

THE PENNSYLVANIA STATE UNIVERSITY

SCHREYER HONORS COLLEGE

DEPARTMENT OF KINESIONLOGY

MEANING IS MEDICINE:
AN ANALYSIS OF MEANING AND ITS POTENTIAL TO HEAL AND TRANSFORM

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Spring 2012

A thesis submitted in partial fulfillment of the requirements
for a baccalaureate degree in Kinesiology with honors in Kinesiology

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Abstract

Health care professionals are constantly striving to improve medicine in order to better treat their patients. One recent enhancement effort called “Exercise is Medicine” encourages physicians to prescribe exercise as a way to maintain and improve patient health. This thesis suggests a more holistic alternative to the “Exercise is Medicine” campaign which I label “Meaning is Medicine”. Using a variety of texts as support, I address the characteristics of meaningful experience, the process of meaning development, the evolution of meaning, and finally the significance of meaningful movement in our lives. The practical application of this research suggests that meaningful rather than simply mechanical medical movement more effectively promotes the entire well-being of the individual. Since human beings are meaning seeking creatures who are moved and transformed by meaningful experience, it is important to maintain such experience at the center of medical treatment and activities.

Table of Contents

Introduction:	1
Characteristics of the Deweyan Experience:	4
Meaning Seeking in Musical Expression – Ways of the Hand.....	11
Meaning Seeking in Mystical Experience – Zen and the Art of Archery	14
Piano, Archery, Meaning Seeking and the Deweyan Experience	18
Polanyi’s Theory of Meaning	21
Conclusion:.....	28

Introduction

Recently health care providers and exercise professionals have made an effort to promote physical activity and exercise as a standard component of disease prevention and treatment in the United States. For instance, in 2007 the American Medical Association (AMA) and the American College of Sports Medicine (ACSM) launched a campaign called “Exercise is Medicine” which encourages physicians to prescribe exercise for their patients (Botsford, 2009, p. 67). Robert Sallis, 2007-2008 President of ACSM and current chair of the Exercise is Medicine Task Force, summarizes the initiative stating: “Regular physical activity, at the correct intensity, is so powerful in maintaining and improving health that it should be prescribed, just as a medicine or drug would be” (Hutber, 2011). As a result of current research regarding the significant effects of exercise on disease prevention and healthy aging, the “Exercise is Medicine” initiative is rapidly spreading to medical, health, and wellness communities. Increasing awareness of the health benefits associated with exercise is evident through countless programs that have adopted the principles of exercise prescription. For example, in 2008, Brookdale Senior Living began developing its own wellness awareness program called “Movement is Medicine” for the residents in senior living communities. The program is based on the ACSM’s campaign for exercise prescription and the latest exercise guidelines for older adults. Like Exercise is Medicine, Brookdale’s program emphasizes exercise benefits such as lowered blood pressure and cholesterol, controlled blood sugar and weight, and improved blood flow, bone strength, and memory (Botsford, 2009, p. 67).

ACSM’s Exercise is Medicine initiative contributes greatly to increases in activity levels of individuals who would otherwise remain sedentary and to decreases in risk for a wide range of chronic diseases (Hutber, 2011). Yet, it limits the value and benefits of movement to physical and mechanical aspects. While exercise prescription has demonstrated numerous benefits, such efforts that promote human health in terms of mechanical well-being and efficiency fail to account for all aspects of human

health. In other words, by promoting health mechanistically we target only one aspect of the human being and, because of that, promote wellness less effectively.

Although Brookdale Senior Living follows similar principles as those suggested by ACSM, their mission indicates a step towards a more holistic approach to health and wellness: “The Optimum Life initiative [...] offers a lifestyle that allows residents to achieve whole-person wellness. At Brookdale, these dimensions include physical, emotional, social, spiritual, purposeful and intellectual wellness” (Botsford, 2009, p. 67). The exercise program at Brookdale Senior Living is a prime example of an effort to promote a kind of wellness that surpasses what was previously identified as mechanistic wellness. Individuals leading the program at Brookdale strategically chose the phrase *Movement is Medicine* in order to support the Optimum Life initiative and encourage residents to find alternative ways to fill certain physician-recommended exercise prescriptions. Yet to promote health holistically, an additional step must be taken away from the mechanistic and toward the meaningful. In this paper, I propose such a holistic approach and make a case for “*meaning as medicine*”. An approach to healthcare that revolves around this recognizes human beings as meaning-seeking, moving individuals and suggests that meaning has medicinal power as well as other values that transcend but influence physical health.

The subject of meaning as medicine is not an easy one to broach without first discussing the rudimentary concepts and theories regarding meaning itself. We often find ourselves pondering what meaning is, whether an intangible entity like meaning truly exists, and if indeed it does exist, what exactly constitutes something that holds meaning. For this reason it is necessary to understand what meaning is, how it is developed, and how it relates to the human experience before addressing how meaning can promote holistic human health. In the following section, I rely heavily on John Dewey’s book *Art as Experience* in order to discuss what constitutes a meaningful experience and how one can convert ordinary sensation and experience into something that matters. Dewey identifies an esthetic

experience as one that involves interaction between a creature and some aspect of the world, that maintains a balance between undergoing and doing, and that has a pattern and structure. He also describes factors that constitute higher quality experiences such as unity, fulfillment and the flowing together of successive parts.

Following a discussion of Dewey's notions of meaning, I will use examples from Sudnow's *Ways of the Hand: The Organization of Improvised Conduct* and Herrigel's *Zen in the Art of Archery* to demonstrate that meaning development is not merely the result of a decision but a process that leads to qualitatively different experiences that can touch or move a person right down to their meaningful roots. Sudnow and Herrigel provide clear depictions of how meaning happens in both artistic and physical activities and demonstrate the meaningful experience that Dewey attempts to clarify in his chapter "Having an Experience."

I will also use Michael Polanyi's theory of meaning as a framework for determining different levels of meaning and value. Polanyi takes the position that the development of meaning is both conscious and intentional. The development of significant and meaningful experience requires a person to integrate a certain set of subsidiaries such as skills, self-knowledge, and sensory input toward a focal target or intended object. In a sense, experiences are made from the self or individual to the object of interest. According to Polanyi, a reciprocal relationship between the individual and the playground provides continual growth, further understanding, and enhanced development of meaning.

A final analysis will bring together these readings on meaning to demonstrate how medical interventions based in meaning can be used to treat the whole individual. This view looks beyond mechanics to take a more holistic approach to human movement. The development of significant experience along with the evolutionary roots of meaning demonstrate how human beings have moved beyond a purely mechanistic state to become meaning seeking creatures. As individuals with meaning

at the center of our existence, it is important to focus not simply on promoting movement but on encouraging movement that is personally significant.

Characteristics of the Deweyan Experience

In his work *Art as Experience*, Dewey provides a comprehensive account of the phenomenology of esthetic and artistic experience. His approach recognizes the intricate complexities of experience. Dewey's analysis of an experience is centered on "the live creature in its environment" which relates to Heidegger's formulation of Being-in-the-World (Leddy 2011). This concept involves the division between subjective and objective and the ability to demonstrate openness to the world. While Dewey strives to outline the qualities of what he labels "an experience," he does not follow contemporary analytic philosophy or commit to a precise definition. Nor does he employ a relativistic view that indicates principles relating to the lived experience are applicable in a limited context with no objective truth value. Rather, Dewey presents esthetic experiences as evolving truths that are subject to refinement and further sophistication. Dewey's presentation of the definition, quality and interactive and dynamic characteristics of experience in his chapter "Having and Experience" can shed light on the ambiguous subject of meaning, therein providing a basis that will lead into a discussion of meaning as medicine.

