

A COMPARISON OF CROSS-CULTURAL PSYCHOLOGY AND TAIJIQUAN

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Abstract: This article connects literature in cross-cultural psychology with the study of Taijiquan. Cross-cultural psychology has found two main differences between the typical East Asian and Westerner. East Asians emphasize an interdependent self-concept and holistic cognition while Westerners emphasize an independent self-concepts and analytic cognition. Taijiquan, as a systematized component of Chinese culture, stresses both the interdependent self and holistic cognition. The study of Taijiquan is also the study of the East Asian self and cognition.

In the summer of 2009 I helped take 24 undergraduate college students from the U.S. on an abroad trip to China to study Chinese culture, business and history. I was accompanied by professors of history and business who each taught their respective areas, and I was responsible for teaching Chinese culture. As a psychologist and practitioner of Taijiquan, I exposed students to modern cross-cultural psychology literature on Chinese thought and values. I also taught students Taijiquan as an aspect of Chinese culture that reflects these East-Asian thoughts and values. I searched for an appropriate reading to assign my students that would connect modern research in cross-cultural psychology with the study and practice of Taijiquan. I was unable to find a paper on this topic. This paper is aimed at filling that void.

This paper briefly reviews the current cross-cultural psychology literature on cognitive differences between typical Westerners and East Asians and then explains how this research is related to the practice of Taijiquan. Since Taijiquan is a product of Chinese culture, it is logical to study the product to learn about the culture. Recent research in cross-cultural psychology also argues strongly that culture and cognition are intimately linked. Hence, the central thesis of this paper is that the study of Taijiquan is the study of East-Asian culture *and* cognition. Because this paper is aimed at bridging the literature between two communities who have differential expertise, I will first provide very brief summaries of Taijiquan and cross-cultural psychology.

I. Taijiquan

Taijiquan loosely translates as Grand Ultimate Fist. The concept of Taiji is an ancient one in Chinese philosophical thought (see Davis, 2004 for a detailed description of

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the concept). Wang Zong-Yue is credited with saying that Taiji “is generated from Wuji, And is a pivotal function of movement and stillness. It is the mother of Yin and Yang. When it moves, it divides. At rest it reunites” (quoted in Yang, 1999, p. 13). Wuji is the state of no division, or no extremity, and Taiji is the force that creates division, such as Yin and Yang, out of emptiness (Wuji). Taiji is translated as Grand Ultimate because it represents the progenitor of life, the divine that creates life out of nothingness. Adler (2008) describes the relationship between activity and stillness as a main focus of Song Neo-Confucianism and much of Chinese philosophical thought. Quan is the Mandarin for fist and indicates that Taijiquan is a martial art (an art of the fist). Taijiquan is usually translated as Grand Ultimate Fist and is the application of the Taiji philosophy, with its emphasis on Yin and Yang, to martial arts.

While many people who study Taijiquan today are aware of its martial heritage, most practitioners today likely study the art because of its health benefits. Because of Taijiquan’s focus on breathing, relaxation, and energy (qi) circulation it has gained popularity as a form of qigong. Qigong is a generic term that applies to the practice of circulating energy (qi) throughout the body through breathing and movement. The practice of Taijiquan today has also developed into an aesthetic and callisthenic art. Because of these changes in focus what many people today practice might more appropriately be called *Taijiqigong* than *Taijiquan*. Taijiquan, while also a form of qigong, is deeply rooted in the martial arts heritage. This diversity of practice is reflected in a diversity of styles and lineages that differentially emphasize the art as a martial art or as a health practice. The slow gentle movements typical of Yang style Taijiquan are characteristic of a focus on health and qigong while the explosive movements of Chen style (and some Yang styles) clearly reveal the martial heritage.

While there is much mysticism and legend surrounding the origin of Taijiquan, the earliest verifiable claims are that it was practiced in Chen village (Chenjiagou), Henan Province in the 1600s. One of the more likely origin stories is that Chen Wangting created this style in the 1600s by synthesizing other martial arts styles and it was then handed down and modified within the Chen family in Chen village. The other Taijiquan styles are all branches of the system founded in Chen village (see Davis (2004), DeMarco (1992) and Wile (2007) for more detailed histories of Taijiquan).

