alone? *Independent*. Retrieved from: <http://www.independent.co.uk/life-style/health-and-families/features/the-loneliness-epidemic-more-connected-than-ever-but-feeling-more-alone-10143206.html>
- Helgesen, S. (2001). *Thriving in 24/7: Six Strategies for Taming the New World of Work*. New York, NY: The Free Press.
- Joinson, A. N. (2001). Self-disclosure in computer-mediated communication: the role of self-awareness and visual anonymity. *European Journal of Social Psychology*, (31, 177-192).
- Lewis, P. (1986). *Theoretical approaches in dance-movement therapy* (Vol. 1). IA: Kendall/Hunt
- Levy, F. J. (Ed.) (2005). *Dance movement therapy: A healing art* (2nd Rev. ed). Reston, VA: AAHPERD
- McGoldrick, M. (2008). *Genograms: Assessment and intervention* (3rd ed). New York, NY: Norton.
- Medco Health Solutions Inc. (2010). America's State of mind: a report by medco. Retrieved from: <http://apps.who.int/medicinedocs/documents/s19032en/s19032en.pdf>

Mulvihill, A. (2011). Measuring the Value of a Facebook 'Like'. *EContent*. Retrieved from:

<http://www.econtentmag.com/Articles/News/News-Feature/Measuring-the-Value-of-a-Facebook-Like-76422.htm>

Muther, C. (2013). Instant Gratification is Making Us Perpetually Impatient. *The Boston*

Globe. Retrieved from: <https://www.bostonglobe.com/lifestyle/style/2013/02/01/the-growing-culture-impatience-where-instant-gratification-makes-crave-more-instant-gratification/q8tWDNGeJB2mm45fQxtTOP/story.html>

Perrin, A. (2015). One-fifth of Americans report going online 'almost constantly'. *Pew*

Research Center. Retrieved from: <http://www.pewresearch.org/fact-tank/2015/12/08/one-fifth-of-americans-report-going-online-almost-constantly/>

Preciado, P., Snijders, T., Burk, W.J., Stattin, H., Kerr, M. (2012). Does proximity matter?

Distance dependence of adolescent friendships. *Social Networks*, 34, 18-31.

Relationship. (1989). In *Oxford English Dictionary online* (2nd Ed.). Retrieved from:

www.oxforddictionaries.com

Reynolds, D. (2012). *Kinesthetic empathy in creative and cultural practices*. Chicago, IL:

Intellect, The University of Chicago Press.

Silverman, J. (2015). 'Pics or it Didn't Happen' – The Mantra of the Instagram Era. *The*

Guardian. Retrieved from: <http://www.theguardian.com/news/2015/feb/26/pics-or-it-didnt-happen-mantra-instagram-era-facebook-twitter>

Society for Neuroscience (2008). Mirror Neurons. *BrainFacts.org*. Retrieved from:

<http://www.brainfacts.org/brain-basics/neuroanatomy/articles/2008/mirror-neurons/>

- Taylor, J. (2011a). Is Technology Stealing Our (Self) Identities? *Psychology Today*.
Retrieved from: <https://www.psychologytoday.com/blog/the-power-prime/201107/technology-is-technology-stealing-our-self-identities>
- Taylor, J. (2011b). Technology: Myth of Multitasking. *Psychology Today*. Retrieved from:
<https://www.psychologytoday.com/blog/the-power-prime/201103/technology-myth-multitasking>
- Turkle, S. (2011). *Alone in the crowd*/Interviewer: M. Price [Transcript]. Retrieved from:
<http://www.apa.org/monitor/2011/06/social-networking.aspx>
- Turkle, S. (2012). *Alone Together: Why We Expect More from Technology and Less from Each Other*. New York, NY: Basic Books.
- Turkle, S. (2015). *Reclaiming Conversation: The Power of Talk in a Digital Age*. New York, NY: Penguin Press
- Watson, A. M., Meade, A. W., Surface, E. A., & VandeWalle, D. (2007, April). Are Goal Orientation comparisons appropriate between American and Korean Groups? Paper presented at the 22nd Annual Meeting of the Society for Industrial and Organizational Psychology, New York.
- Yalom, I.D., & Leszcz, M. (2005). *Theory and practice of group psychotherapy* (5th Ed.). New York, NY: Basic Books.
- Young, K.S. & Rodgers, R.C. (1998). The relationship between depression and Internet addiction. *CyberPsychology & Behavior*, 1(1), 25-28.