Dewey first broaches the subject of experience by defining everyday experience using phenomenological language. While "the interaction of live creature and environing conditions" forms the basis of experience, it also contributes greatly to the sequences of everyday living (Dewey, 1980, p. 36). Therefore, in one sense, experience is a continuous, normal feature of wakeful life. Yet this statement creates the image of an obscure, uninterrupted progression of events that are connected only by a single, common beginning and end. Dewey rejects this view of experience and instead states that experience is defined by the situations that stand out as real or significant and whose moments run

together freely until completion (1980, p. 37). While the individual parts of an experience remain distinct, they flow together in a way that allows the successive portions to be identified as a whole entity. Dewey states: "The existence of this unity is constituted by a single quality that pervades the entire experience in spite of the variation of its constituent parts" (1980, p. 38). Although the series of events that make up an experience manifest both diversity and transformation, there remains a certain overwhelming feel that marks an experience as "whole, continuous, and meaningful" (Alexander, 1998, p.15). A series in which preceding and subsequent incidents unite under an all-encompassing quality is esthetic. In a similar way, each individual experience maintains its identity while also being integrated into the general flow of experiences that constitute daily life.

Dewey labels two instances that lead to an experience which is non-esthetic. First, experience can lose its esthetic quality when activity becomes too automatic or mechanical. In such an experience there is a lack of sensation relating to what the activity is about. The experience has no uniting consummation of events but only a confined series of instances that lack integration. On the opposite end of the spectrum lies a second instance, aimlessness, which is characterized by uncertainty and inconclusiveness and involves a loose succession of events with no particular beginning or ending. Dewey asserts, "Rigid abstinence, coerced submission, tightness on one side and dissipation, incoherence and aimless indulgence on the other, are deviations in opposite directions from the unity of experience" (1980, p. 42). Between these two poles of the non-esthetic experience lies a mean course of action. Dewey labels this half-way point as the integral or esthetic experience "in which through successive deeds there runs a sense of growing meaning conserved and accumulating toward an end that is felt as accomplishment of a process" (1980, p. 40). The spectrum lays out the differences between esthetic and non-esthetic experience and again emphasizes the importance of integration of successive events through a durable quality. It also suggests the significance of movement toward a united end which results in a consummatory experience.

The development towards complete union, which is inherent in esthetic experience, can involve certain qualities in addition to those previously discussed. First of all, struggle and conflict are often linked with the integral experience, occurring throughout the various stages of meaning development. Some form of suffering serves as a means for growth, maturation, and reconstruction. While struggle and pain often indicate maturation and forward motion toward some end, they alone do not define an esthetic experience. In some cases, an integral experience may lack such difficulties as discussed above. Therefore, struggle and pain are potential characteristics, but not necessary constituents, of the esthetic experience.

Similarly, experiences that involve significant emotional states can have esthetic character without necessarily being an esthetic experience. In some cases, emotions relate almost entirely to automatic reflexes such as fright and embarrassment. These physiological reactions are not the same as the emotion involved in esthetic experience. Dewey states; "In order to become emotional [such reflexes] must become parts of an inclusive and enduring situation that involves concern for objects and their issues" (1980, p. 44). Emotion, when involved in an esthetic experience, is not directed by impulse or demand. Rather, it attaches to and moves with the events of an experience. Emotional expression replaces raw emotional states when coordination and relationship with the world is established. As a result, "[m]eaningless organic energy is transformed into meaningful, conscious, experience. In this process both self and world become imbued with felt, emotionalized, or expressive significance" (Alexander, 1998, p. 10). Emotional expression that is integrated with a situation and with the world becomes meaningful in comparison to simple physical reactions that lack relationship. These integrated emotions contribute greatly to the moving and changing esthetic experience and provide unity throughout the succession of events. The resulting unity is what gives a certain experience esthetic character.

Although both struggle and emotion contribute to the quality of experience, they are not essential to its development. To further clarify the distinctiveness of the sort of experience he wishes to discuss, Dewey presents a more specific structure of experience. The form of Dewey's experience contains two significant components. Since "every experience is the result of interaction between a live creature and some aspect of the world in which he lives," the first component is the relationship between undergoing and doing (Dewey, 1980, p. 45). When an individual acts toward his surroundings, he will inevitably undergo certain suffering, moving, or development as a consequence. Another action or doing phase will follow, escalating the undergoing and doing to a continuous pattern of interaction.

The second component of Dewey's experience consists of a tendency towards integration which completes the interaction between the individual and environment and harmonizes the succession of events that make up the experience. "Thus," explains Alexander, "every experience which is *an* experience is a consummation, a bringing to completion, in which the world opens itself to us and reveals a felt or sensed meaning and embodied value" (1998, p. 14). The two structural components of experience occur in constant relationship with one another: In significant situations, undergoing and doing become related in a way that joins them in perception. This integration resulting in a whole perception ultimately gives meaning to an experience.

In order to understand the significance of this relationship and how it can provide meaning, it is necessary to explore more thoroughly the undergoing and doing phases of experience and how the two can become integrated in the flow of experience. The undergoing phase of experience can be described as a "rhythmic dance with our environment" which involves openness, vulnerability, and outwardly directed needs (Alexander, 1998, p. 8). It requires receptivity towards the world in order to take in preceding events and experience meaningful growth. Suffering is closely related to the undergoing phase because it leads to the kind of growth that contributes to "an experience." This relationship

between suffering and undergoing implies that “[t]o be able to experience the world we must be willing to be wounded by it” (Alexander, 1998, p. 13). However, an excess of the undergoing phase may limit experience. Surplus receptivity leads to inclusion of numerous impressions without taking into account the perception of meaning (Dewey, 1980, p. 46). The doing phase balances this receptivity and allows for the restoration of meaningful experience. Doing occurs when the subject acts or reacts to the environment. Yet this phase also involves “responding, organizing our energies toward the world in a coordinated, discriminating way” (Alexander, 1998, p. 9). Unbalance on the doing side involves a rushed and dispersed flow of events and results in the inability to live out an entire experience before the next commences. Only when there is balanced interaction between undergoing and doing can we experience in a way that is meaningful.

The main purpose of Dewey’s chapter “Having an Experience” is to provide a thorough description of an “esthetically consummated experience” (Alexander, 1998, p. 13). In such an experience, events are connected in a growing, changing, developing flow that converges toward an integrated completion. Integration of successive events provides an experience with a certain feel or quality that sets it apart from ordinary experience. For such integration to occur, an experience must sit somewhere between mechanical efficiency and aimlessness. It must involve a relationship between an individual and the world that demonstrates characteristics such as suffering, emotion, interaction, and progress. “The perceived relationship between the phases of experience which are had or undergone and are done,” ultimately brings a flow of events together as a consummatory experience (Alexander, 1998, p. 16).