II. Cross-cultural Psychology

Broadly speaking, psychology is the scientific study of thought and behavior. It is a behavioral science, meaning that it embraces the Western scientific worldview as a means of explaining and understanding behavior. Western psychology, and cognitive psychology in particular, has a tradition of assuming cognitive universality and neglecting the role of the environment, including culture, in shaping thought and behavior (Dunwoody, 2007). Cognitive psychologists have assumed that much of cognition is hard-wired (biologically determined) and therefore universal.

This assumption can be seen in the study of personality, as the Big Five personality traits have been viewed as biologically, rather than culturally, determined. However, Piekkola (2011) argues that Allport’s original conception of personality

included cultural context, writing:

The conditions to which people must adjust themselves can be malleable over history and variable between cultures and in adjusting to these the personality forms. These variable conditions to which each person adjusts themselves must not be overlooked in the study of personality, and that means that we must not forego the part played by culture in the formation of personality (p. 12).

This view of personality stresses that personality is an interaction of biological and cultural forces. Despite Allport's focus on how context can help shape personality, and earlier work by Wundt on cultural psychology (i.e., *Völkerpsychologie*), the dominant paradigm today is still organismically focused and neglects the role of the environment as a determinant of personality (Piekkola, 2011) (for a review of personality research and the influence of culture see Church, 2010).

The assumption that because our basic biology is shared, there is no need to look for differences in cognition or personality between cultures is changing. Research programs have developed that compare cognition across cultures to test this previously untested assumption (Norenzayan, Choi, & Peng, 2007). Triandis (2007) states that the integration of culture in to mainstream psychology began as recently as 1985. The results have challenged the basic assumptions of the field. In their introduction to a special journal issue focused on culture and psychology, Gelfand and Diener (2010) write "psychology is witnessing a revolution...the articles in this special issue make clear that culture should play a role in all areas across the discipline of psychology" (p. 390).

While there are no universally agreed upon definitions of culture (see Triandis, 2007 for a detailed description,) for the purposes of this article culture is:

an evolved constellation of loosely organized ideas and practices that are shared (albeit imperfectly) among a collection of interdependent individuals and transmitted across generations for the purpose of coordinating individual goal pursuits in collective living (Chiu, Gelfand, Yamagishi, Shteynberg, & Wan, 2010, p. 482).

This definition acknowledges that cultural beliefs are imperfectly shared. Researchers in cross-cultural psychology are aware that there are very likely more differences between people of the same culture than there are typical differences between people of different cultures. Researchers are also aware that the "typical" member of a culture is a generic construct and that there will be variations and exceptions. For example, the typical male is taller than the typical female. The fact that there are many females who are taller than many males does not discount the utility of the original statement. Likewise, cultural differences are real and if we hope to understand them we must consider these group norms, however imperfect they may be. In summary, cross-cultural psychology identifies broad differences in behavior between people of different cultures, while also examining these same differences within a culture, using the standards and methods of modern behavioral science.

III. Western and East-Asian Cognition

Cross-cultural psychology has identified two main differences between typical East Asians and Westerners. First, East Asians are more likely to have an interdependent view of the self, while Westerners are more likely to hold an independent view of the self. Second, East Asians are considered to be more holistic while Westerners are considered to be more analytic (Nisbett, 2003; Markus & Kitayama, 1991; Markus & Kitayama, 2010; Varnum, Grossmann, Kitayama, & Nisbett, 2010). However, see Slingerland (2011) for a counter-argument to these differences. Each of these topics is discussed in more detail below.

The nature of the self. Asking someone to describe themselves in 20 statements is one common way to assess how an individual views their sense of self (Markus & Kitayama, 2010). A person with a more independent orientation is likely to list dispositional characteristics, such as aspects of their personality, goals, and achievements. For example, typical independent responses could include “I am honest,” “I am hard working,” and “I am stubborn.” A person with a more interdependent self is more likely to list aspects of the self that reflect relationships with other people. For example, typical interdependent responses could include “I am a father,” “I am sensitive to those around me,” and “I am a member of my community.” This seemingly simple difference appears to have profound implications for how the typical Westerner and East Asian experience the world.