Through his definition of esthetic experience, Dewey draws conclusions about a meaningful existence. For instance, Dewey suggests that “human life is guided by a desire to experience the world in such a way that the sense of meaning and value is immediately enjoyed” (Alexander, 1998, p. 3). The

concept of esthetic experience indicates that we are intelligent beings with the ability to perceive significant relationships within the flow of events of our lives. We are meaning-seekers who interact with the world and experience life as a culminating integration of acting and receiving. Yet, our search for meaning is often hampered by tendencies to drift towards extremes such as mechanical efficiency and aimlessness rather than maintain balance. Similar inclinations toward utility shift focus from ends that are meaningful to ends that are useful. Furthermore, excessive doing or undergoing impedes our ability to experience the esthetic. Although this list of obstacles makes the attainment of meaningful experience in today's world seem difficult, Dewey provides an example of "the moment in which human alienation is overcome and the need for the experience of meaning and value is satisfied" (Alexander, 1998, p. 4). In his work, Dewey claims that production and appreciation in art bring together the same undergoing/doing relationship as in esthetic experience. The process of producing a work of art first involves perception and awareness of the work that is to come. This is followed by the action of creating and reshaping the work. These two processes become integrated in a dynamic union to form a perceptual whole. Another relationship, between the individual and the world, is apparent in the interaction of the artist with his product. While the work of art may come to a completion, the consummation phase is apparent throughout all stages of the production process (Leddy, 2011). It follows from Dewey's original description of experience that art has the potential to become aesthetic and to create value and meaning. Alexander provides a brief analysis of Dewey's aesthetics in relation to art:

There is an aesthetic and artistic aspect of our ordinary experience which can be developed to a high degree, and the fine arts are living proof of that...operating as a mere refuge from the failure of the rest of our experience to be deeply meaningful. The purpose of aesthetics is to restore continuity between the refined and intensified forms of experience that are works of art and the everyday events, doings, and sufferings that are universally recognized to constitute experience. (Alexander 6)

Here Alexander suggests an application of Dewey's phenomenological account of esthetic and artistic experience. He acknowledges the view that esthetic experience is a complex, intangible concept that has little to do with ordinary life. Yet he demonstrates that a connection between meaningful and ordinary experience is possible. By referring to Dewey's example of the fine arts, Alexander demonstrates that continuity can be restored between the everyday experience and the esthetic. He explains further: "The great moral to be learned from the arts for Dewey is that when ideals cease to be confined to a realm separated from our daily, practical experience, they can become powerful forces in teaching us to make the materials of our lives filled with meaning" (Alexander, 1998, p. 6). Meaning, when applied to our daily lives, can have powerful implications for our overall experience and well-being.

So far, I have only addressed esthetic experience in the realm of art production and appreciation which serves as Dewey's prime example. However, the development of ordinary events to a higher degree of experience becomes evident in areas beyond the fine arts as well. Alexander interprets Dewey's description of "art as experience" by stating that such a high quality experience is not separate from the happenings of our daily lives. In the following sections, I will discuss the works of David Sudnow and Eugen Herrigel, highlighting how both individuals came to develop memorable experience within two diverse activities. Although neither work is intended as a manifestation of esthetic experience, both authors describe a quest for meaning in a particular motor activity that overlaps with the Deweyan concepts discussed in *"Having an Experience"*. Through comprehensive descriptions of relationship with a certain activity and journey through skill development, Sudnow and Herrigel confirm Dewey's description of esthetic experience, support Alexander's claim that heightened experience can be found anywhere in our lives, and introduce the relationship between meaning and movement.

Meaning Seeking in Musical Expression – Ways of the Hand

Sudnow's account, *Ways of the Hand*, describes the process by which he strives for meaningful expression through learning to improvise jazz on the piano. Sudnow's journey of skill development begins with simple repetition and acquisition of basic abilities that form the foundation for progression. His initial experience of jazz piano involves rote learning. In his attempt to become a jazz pianist, Sudnow decides to renew his elementary relationship with the piano. With only a basic understanding of the instrument, Sudnow approaches the relationship by meticulously breaking down particular chords and subsequently forcing each of his fingers onto the correct keys. Once he establishes a decent hold on a variety of chords, Sudnow progresses to clustering chords into melodies and attempts to reproduce the sounds of a jazz soloist:

The extraordinary difficulties of a first solo-copying attempt, trying to find the tiny spot on the record again and again, endlessly rehearsing the same minuscule passage to narrow in on its notes, finding those places on the piano, working out a fingering solution that didn't just play the right notes but with the right time values – after a major struggle I sensed this wasn't the way to go, at least for me (Sudnow, 2001, p. 20).

At this early stage of skill acquisition, Sudnow's main method of learning appears to be focused on the technicalities associated with the complex skill of making music. He attempts to mechanically imitate the movements and techniques of another musician in order to produce a jazz-like sound. However, he struggles to achieve proper improvisation using this technique. Although this beginning stage of learning may appear as a failed attempt, the development of primitive meanings in jazz is the necessary basis for attaining higher levels of significance.

In the next section of his account, Sudnow gets a sense of meaningful expression through the mystery of sounds. Sudnow describes a method called "going for sounds" in which he directs his attention to the sounds that he wants to make, rather than breaking down each chord, transition, and

progression. Sudnow highlights a specific instance that relates to his experience with the keyboard and plays an essential role in his progression towards making music:

I specifically recall playing one day and finding, as I set out into a next course of notes after a liftoff had occurred, that I'd expressly aimed for the sounds of these particular notes, that their sounds seemed to creep up into my fingers, that the depression of the keys realized a specific sound I'd gone there to make, as if when walking one brought intentional regard to the sound of one's steps, expressly then doing each and every one of their successive sounds, as in a march. I wasn't going for good places. I was aiming for sounding spots (Sudnow, 2001, p. 40).

This new technique gives Sudnow the ability to explore and to experiment with the endless jazz sounds available at the piano. Instead of remaining chained to the same notes, Sudnow can reach for new territories all the while incorporating various patterns and techniques that he accumulated along the way. The resulting sound vaguely resembles that of improvisational jazz. As Sudnow listens for sounds and reaches for unexplored areas on the keyboard, his hands demonstrate a unique connection with the piano:

Look to what my hands were learning. As I found next sounds coming up, it wasn't as though I'd so learned about the keyboard that by looking down I could tell what a regarded note would sound like. I don't have that skill, nor do many other musicians. I could tell what a note would sound like because it was a *next* sound, because my hand was so engaged with the keyboard that through its own configurations and potentialities it laid out a setting of sounding places right up ahead of itself (Sudnow, 2001, p. 47).

This newly formed relationship between the hand and the piano plays a role throughout the rest of Sudnow's account because it initiates a reciprocal relation between Sudnow and the piano. Sudnow begins to move with his hands as they travel across the keyboard to find the next sound that will work to continue or complete a certain phrase or melody. While his hands act on the keyboard, Sudnow absorbs the sound created by the piano. When a note or chord is played, Sudnow internally sings the sound that is to follow. His hands react almost immediately, following a path along the keyboard that produces the desired sound. This continuous relationship creates a flow of hearing, singing, and playing of sounds

and indicates that Sudnow is not living toward his hands but rather *as* his hands. For Sudnow, such a relationship is the key to creating a melody that comes close to the meaningful expression of jazz.

While it is clear that Sudnow's evolving relationship with the piano in addition to the technique of going for sounds enhances his ability to create a jazz-like sound, he continues to struggle in his attempts to obtain a complete mastery of jazz improvisation. Sudnow indicates that his endeavors sound strained, as if he is "trying hard to say something" and "striving to make a saying happen" (Sudnow, 2001, p. 49, 52). He is unable to completely let go and allow the relationship of hearing, singing, and playing to take over the jazz. Sudnow also confesses to remaining "engrossed in continuous analytic thinking" and trying to repeat passages that he had previously heard or played (Sudnow, 2001, p. 55). He appears to attribute the majority of his struggles to his inability to move forward with the flow of the jazz and to avoid mechanical over analysis and repetition.

In the final section of his account, Sudnow describes how he comes to master the skill of jazz improvisation. He refers to this final stage of skill acquisition as "going for the jazz." At this level, Sudnow recognizes short bursts of jazz that emerge intermittently throughout his practice sessions. Yet once he senses an acceptable, good-sounding bit of jazz, Sudnow seems to lose it in the midst of his concentration. Although at this stage the occurrence of good jazz is short lived, Sudnow explains that "an essence of the experience was tasted with a 'this is it' feeling, like a revelation" (Sudnow, 2001, p. 76). Sudnow begins to understand jazz improvisation on a higher level, recognizing that it is more than simply a skill to be acquired. He embraces the continuous flow of melody that weaves effortlessly beyond his comprehension:

Watching from above and seeing a stretch of action occur in a way that almost prompted me to exclaim "some jazz just came out!" prophesied a way of doing these notes so that they'd appear just to come out. A sense grew of finally being onto something, and I'd search for just the way to proceed. Small indications became targets, glimpses of what the way of being would somehow have to achieve (Sudnow, 2001, p. 77).

These “glimpses” of jazz incorporate the growing relationship between Sudnow, the piano, and the sounds that they produce together:

A new sort of hookup between the singing me and my hands was developing, as next sounds I’d project began to come under the hands’ jurisdictional review of their own positional readiness, as where we were going together slowly began to integrate into an altogether different way of doing singing at the piano: a new way for intentions to be formed, a more refined synchrony and bidirectionality of linkage being forged between my head’s reach for sounds’ places and my fingers’ reach for singable ones (Sudnow, 2001, p. 85).

Sudnow refers to a connection that transcends the mechanical method of placing the right finger on a certain key to produce a particular sound. He again represents the relationship of the hand and piano as a continuous flow of hearing, singing, and playing sounds. To end his account, Sudnow leaves his audience with a final picture of this newfound method of producing jazz:

From an upright position I look down at my hands on the piano keyboard during play with a look that’s hardly a look at all. But standing back, I find that I proceed through and in a terrain nexus, doing singings with my fingers, so to speak, a single voice at the tip of the fingers, going for each next note in sayings just now and just then, just this soft and just this hard, just here and just there, with definiteness of aim throughout, taking my fingers to places, so to speak, and being guided, so to speak. I sing with my fingers, so to speak, and only so to speak, for there’s a new being, *my body*, and it is this being (here too, so to speak) that sings (Sudnow, 2001, p. 130).

Here Sudnow highlights his progression beyond controlling the movements of his fingers to singing and moving *with* his fingers. Throughout his experience, Sudnow becomes one with his body, his movements, the jazz sounds, and the keyboard. It is through this relationship, this continuous flow of melodic and bodily reciprocation, that Sudnow discovers the ways of the jazz improvisation and expression.

Meaning Seeking in Mystical Experience – Zen and the Art of Archery

Unlike Sudnow who begins his journey with the intention of acquiring the skills necessary to improvise jazz on the piano, Herrigel initiates his path to discovery with the purpose of attaining a state

of true detachment through the disciplines of Zen Buddhism. Herrigel's decision to take up the art of archery lies in his desire to understand mystic phenomena. After extensive research, Herrigel decides that in order to truly comprehend the topic of mysticism, he must experience the practices of Zen first-hand. Guided by Zen Master Kenzo Awa, Herrigel begins his attempt to understand Zen through the art of archery. Herrigel's lessons take him on a journey of motor skill development that results in a transcendental experience similar to that of Sudnow.

Herrigel begins his account by describing the difficulties and inhibitions that a student experiences when he first begins instruction in Zen. He highlights the struggle involved even in the early stages of instruction:

No mystic and no student of Zen is, at first step, the man he can become through self-perfection. How much still has to be conquered and left behind before he finally lights upon the truth! How often is he tormented on the way by the desolate feeling that he is attempting the impossible (Herrigel, 1981, p. 9).

Herrigel indicates that the experience of Zen that can be achieved through archery is inaccessible to those who have not first gone through the painful transformation of self-perfection. This journey ultimately requires a letting go of the self and a concentration of all physical, psychological, and worldly forces. This is done using archery as a vehicle. Herrigel outlines the steps involved in archery in the early pages of his account:

The unified process of drawing and shooting was divided into sections: grasping the bow, nocking the arrow, raising the bow, drawing and remaining at the point of highest tension, loosing the shot. Each of them began with breathing in, was sustained by firm holding of the down-pressed breath, and ended with breathing out. The result was that the breathing fell into place spontaneously and not only accentuated the individual positions and hand-movements, but wove them together in a rhythmical sequence depending, for each of us, on the state of his breathing capacity. In spite of its being divided into parts the entire process seemed like a living thing wholly contained in itself [...] (Herrigel, 1981, p. 21).

Herrigel indicates that only when a student learns to merge the divided sections of drawing and shooting will the meaning and character of the experience be complete. While breathing emphasizes

the division between each step in drawing and shooting, it simultaneously brings them together so that they flow perfectly and effortlessly into one swift shot. Evidently, this concept of concurrent separation and union is difficult for a beginning archer to achieve let alone understand.

Along with the combined distinctiveness and connectedness of the components of shooting, Herrigel discusses the importance of an element of surprise regarding the release of the bowstring. Herrigel quotes his Master who explains, “The shot will only go smoothly when it takes the archer himself by surprise. It must be as if the bowstring suddenly cut through the thumb that held it. You mustn’t open the right hand on purpose” (Herrigel, 1981, p. 29). With this statement, the Master indicates that anticipation and premature action can ruin a shot. In addition, the Master warns Herrigel against releasing his hand in a premeditated, mechanical way. The Master suggests an approach that involves receptivity rather than activity. He reinforces this concept of receptivity when he critiques Herrigel’s early attempts at archery: “The right shot at the right moment does not come because you do not let go of yourself. You do not wait for fulfillment but brace yourself for failure” (Herrigel, 1981, p. 30). At this point in his lessons, Herrigel is unable to relax when attempting to shoot an arrow. Rather than waiting and letting the right shot happen, he strains his body, attempting to remain in control of the bow. He focuses on physical restraint rather than breathing and receptivity. Herrigel experiences neither oneness with the bow nor completeness of his actions, but instead feels tension and struggle as he fights for a good shot. Herrigel comments on his struggles during the beginning stages of his journey:

There followed weeks and months of fruitless practice. I could take my standard again and again from the way the Master shot, see with my own eyes the nature of the correct loose; but not a single one succeeded. If, waiting in vain for a shot, I gave way to the tension because it began to be unendurable, then my hands were slowly pulled together, and my shot came to nothing. If I grimly resisted the tension till I was grasping for breath, I could only do so by calling on the arm and shoulder muscles for aid. (Herrigel, 1981, p. 29).

Just as Sudnow tries to replicate the improvisation techniques of the jazz artists that he listens to, Herrigel attempts to mechanically decipher the way his Master shoots an arrow. Like Sudnow, Herrigel

eventually realizes that his efforts through this form of practice produce limited results. Although learning the mechanics of the shot is a critical starting point, transcendence of the technicalities of procedure is necessary in order to perform the skill meaningfully. As long as his practice involves tension, and premature action, Herrigel is unable to experience a good shot.

Over time, Herrigel begins to absorb the Master's suggestions about letting go of self and waiting patiently for the shot to come. Herrigel eventually shifts his focus from copying his Master's movements toward releasing his mind and body from the restraints of technical effort. As Herrigel, like other successful students of Zen, becomes aware of a certain coming together of forces, the skill of archery becomes spiritual rather than mechanical. Looking back on his journey, Herrigel discusses the shift from technical to inward focus.

“[...] [T]he right frame of mind for the artist is only reached when the preparing and the creating, the technical and the artistic, the material and the spiritual, the project and the object, flow together without a break. And here he finds a new theme for emulation. He is now required to exercise perfect control over the various ways of concentration and self-effacement. Imitation no longer applied to objective contents which anybody can copy with a little good will, becomes looser, nimbler, more spiritual. The pupil sees himself on the brink of new possibilities, but discovers at the same time that their realization does not depend in the slightest degree on his good will” (Herrigel, 1981, p. 43).