Western thought since at least the time of the Greeks has emphasized individual agency. The individual is unique and maturation, to some extent, means that you are discovering your own unique qualities. Markus and Kitayama (1991) write, “[i]n many Western cultures, there is a faith in the inherent separateness of distinct persons. The normative imperative of Western culture is to become independent from others and to discover and express one’s unique attributes” (p. 226). The assumption of the independent self is so strong in Western civilization that some have wondered how it is that we cope with being so alone and isolated. Fromm (1941/1994) theorized that the freedom of independence is potentially terrifying and that we cling to symbols of our culture, sometimes those related to war and patriotism, as a way to find meaning and escape our feelings of isolation. Becker (1973/1997; 1975) argued that because we view ourselves as isolated entities, the thought of death is potentially paralyzing because it involves the obliteration of the individual self. Like Fromm, Becker argued that we cling to cultural symbols as a way of coping with our fears.

The Western isolated self is in stark contrast to the traditional East-Asian interdependent self. The interdependent self is a contextual self. The self is viewed as intimately connected with relevant social others and individuals’ self-constructs are more likely to reference relationships with others. Hence, East-Asian societies have also been called collectivistic because they emphasize the importance of these social relations above the importance of individual uniqueness and expression. The normative imperative in East-Asian culture is to be aware of others in your social environment and to adjust your behavior according to the desires of the group. In a very real sense, the definition of self in an interdependent culture includes close social

others. For example, research described by Park and Huang (2010) shows that the medial prefrontal cortex is particularly active when both East Asians and Westerners make judgments about themselves. When making judgments about close others (one's mother), East Asians had greater activation in this same region than Westerners.

In Western culture, as you mature you are expected to "know thyself" and express your opinions and desires openly. This is considered a positive attribute. In East-Asian culture, as you mature you are expected to be sensitive to the opinions and desires of others and demonstrate greater control over your own personal desires. For an adult to express their opinions and desires openly in East-Asian cultures can be considered childish and selfish (Kitayama, Duffy, & Uchida, 2007). Expressing such self-centered desires is viewed as childish and a failure to be sensitive to those around you. This difference between cultures in the appropriateness of openly expressing one's desires is rooted in the divergent weight that different cultures place on independence and interdependence. Researchers acknowledge that we all have both interdependent and independent schemas (Kuhnen, Hannover, & Schubert, 2001) and some argue that these are two independent dimensions rather than two ends of a single continuum (Gelfand, Triandis, & Chan, 1996). Culture is considered a major factor, if not *the* major factor, in determining which schema is more dominant (Kuhnen et al., 2001).

Kitayama et al. (2007) summarize much of the research on this topic and offer a broad model of independent versus dependent selves (see Figure 1). They argue that a main difference between cultures is whether they emphasize goal attainment of individuals as a way to define the self or connectedness with social others as a way to define the self. Depending on one's culture, either goal achievement or responsiveness to social contingencies is the guiding motivation of behavior. These result in two different modes of being, the independent and interdependent. The independent mode of being regards action as influence. The more one has influence, the greater ability one has for goal achievement. Both influence and goal achievement become the main sources of self-esteem. The interdependent mode of being regards action as social adjustment. Greater social adjustment abilities result in increased social harmony and connectedness, and become the main sources of self-esteem.

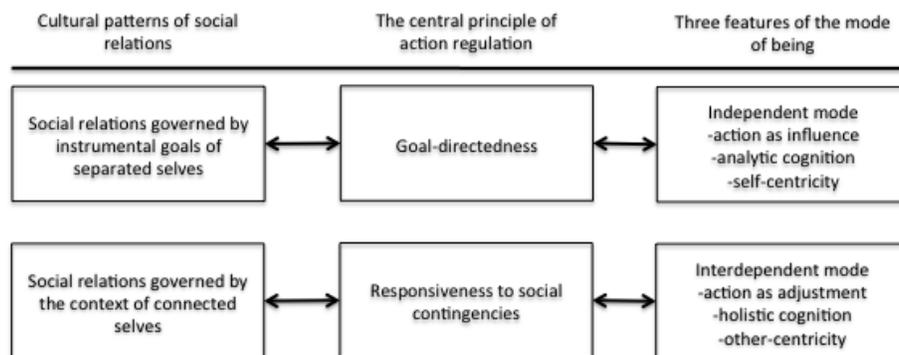


Figure 1: Cultural modes of being adapted from Kitayama et al., 2007

The *social orientation hypothesis* posits that these differences in social orientation cause other known cognitive differences between East Asians and Westerners (Varnum et al., 2010). Specifically, this hypothesis argues that because East Asians are continually encouraged to be perceptive of their social environment, they are cognitively more aware of context in non-social environments as well. Simply put, their attention has been trained to focus on the context. This increased contextual thinking is described as more holistic. Because Westerners are continually encouraged to be more independent, they are cognitively more focused on isolated objects and events. This increased attention to isolated objects and events encourages more analytic thinking.

Cognition has often been described as involving two modes, one analytic and one holistic or intuitive (Dunwoody, Haarbauer, Mahan, Marino, & Tang, 2000; Hammond, Hamm, Grassia, & Pearson, 1987; Kahneman, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001). In analytic cognition “Inferences rest in part on decontextualization of the structure from content, use of formal logic, and avoidance of contradiction.” In contrast, “Holistic approaches rely on experience-based knowledge rather than abstract logic and are dialectical” (Norenzayan et al., 2007, p. 577). Dialectical reasoning is categorized by three attributes very prevalent in Chinese thought. These include:

1. *The principle of change*: Reality is a process that is not static, but dynamic and changeable.
2. *The principle of contradiction*: Contradiction is a constant element of life.
3. *The principle of relationship or holism*: Nothing is isolated and independent; instead everything is related to everything else. (Norenzayan et al., 2007, p. 583)

These differences in cognitive modes (holistic versus analytic) have been found in numerous studies measuring many aspects of cognition. Research reviewed by Norenzayan et al. (2007) shows that East Asians are more likely than Westerners to predict a change in the future while Westerners are more likely to predict consistency with the past. East Asians are more comfortable with contradiction and even view contradiction as a sign of wisdom. East Asians, in a variety of both social and non-social tasks are more likely to emphasize the connections between objects and events. In a study evaluating the influence of Oriental or Western medical training on cognition, Koo and Choi (2005) conclude that:

[s]tudents of Oriental medicine seem to learn to believe that an event goes through a cyclic pattern of change. If a certain event has been increasing or decreasing, they expect the trend will reverse its direction in the future (Study 1). They also learn to think that an event is determined by numerous factors and that a given factor cannot be dismissed easily while explaining a certain event. Therefore, they end up considering a greater number of factors in causal attribution. Importantly, such holistic causal beliefs become stronger as training in Oriental medicine continues. (p. 1270)

Research by Peng and Nisbett (1999) found that in general, East Asians are more comfortable with contradiction than Westerners. Chinese proverbs contain a significant number of contradictions and reasoning that includes contradictory statements and are more appealing to East Asians than Westerners. This acceptance of contradiction as a part of nature is in stark contrast to traditional Western philosophy. Western philosophical theories of truth have coherence (a lack of contradiction), as a central criterion for a belief to be true. For a belief to be true it cannot contradict itself or other accepted beliefs. The *Coherence Theory of Truth*, as it is known, is one of the foundational assumptions of Western science. Scientific theories that contain contradictions fail the coherence test of truth (Dunwoody, 2009; Kirkham, 1992).

In judgments of causation, East Asians are likely to consider more variables than Westerners, which emphasize the East Asian focus on holism (Choi, Dalal, Kim-Prieto, & Park; 2003). Also in judgments of causation, East Asians are more likely than Westerners to utilize the context to explain another person's behavior. Westerners are more likely to explain the person's behavior by referring to personality traits of the individual (Nisbett et al., 2001). Even when assigning causation to physical objects, East Asians are more likely to consider the context than Westerners (Beller, Bender, & Song, 2009). In attention and memory, East Asians are more likely than Westerners to pay attention to and remember aspects of the context while Westerners are more likely to pay attention to and remember aspects of the focal object (Park & Huang, 2010; Norenzayan et al., 2007). When asked to replicate the absolute length of a line or the length of a line relative to the frame that it is in, East Asians outperform Westerners on the relative task while Westerners outperform East Asians on the absolute task (for a summary of this research see Norenzayan et al., 2007).

Currently, "the most compelling proximal explanation for the cognitive differences is the differing social orientations of people in East Asian and Western cultures" (Norenzayan et al., 2007, p. 586). The mounting evidence in cross-cultural psychology suggests that differing cultural norms have profound influences on our basic cognitive processes. There is even evidence to suggest that short-term exposure to these cultural norms can influence cognition and reasoning. Koo and Choi (2005) demonstrated that Koreans enrolled in traditional Oriental medical training demonstrated more holistic cognition than Koreans enrolled in Western medical training. More convincing, is research showing that simply priming (making one think about) the independent or interdependent self will cause one to become more holistic or analytic (Kuhnen et al., 2001). This priming effect implies that short-term cultural exposure may be enough to influence cognition. This priming research is perhaps that strongest evidence that different social orientations can *cause* the noted differences in analytic and holistic cognition.