Herrigel indicates that the spiritual experience of skill involves an effortless and undisturbed concentration that consummates all aspects of the experience and allows for the realization of new possibilities. He describes what such a spiritual experience might feel like in archery: “Bow, arrow, goal and ego, all melt into one another, so that I can no longer separate them. And even the need to separate has gone. For as soon as I take the bow and shoot, everything becomes so clear and straightforward and so ridiculously simple...” (Herrigel, 1981, p. 61). It is evident that Herrigel's experience at this stage of training differs significantly from his original experience during which he expressed his effortful struggles to control the bow and his intentional movements to release each shot.

Whereas originally the bow felt awkward and cumbersome to Herrigel, it now appears to be an extension of his own body which he can control without difficulty. Just as one can proprioceptively sense the relative positions of his body parts without voluntarily thinking, Herrigel can feel when each shot should be loosed and where it should be directed. Through his relationship with the bow and arrow in which acting and receiving flow continuously from hand to bow to target, Herrigel comes to achieve a spiritual experience in the art of archery.

The final step in Herrigel's journey involves letting go of the ego to achieve a state of selflessness. In Zen Buddhism, mastery is a result of the inward turning of the pupil so that training and shaping result not only in skill acquisition but also in the discovery of some boundless Truth. Herrigel's Master comments on the transformation of his pupil saying, "You have become a different person in the course of these years. For this is what the art of archery means: a profound and far-reaching contest of the archer with himself" (Herrigel, 1981, p. 65). Through the art of archery, Herrigel undergoes challenge and struggle which result in a transformation that goes beyond simple skill development. Ultimately his journey leads to a spiritual experience which involves a letting go of the self and a discovery of wholeness of body and bow as well as action and receptivity.

Piano, Archery, Meaning Seeking and the Deweyan Experience

Through the transformation stories of Sudnow and Herrigel, it is evident that Deweyan experience or at least certain elements of it are not exclusive to the domain of the fine arts. These two accounts address different skills, yet are similar in that they both apply the characteristics of esthetic experience to the process of skill development. Here I will review how the unique dimensions of Dewey's experience relate to both jazz improvisation and the art of archery in a way that produce not only skill, but also meaning.

As stated earlier, Dewey considers two instances on opposite ends of a spectrum that impede the occurrence of an experience. Experiences lose their esthetic quality when they become too mechanical or, conversely, too aimless. Sudnow and Herrigel provide detailed examples of how concentrating on technicalities can inhibit an individual's ability to achieve an esthetic experience within a certain activity. In the beginning stages of skill development, both Sudnow and Herrigel attempt to mimic the mechanics of their teachers. While Sudnow scrupulously places his fingers in certain places on the keyboard and tries to repeat progressions that he hears in the recordings of famous jazz artists, Herrigel concentrates on physically restraining the bow and trying to determine when he should release it. Both men meet continuous struggle and frustration in their attempts to experience their respective activities through technical and effortful mastery. However, it is important to note that this beginning phase of skill development is full of what we can consider primitive meanings that will eventually lead to deeper encounters with significance. At a certain point, Sudnow and Herrigel surpass such primitive meanings and strive for greater forms of expression within their prospective skills.

Sudnow's approach shifts to what he calls aiming for sounds. He lets go of rules and form and instead allows the sounds that he hears to carry his hands to new places on the keyboard. Similarly, Herrigel embraces a purposelessness that allows him to wait for the right shot to happen. Yet neither Sudnow nor Herrigel enter into complete aimlessness for both maintain aspects of control and concentration throughout their experiences. Both men experience a series of transcending stages, each one based on the previous level. When they achieve a balance between mechanical activity and aimlessness, Sudnow and Herrigel begin to sense progression to a new level of experience. This escalating progression toward a certain end is manifested by the developing relationship between each man and his activity and environment.

Dewey emphasizes the essential role that such an intensifying relationship plays in the esthetic experience and details the undergoing and doing phases that contribute to a continuous pattern of interaction. In his account, Sudnow describes the development of a unique connection between his hands and the keyboard. In the doing phase Sudnow's hands travel across the keyboard producing sounds. In the undergoing phase, Sudnow hears the sounds from the piano and sings the sound that must come next in order to continue the phrase. His hands respond again by finding the correct notes on the keyboard. This cycle of undergoing and doing involving Sudnow, his hands, and the keyboard occurs continuously to produce a high level of experience in jazz. Herrigel experiences a similar interaction as he develops skill in archery. He learns that in order to make a good shot, he must be receptive as well as active. While Herrigel actively controls the bow with his hand, he must also relax and wait openly for the right moment to release his grip on the bow, string, and arrow. Otherwise he will prematurely loose the arrow. As Sudnow and Herrigel continue to practice in a way that cyclically encompasses both the doing and undergoing phases of the Deweyan experience, they begin to observe the mysterious flow of events that leads to a sort of unity. Such unity achieved through the journey of skill development requires emphasis because essentially the coming together of parts as a whole is what sets the experiences of Sudnow and Herrigel apart from other events.

For Sudnow, the Deweyan experience is finally achieved when he arrives at the sensation that his mind, his body, and the piano communicate effortlessly to produce the sounds of jazz. While each song can be broken into specific chords and techniques, Sudnow experiences the music that he produces as a continuous melody that comes alive through the mutual understanding of himself, his hands, and the keyboard. In a similar way, Herrigel observes the "[b]ow, arrow, goal and ego, all melt into one another" (Herrigel, 1981, p. 61). He feels the components of his shot come together in a complete and unified experience. Both men clearly describe how the elements that contribute to their skills become joined in a way that raises the activity to a higher level of experience, one that Dewey would identify as an

aesthetic experience. The integration and culmination of the experience and skills of the self with the variables of the surrounding world bring meaning to each activity.

Sudnow's experience of improvising jazz on the piano and Herrigel's experience of learning the ways of Zen through the art of archery serve as examples of how Dewey's esthetic experience can develop in various activities as long as they contain certain characteristics. Dewey first maintains that the experience must lie between the two extremes of being mechanical and aimless. Events within the experience merge together in an ever-intensifying series towards completion. The wholeness of the experience sets it apart from other moments in a person's life. Esthetic experience, in Dewey's opinion, also involves a reciprocal relationship between a person and his surroundings. In Sudnow and Herrigel's accounts, we glimpse the characteristics that Dewey most strongly associates with a meaningful experience. In this way, Sudnow and Herrigel's experiences as well as Dewey's discussion of the fine arts point towards meaningful existence and the impact that meaning has on our lives.

Polanyi's Theory of Meaning

While Dewey provides a detailed account of meaningful experience, it is Michael Polanyi who examines the relationship between such meaning and the individual. With the understanding that consciousness is intentional, Polanyi delves into the values of meaning. In his book, *Meaning*, Polanyi investigates "the vast importance [meanings] possess for us through the significance they are able to create in our lives" (1977, p. 65). In the accounts of Sudnow and Herrigel, we witness the emergence of such significance resulting from the development of meaning in a certain activity. This observation may lead us to question how meaning becomes so personal that it transforms our lives in such an immensely deep way. The answer to this question lies in Polanyi's tacit triad of meaning.

Polanyi bases his scheme on the interrelation of three particular concepts. He states that all meaningful experiences are indisputably personal because they "exhibit a triadic structure consisting of

the subsidiary, the focal, and the person” (Polanyi, 1977, p. 64). Subsidiaries, the first component of Polanyi’s triad, include all of an individual’s skills, experiences, sensory input, knowledge, and habits which affect how a person sees things and acts upon situations. An individual’s pool of subsidiaries is constantly expanding and contributing to his knowledge foundation. Even past experience and knowledge that seem to have been forgotten can contribute to a person’s set of subsidiaries (Polanyi 34). In the acquisition of tacit knowledge, subsidiaries bear upon a second component, the focal target, which Polanyi also labels as the point of interest or the matter of concern.

Using the example of skillfully handling a hammer, Polanyi differentiates between subsidiary awareness and focal awareness and then demonstrates how these two forms of awareness contribute to knowledge of a skill. In the example, the subsidiary awareness corresponds to the individual’s attentiveness to the feelings in the hand and fingers as the hammer strikes its mark. The focal awareness refers to when the individual wielding the hammer watches the hand move through space and becomes alert to the effect of the hammer strokes that drive the nail. Although subsidiary and focal are two different types of awareness, they are closely connected in relationship: “I may say that I have a *subsidiary awareness* of the feelings in my hand which is merged into my *focal awareness* of my driving the nail” (Polanyi, 1977, p. 33). Polanyi points out that characteristically, the two types of awareness merge when we “know something focally by relying on our awareness of something else” (1977, p. 33). Finally, the person or individual brings together the components of the subsidiary and the focal in Polanyi’s tacit triad: “The relation of a subsidiary to a focus is formed by the *act of a person* who integrates one to the other. The from-to relation lasts only so long as a person, the knower, sustains this integration” (Polanyi, 1977, p. 38). Hence, unification occurs in tacit knowing when the individual assimilates his set of subsidiaries to a focal target. Essentially, the relationship among the subsidiaries, the focal target, and the person allows for a certain level of meaning or significance to develop within an experience.

To clarify the interrelation of the three parts of his scheme and the from-to relation of the subsidiary and focal point, Polanyi uses the analogy of a person using a stick to probe a dark cave. In this scenario, the probe becomes an extension of the individual. A person's store of subsidiaries is poured into the probe, while the probe is assimilated as a part of the self. As we use the probe to explore the cave, "we attend subsidiarily to the feeling of holding the probe in the hand, while the focus of our attention is fixed on the far end of the probe, where it touches the obstacle in its path" (Polanyi, 1977, p. 35). Since the probe serves as an extension of the body, the feeling of the probe on the hand is lost to the sensation at the end of the probe which touches the wall of the cave or another object. Such a relation in which the individual concentrates his skills, knowledge, history, sensations and other subsidiaries from the stick to the cave establishes the from-to quality of tacit knowing.

Polanyi also describes certain types or values of meaning using his triadic theory. In one kind of meaning, the object of the focal attention possesses the intrinsic interest while the subsidiaries do not (Polanyi, 1977, p. 71). For instance in the probe example, the interest would lie in the object at the end of the probe rather than in the feelings in the hand that holds the probe. Such a scheme is labeled as "self-centered" because integrations are made from the self to the object of focal attention which lies outside the self.

In another type of meaning, the subsidiary clues rather than the object of focal attention are of intrinsic interest and fill the center of the knower's awareness. In the cave scenario the individual would become more aware of the sensation in the hand rather than the object at the end of the probe. When this is the case, the individual experiences a higher level of meaning through embodiment of the self in the focal object. Memories, experiences and all past subsidiaries flow from the self and are surrendered to the object of interest. This object then becomes the focal point of integration for the individual's whole existence. Once subsidiaries become embodied by the object, the object reflects back upon

those subsidiaries, adding to the individual's unique set of experiences. Polanyi explains the importance of this reciprocity stating, "our perception of the focal object also carries us back toward [...] those diffuse memories of our own lives (i.e., of *ourselves*) which bore upon the focal object to begin with" (1977, p. 73). He presents a reciprocal relationship in which the person integrates a certain set of subsidiaries toward a focal point and is then carried away by significant experiences and meanings that build upon the original set of subsidiaries.

Polanyi further explains the intricacies of the relationship between an individual and a focal object: "We do not surrender to a symbol if we are not carried away by it, and we are not carried away by it if we do not surrender to it" (Polanyi, 1977, p. 73). These abstract ideas can be viewed more practically through the example of the symbolism of a flag. The flag as an object is of little interest to us. However, in light of a solemn occasion or a national celebration, the flag encompasses our subsidiary awareness, evoking memories and feelings that move us. The ordinary, uninteresting flag comes to stand for or symbolize something of memorable and heightened significance. At this high end of development, intentional integration brings about meaning in the holistic and imaginative achievement of uniting the individual and the focal object. In comparison with the first "self-centered" scheme, the "self-giving" model contributes to higher levels of meaning as well as a tacit grasp of the self as a whole and complete entity.

Polanyi's ideas relating to integration and the development of meaning provide a solid basis for the discussion of meaning in movement situations. The components of the triadic theory can be applied to the world of movement just as easily as to the probe and cave example that Polanyi uses. In the movement world, the cave might resemble a soccer field, a gym, or even a mountain. These "movement playgrounds" consist of an endless supply of focal objects to which an individual may surrender a certain set of subsidiaries.

First, we will explore the example of the soccer field as the movement playground. Various objects such as turf, nets, field lines, weather, teammates, and competitors are located within the playground. When the athlete enters the playground, she brings with her all of her training, past competitions, habits, skills, and memories. The focal target becomes whatever the athlete acts upon; the ball as she completes a pass to a teammate or the turf as she cuts to catch an opponent. The athlete becomes integrated with the playground by surrendering her unique set of subsidiaries to certain focal points within the field. Focal meaning develops as the playground receives the player's subsidiaries while providing new experiences that build upon the athlete's original set. As the reciprocity continues, the playground begins to resemble the athlete while the athlete takes on the subsidiaries of the playground. As a result of the self-giving relationship between the player and playground, the athlete experiences the integration of self and playground and is carried away by the meaning that develops from such a relationship.

With one example laid out for us, we begin to see movement playgrounds all around us. And where there is a movement playground, there is an opportunity for meaning. In more structured movement settings like the gym, we can easily identify the subsidiary awareness of the pressure of a dumbbell on the hand and of muscles activating throughout the body as well as the focal awareness of the weight moving through space. A lifter surrenders all of his past experiences and skills to the focal object, the dumbbell, and in turn acquires a new set of subsidiaries. At a high level of self-giving, when the gym represents all of the lifter's subsidiaries and reciprocates by providing the lifter with new experience in the Deweyan sense, the lifter is carried away by meaning.

Even something as simple as a mountain can be transformed into a movement playground through the integration of the individual, subsidiaries, and a focal point. A hiker who acts on the slope, terrain, and weather on a mountain and surrenders her set of subsidiaries to such targets will fuse with

the playground in such a way that the mountain transforms her and she gives meaning to the mountain. The merging of the self, experience, and playground and the reciprocity of the relationship between the player and playground demonstrate precisely the type of meaning that Polanyi describes in his tacit triad theory. The wide availability of movement playgrounds and the ease with which an individual can be carried away through movement suggests that meaningful movement should play a greater role in our society today.