In summary, the research in cross-cultural psychology shows that East Asians are generally more interdependent while Westerners are generally more independent. East Asians are also more holistic in their cognition which is reflected in a more dialectical approach to reasoning. Westerners rely more on analytic cognition, which emphasizes abstraction and formal logic. To date, the literature suggests that the difference in

self-construals (independent versus interdependent) causes the observed differences in cognition (analytic versus holistic).

IV. Connections between Cross-Cultural Psychology and Taijiquan

DeMarco (1992) writes that, “[t]he style that Chen Wan-ting created was a physical embodiment of Daoist philosophy, particularly the concept of Yin/Yang. His system is a harmonious blending of hard/soft, fast/slow, passive and active” (p. 15). These concepts are typical characteristics of Chinese culture and are reflected in current cross-cultural psychology research. “[C]ulture is a whole set of symbolic resources of a given community....The symbolic resources of culture are accumulated and transmitted across generations and are usually externalized into social practices and institutions” (Kitayama et al., 2007, p. 138). Taijiquan is one way in which Chinese culture has been externalized into a social practice. Taijiquan is the study of a highly symbolic system of movements, feelings, and beliefs heavily rooted in traditional Chinese philosophical thought. As such, the main characteristics of East-Asian thought identified in cross-cultural psychology (and described above) are also fundamental components of Taijiquan. From a psychological perspective, the study and practice of Taijiquan can be characterized as a focus on the interdependent self and a focus on holistic cognition via a dialectical orientation. Each is described in detail below.

Interdependence of the self can be seen in classic texts and modern writings on Taijiquan. Wang Zong-Yue is credited with the following as part of what is now called the Taijiquan Classics:

When the opponent is hard, I am soft;
 This is called yielding
 When I follow the opponent,
 This is called adhering.
 When the opponent moves fast, I move fast;
 When the opponent moves slowly, then I follow slowly.
 Although the variations are infinite, the principle remains the same.
 After you have mastered (the techniques of adhering and following),
 Then you can gradually grasp what “Understanding Jin (Dong Jin)”
 means.
 From “Understanding Jin,” you gradually approach enlightenment (intuitive
 understanding) of your opponent’s intention.
 However, without a great deal of study over a long time, you cannot grasp this
 intuitive understanding of your opponent. (Yang, 1999, pp. 15-16)

This quote from the Taijiquan classics illustrates the importance of interdependence in Taijiquan. Action is based on adjustment to one’s opponent. When the opponent is hard, you are soft. When the opponent is fast or slow, you match the speed. The focus is always on adjustment. Successful adjustment to one’s opponent can only happen if one is skillful at Understanding Jing (spelled “Jin” above). Jing refers to martial

power or skill (Yang, 1996). Understanding Jing is developed gradually and allows one to intuitively know the intentions of the opponent. Tek (1995) writes, “sticking is necessary in order to “listen” to your opponent’s strength and understand it so you can counter it by turning it against himself. Proper “listening” makes it possible for you to detect gaps and flaws in his posture and turn them to your advantage” (p. 67).

Action as adjustment is described by Kitayama et al., (2007) as one of the main features, if not the main feature, of the independent mode of being and is clearly a focal point in the Taijiquan classics as shown above. Given the normative imperative to be aware of the thoughts and feelings of those around you in an interdependent culture, what would be the ideal for a martial artist? It would be to have an intuitive understanding of one’s opponent, while also remaining unknown to one’s opponent. In other words, the goal would be to know your opponent’s intentions without the opponent knowing yours. Wang, Zong-Yue is credited with the following:

When there is pressure on the left, the left becomes insubstantial;
 When there is pressure on the right, the right becomes insubstantial.
 Looking upward it seems to get higher and higher;
 Looking downward it seems to get deeper and deeper.
 When (the opponent) advances, it seems longer and longer;
 When (the opponent) retreats, it becomes more and more urgent.
 A feather cannot be added a fly cannot land.
 The opponent does not know me, but I know the opponent.
 A hero has no equal because of all of this. (Yang, 1999, pp. 17)

From the first two lines we see a clear emphasis on action as adjustment. The passage emphasizes elusiveness when your opponent tries to know you. Yang, Jwing-Ming (1999), in his commentary on this passage writes:

After much practice, you can be so sensitive and accurate in your response that not even a feather can touch you without setting you in motion. Your partner can never catch hold of you to figure you out, but you always know him. If you reach this level, no one can match you. In order to reach this level, you must train listening Jin[g] (p. 18).