However, before addressing why meaningful movement is important, we must first concentrate on how meaning itself is significant to our lives. Polanyi explores the need for a society in which meanings “are acknowledged to be real and worthy of respect and honor – and in which men are therefore also respected and honored as creators and bearers of such meanings” (Polanyi, 1977, p. 181). Such a need for meaning stems from the fact that human beings are meaning seeking creatures. Polanyi uses the example of living organisms developing more advanced and meaningful structures and achievements in order to reinforce the existence and importance of meaning: “The fact is [...] that every living organism is a meaningful organization of meaningless matter and that it is very highly improbable that these meaningful organizations should all have occurred entirely by chance” (1977, p. 172). He suggests that as time passes, the individual parts that make up the world are intentionally being moved toward more meaningful organization. An evolution toward meaning indicates that there is some point to the way certain things are put together and also strengthens the argument for an ultimately meaningful world. Human beings are not excluded from this movement toward meaningful organization in a world where meaning matters and development is intentional. As players in a world that is meaningfully directed, we orient our lives toward meanings.

Although our roots indicate meaningful existence, Polanyi points out that the current ideal of scientific knowledge presents certain misgivings in relation to the various archaic myths of creation from

which meaning stems. Polanyi explains that aberrations in archaic myths are most likely due to the drawing of conclusions from observed causal relations by individuals who were unprepared to regard such occurrences as mere coincidences. Such incompatibilities in archaic myths should be regarded as works of imagination whose truths “can consist only in their power to evoke in us an experience which we hold to be genuine” (Polanyi, 1977, p. 146). While the truth of the myth is greatly doubted, scientific inquiry is most often accepted toady. Yet, Polanyi reveals that even scientific inquiry is occasionally “accepted in general for the truth supposedly grasped *in* it, not because all parts of it are equally credible” (Polanyi, 1977, p. 146). In some cases, when researchers come across facts that contradict a certain theory, the theory is still maintained as a truth. Inexplicable evidence is simply labeled as an exception to a theory or two contradictory principles are accepted with the hopes that the conflict will be resolved by some future evidence. Polanyi makes the point that archaic myths should not immediately be disregarded as a result of possible inconsistencies. Such myths like that of creation stir something within us human beings that allows for us to conjure meaning in our lives. Polanyi summarizes his thoughts on the truth in myths:

Man’s origin is a mystery which the myth of creation expresses in its own way. And the image of man’s destiny, as derived from his mythical origins, is much nearer to our own experience of our own lives, to our experiences of human greatness, to our perception of the course of our history since history began, and to our experience of the shattering forces of our utopias than is the image of the barren atomic topography to which the ideal of detached observations seek to reduce these matters. (Polanyi, 1977, p. 147)

Essentially, Polanyi tells us that the truths located within archaic myths have greater significance than the possible incongruities of the myth itself. Although they may not be literally true, ancient beliefs often contain some form of human truth. Mythical knowledge provides for the possibility of producing experiences that we believe to be true. Belief in foundational, archetypal myths allows us to see and experience meaning in ourselves and in the world around us.

Conclusion

The works of Dewey, Sudnow, Herrigel, and Polanyi together provide an understanding of the sort of meaning that human beings constantly strive for. Dewey identifies a way in which we approach life meaningfully. He highlights a reciprocal relationship between a person and his surroundings that involves both undergoing and doing and results in the consummation of experience in a meaningful way. Sudnow and Herrigel's accounts further demonstrate how complete immersion in a specific activity initiates in a unified journey made up of experiences that meaningfully unite the self with a certain skill. Finally, Polanyi's theory of tacit knowledge incorporates the concepts of self, subsidiaries, and focal object in such a way that leads to personal, intentional meaning through the mutual embodiment of man and environment. With an understanding of the truth in myths and the meaningful organization of our world, we can begin to see how the rich ideas of these works bear substantial implications for meaning in today's society, especially in relation to the world of movement.

I began my thesis discussing ACSM's "Exercise is Medicine" initiative, which utilizes exercise as a tool to decrease disease and promote healthy living. While exercise prescription certainly has the potential to benefit patients, it is insufficient for treating human beings who live in search of meaning. Some, like the directors at Brookdale Senior Living Center, have recognized the inadequacies of such an approach and have built upon the "Exercise is Medicine" initiative to develop a more holistic alternative to health and wellness. My purpose in providing an in depth analysis of Dewey, Sudnow, Herrigel, and Polanyi is to emphasize the role that meaning plays in our lives and to suggest that meaningful movement takes basic, mechanical medicine to a new level. The implications of the ideas discussed in this thesis are as follows. First, because human beings are complex organisms who are more than just a jumbled mass of cells, organs, and muscles, medical treatment must encompass the entire being and not just the physical or outward ailments of an individual. Secondly, movement that is based in meaning has the potential to transcend its mere physical characteristics and transform a person's life. I will

discuss both of these implications in terms of the ideas that have previously been addressed in this paper.

The first implication relates to Polanyi's exploration of society's need for meaning as well as his tacit triad theory. He suggests a directional evolution in which the world and everything in it develops toward meaning. As residents of such a world, human beings are identified as meaning-seeking creatures who orient their lives in the direction of significance. The tacit triad further recognizes humans as complex individuals. The concept of subsidiaries moves the human being beyond something purely biological. In effect, the tacit triad allows for the recognition of the self as an intricate masterpiece that incorporates and blends experience, habit, knowledge, skill and sensation.

Polanyi exposes us to certain roots of meaning from which the human search for significance stems. We can argue that humans are in some way hard wired for such directionality and that meaning lies within our biology and cells. We can say that our anatomy allows us to move and interact with the world in a way that fosters meaning as we observe with Sudnow and Herrigel. We can agree with Polanyi that evolution points to a meaningful world and meaningfully constructed individuals within that world. We can suggest that with culture we have developed symbolism and the ability to give meanings to, and find meanings in, certain words or objects. We can see a history of significance and meaning oriented behavior by looking at the past actions taken by ourselves and others. Since human beings are rooted in meaning in so many different ways and at such a variety of levels, it is clear that meaning is more significant to our lives than we typically understand it to be.

Since humans are complex individuals who live beyond the restricted mechanisms of the body and constantly alter the self through a growing pool of subsidiaries, it seems almost impossible to identify ways to successfully treat patients. However, the identification of meaning's diverse and numerous roots as well as the truths found within the archaic myth of creation demonstrate a way to

access an entire individual. Healthcare that revolves around meaning recognizes human beings as meaning-seeking creatures and has the potential to heal people in ways that other medicinal methods cannot even approach. For instance, ACSM's "Exercise is Medicine" initiative focuses solely on the physical aspects of a person. Medical practice that relies on such a limited view of the human being often results in ineffective treatment. In mechanically focused medicine, diagnosis is based on a standard set of symptoms and the same treatments are given in cases that are far from identical. The only way to treat the individual rather than their general symptoms and to focus on the whole person instead of just their body is to adopt meaning as medicine.

As we have come to understand, meaning is highly personal. Each individual has a unique set of subsidiaries that they surrender to a certain object to encounter meaning. Experiences and skills become meaningful to different people in different ways. In a way, each person has a unique meaning profile. We all have certain tendencies and vulnerabilities that contribute to such a profile. If treatments were prescribed with a person's meaning profile in mind, the individual would receive care that is specific to his needs. This could most likely result in a faster and more successful recovery. In this way meaning-centered medicine treats the individual instead of the masses.

Similarly, meaningful medicine addresses the whole person and not just the physical or outward indications of his ailments. Although eliminating physical symptoms is certainly an important goal of modern medicine, what is more important is to locate and deal with the source of the issue. Since we do not live through the body alone, most medical cases will have some source that goes beyond the reach of typical treatment. Through meaning, we can access the whole person whose life is centered around and rooted in meaning.

As complex beings whose lives are grounded in meaning, humans require medical treatment that focuses on the individual and treats the whole person. The qualities of meaning that are discussed

in this paper indicate that meaning itself is a more viable treatment than some of the approaches that are utilized today. Approaches that provide general treatments for every patient and that focus on only one or few aspects of the person cannot successfully restore an individual to health. For instance, conditions that are physically manifested may not always have physical causes. In some medical cases, the cause of certain physical maladies lies in the individual's psychological, emotional, or spiritual being. Because it is specific to each individual and because it lies at the center of our entire being, meaning is, in many cases, a more suitable medical treatment.

The second implication of this paper relates more specifically to the question of why meaningful movement should be used as medicine rather than simple, mechanical exercise prescription. Today, many Kinesiologists debate whether we should think of movement as a tool that can be utilized to improve health and fitness or as a meaningful activity that stirs something within our deepest recesses and transforms our lives. The "Exercise is Medicine" initiative indicates a more utilitarian and mechanistic approach to movement in which exercise and its effects can be prescribed, measured, recorded, assessed and enhanced. Although this approach may lead to physical improvements such as lowered cholesterol, decreased diabetes, or increased bone mass density, it rarely affects the overall health and well-being of patients. In this way, exercise prescription focuses on treating specific symptoms rather than treating the whole individual.

Another potential dilemma related to such a utilitarian approach to physical activity as medicine is the issue of prescription adherence. A patient will achieve physical improvement only if she agrees to strictly follow the exercise guidelines provided by her physician. For many patients, especially those who have never performed any physical conditioning in the past, the potential benefits of prescribed exercise are not enough to promote adherence to such recommendations. Although the idea of exercise prescription appears to be an effective strategy to promote health and wellness, in actuality

such a utilitarian approach fails to account for exercise adherence and focuses only on the physical rather than the complete well-being of individuals.

Such problems with using exercise as medicine can be resolved by making certain adjustments that allow for a more effective use of movement as a way to improve the health and well-being of patients. The solution to the issues stated above lies in viewing exercise prescription through the lens of meaning rather than utility. Rather than pursuing the idea of exercise as medicine, practitioners should focus on meaningful movement as medicine. When we promote meaningful movement instead of purely mechanical and utilitarian exercise prescription, we refocus our attention towards the overall well-being of the individual and we reduce the problem of exercise adherence.

To clarify the meaning-solution to medicine, I will first discuss how infusing meaning into exercise medicine accomplishes a transition from symptom specific solutions to the holistic treatment of the patient. While exercise prescription based in utility assigns exercises that target specific symptoms, prescription based in meaning recommends a certain movement scenario or playground that has the potential to foster meaning. For instance, a patient with a family history of heart disease may go to her physician to see how she can prevent the occurrence of additional risk factors. A physician who bases exercise prescription on utility and mechanical efficiency may recommend that the patient spend a certain amount of time on a treadmill doing cardiovascular exercise a few times per week. Conversely, a physician who bases exercise prescription in meaning might first assess the patient for meaning vulnerabilities and potential playgrounds. If the woman mentions that she is passionate about watching tennis matches on her television but admits that she has never attempted to play, a meaning oriented physician might suggest that she take up tennis lessons.

The difference between these two prescriptions lies in their meaning potential. The first prescription of running on a treadmill for a specified amount of time each week effectively targets the

woman's health concerns, yet it limits her to a single activity and dosage. Such a recommendation closely resembles the act of taking a pill, leaves no room for development of skill or growth and essential restricts meaning potential. On the other hand, the tennis prescription successfully addresses the cardiovascular component while also opening up a rich world of meaning for the patient. By following through on her prescription by beginning tennis lessons, the patient immerses herself in a movement playground and takes the first step towards a journey of skill development. As we can see from Sudnow and Herrigel's accounts, participation in a skillful journey can lead to experiences that transform the individual. In addition, immersion in a movement playground allows for the formation of a reciprocal relationship through which the individual obtains meaning. In this way, exercise prescription that is based in meaningful movement and potential playgrounds not only remedies the physical symptoms of the individual but also treats the deeper, meaning seeking capacities of the patient.

The same example can be used to explain how meaning addresses adherence to exercise prescription. Some might argue that the treadmill prescription will provide greater health benefits than the tennis prescription because it will take more time for a woman who has never played tennis before to work up to the level at which she gets the same amount of cardiovascular exercise as she would on a treadmill. However, the idea behind meaningful exercise prescription is to promote a lifetime of healthy habits, not just to get a person to exercise until their symptoms diminish. When we compare the two forms of prescription from this view, it is clear that lifetime benefits are more likely to come from the tennis prescription. A patient will be more likely to discontinue a utility based exercise program, because just like a pill, it can be stopped at any time especially once symptoms have dissipated. However, even if her symptoms cease, the patient who followed a meaning based prescription and began tennis lessons will continue to be immersed in her movement playground and may even reach a point where she is carried away by meaning. Her motivation for adhering to the exercise program shifts away from symptom relief or disease prevention and toward skill development and meaning within the

playground. Such a shift ensures a lifetime of movement which serves as medicine for both the physical and the meaning-seeking aspects of the human being.

Although meaning is not the first thing that we think of in a discussion of medicine and movement, the concepts and experiences of meaning portrayed by Dewey, Sudnow, Herrigel, and Polanyi certainly contribute nicely to a conversation about these topics. In a world that continues to move toward a mechanistic view of science, religion, and the human being, it is important to keep in mind that the world is not simply a jumble of small, randomly assorted pieces. The world becomes what we see in it. When we open our senses, hearts and minds to meaning, we find it everywhere: in art, in music, in movement, in ourselves. As individuals in a meaning filled world, we must recognize the healing powers of meaning as well as the ability of meaning to transform our lives.

References

- Alexander, T. (1998). The Art of Life: Dewey's Aesthetics. In L. Hickman (ed.), *Reading Dewey: Interpretations for a Postmodern Generation* (pp. 1-22). Bloomington: Indiana University Press.
- Botsford, H. (2009). Movement is Medicine: increasing awareness of the healthy aging prescription. *The Journal on Active Aging*, 8, 66-69.
- Dewey, J. (1980). Having an Experience. *Art as Experience* (36-59). New York: The Berkley Publishing Group.
- Herrigel, E. (1981). *Zen in the Art of Archery*. New York: Vintage Books.
- Hutber, A. (2011). *Exercise is Medicine* [Brochure]. Retrieved from http://exerciseismedicine.org/documents/EIMbrochure_HR.pdf
- Leddy, Tom, "Dewey's Aesthetics", *The Stanford Encyclopedia of Philosophy* (Winter 2011 Edition), Edward N. Zalta (ed.), Retrieved from <http://plato.stanford.edu/archives/win2011/entries/dewey-aesthetics/>
- Polanyi, M. & Prosch, H. (1975). *Meaning*. Chicago: University of Chicago Press.
- Sudnow, D. (2001). *Ways of the Hand: A Rewritten Account*. Cambridge: The MIT Press.

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- Prepared and led weekly kickboxing classes to participants of mixed ages

Community, Volunteer and Leadership Experience and Activities

Gracenotes

January 2011-Present

- Performed with a Christian acapella group at community, church, and Penn State events

Peers Helping Reaffirm, Educate and Empower (PHREE)

August 2010-May 2011

- Trained to teach educational programs to raise awareness about sexual assault, rape, harassment, healthy relationships, and body image

Bucks Physical Therapy, Richboro, PA

December 2010

- Assisted physical therapy patients with exercises and observed aquatic physical therapy

Comprehensive Sports Care Specialists Inc., Newtown, PA

May 2010-August 2010

- Guided physical therapy patients through exercises and adjusted equipment settings

St. Mary Medical Center, Langhorne, PA

May 2010-August 2010

- Assisted and motivated patients in the Joint Replacement Rehabilitation Center
- Helped physical and occupational therapists demonstrate exercises and care for patients