This same idea can be seen in the oldest known Taijiquan system, Chen style. Sim and Gaffney (2002) write:

Chen Wanting [the founder of Chen Taijiquan] states that one should aspire to reach the level of “Nobody knows me, while I know everybody.” Harmonizing with the movements of an opponent, the practitioner seeks to eliminate all tension and resistance within his own reactions. Unlike most external martial arts, the aim is not simple to block an incoming force with greater force, but to “listen” to and “borrow” the opponent’s energy to defend oneself. (pp. 6-7)

The above quotes all illustrate action as adjust and the emphasis on knowing your opponent while remaining unknowable to your opponent. This skill is only developed with diligent practice.

Dr. Yang Jwing-Ming (1996) writes:

a *Taiji* martial artist must build the sensitivity of his skin to “listen” to his enemy’s *Jin[g]* [martial power]. Listening *Jin[g]* is one of the most decisive factors in *Taiji* fighting. The better a *Taiji* fighter’s ability to sense the enemy, the better his fighting art will be. When two *Taiji* artists fight, skill in “Listening *Jin[g]*” is usually the main factor in deciding the winner (p. 64).

In his categorization of Jin, Yang, Jwing-Ming lists Sensing Jing as one of the two major types of Jing. Subcategories of Sensing Jing include Listening Jing and Understanding Jing (Yang, 1996).

One story of Yang, Jien-Hou, states that he was so sensitive “that a swallow could not take flight from his open palm” (DeMarco, 1992, p. 23). The logic behind the story is that a swallow needs to push off with its feet to initiate flight and that this small push was absorbed by Yang, Jien-Huo so that the swallow could not find enough resistance to push against. Regardless of the literal accuracy of this story, it clearly highlights the importance of sensitivity in Taijiquan and the breakdown of the subject-object dichotomy. From a Daoist perspective, the breakdown of the self as independent allows one to become interdependent and harmoniously connected with one’s surroundings.

Throughout the Taijiquan literature we see an emphasis on action as adjustment to the opponent through the development of Listening Jing. Action as adjustment is a way in which you cease to be an independent actor, the self dissipates, and you become one with your opponent. You exist not as a separate entity with goals and desires, but as an interdependent part of a larger context. Your opponent cannot know you because you are not separate from your opponent. This sense of non-self is part of the appeal of Zen to the martial artist. In Taijiquan practice, the development of Listening Jing is primarily developed through push hands (and related) training.

Push hands training teaches one to listen to one’s opponent and adjust one’s actions accordingly. It is fundamentally about action as adjustment to your partner. If your opponent pushes to one side, you yield and neutralize to that side. If your opponent pushes upward, you yield and neutralize upward. All action in push hands is about adjustment and highlights the emphasis on the interdependent self. Your goal is also to be elusive so that your opponent cannot “know you,” find your center, and push you off balance. Picture 1 shows an example of a drill that helps develop Listening Jing. You and your partner face each other in a neutral stance (i.e., both legs equally weighted side-to-side and front-to-back) while you hold your arms out in Wardoff (Peng Jing). The Wardoff posture is where one stands and positions an arm or arms as if holding a large ball (see in Picture 1). The opponent places their hands on your elbows and attempts to seal your arms against your body and push you off balance. Your goal is to neutralize this force and remain elusive so that your opponent cannot find your center. In order to neutralize effectively in this position you must “listen” very carefully to the force your opponent is applying. With time and practice your listening skills (Listening Jing) improve and you are able to remain elusive as your opponent seeks your center. As your skills develop, you learn to absorb your

opponent's energies and become one with their movements. Your actions change from being driven primarily by a goal (i.e., not being pushed over) to a focus on harmonious adjustment. This drill demonstrates the importance of listening skills and action as adjustment as fundamental principles of Taijiquan.

In addition to the focus on an interdependent self, Taijiquan also reflects the East-Asian focus on holistic cognition through a dialectical orientation. As discussed above, a dialectical orientation emphasizes that reality is a process of change (the principle of change), that contradiction is a sign of wisdom and a normal part of reality (the principle of contradiction), and that everything is related in some way to everything else (the principle of relationship or holism) (Norenzayan et al., 2007). All three of these principles are found in Taijiquan.

The principle of change can be found in Taijiquan's use of cyclical yin-yang energy in both the solo form and as a martial art. Any physical expression, having reached its yang state, naturally changes back to a yin state. For example, the Taijiquan form emphasizes yang breathing (exhaling) while one is expanding physically and yin breathing (inhaling) while one is contracting physically. Ideally, there is no place in the form where movement stops and is stagnant. Rather, there is constant flow between expansion and contraction, exhalation and inhalation, yang and yin. While the change may speed up (while expressing explosive power) or slow down (while focusing on the meditative side), the focus on change is ever-present. Part of the aesthetic beauty of Taijiquan is the constant change visible in the form.

This same principle of change can be seen as the main strategy behind Taijiquan as a martial art. While Karate, Wing Chun and Jeet Kun Do focus on intercepting the opponent, and Tiger style Kung Fu emphasizes power, Taijiquan emphasizes the constant change between yin and yang as its main strategy. Derrickson (1993) argues that one of the main themes in the Taijiquan Classics is "using the interchange of *yin-yang* duality to control one's opponent" (p. 65). The interdependent focus described above allows a Taijiquan practitioner to listen to an opponent's energy and sense when their yang state has reached its fullest potential and is transitioning to a yin state. For the Taijiquan practitioner, this moment of change is the ideal time to strike. Taijiquan practice emphasizes yielding and neutralizing your partner's Yang energy. Once your partner's yang energy is neutralized and they are physically extended, you then become offensive and attack. If your opponent has fully committed to their attack then your yielding and neutralizing should have put them in a very bad position making it easy for you to attack. This is why the Taijiquan classics state that you should always hold something in reserve. If you fully commit to the yang state, the moment of change is your most vulnerable.

Taijiquan emphasizes leading the opponent into nothingness so that the opponent is lead in to this position of change and the Taijiquan practitioner can capitalize on the moment. This focus on change and expecting the yin to return to yang and vice-versa is an example of the principle of change in dialectical thinking.

The principle of contradiction can be found in Taijiquan's emphasis on opposites and balance. In the Nine Key Secrets of Taijiquan, Yang, Ban-Huo writes:

(The success of manifesting) insubstantial, insubstantial-substantial, and substantial (strategies) is (all hidden) in the meeting (i.e., gathering or concentration) of the spirit. Insubstantial and substantial, substantial and insubstantial, the hands (are mainly used to) perform these achievements. (If) training fist (i.e., martial arts) without knowing the theory of insubstantial and substantial, (then) wasting Gongfu and (the arts) will not be completed at the end. Defense with insubstantial and attack with substantial, the tricky (keys) are in the palms. (If only) keep the center substantial without attacking, the art will be hard to refine. Insubstantial and substantial must have their reasons as the insubstantial and substantial. (If you know how to apply) insubstantial, and insubstantial-substantial, and substantial, then the attack will not be in vain. (Yang, 2001, p. 22).

Here substantial refers to offensive energy, weight, strength and is a yang state. Insubstantial refers to defensive energy, less weight, yielding and is a yin state. Yang, Ban-Huo stresses that the key to martial success in Taijiquan is found in understanding opposites.

Likewise, Wang Zong-Yue, in the Taijiquan Classics, is credited with writing, “When there is pressure on the left, the left becomes insubstantial. When there is pressure on the right, the right becomes insubstantial” (Yang, 1999, p. 17). Not only is there insubstantial and substantial between people as Wang, Zong-Yue indicates, but there is insubstantial and substantial within a person for every movement. Zhang, San-Feng is credited with the following:

Substantial and insubstantial must be clearly distinguished.
 Every part (of the body)
 Has a substantial and an insubstantial aspect.
 The entire body and all the joints should be threaded together without the slightest break. (Yang, 1999, p. 9)

Understanding which leg or arm is substantial and insubstantial is a fundamental component of understanding Taijiquan.

Numerous people claim that the Yin/Yang dichotomy is the root of Taijiquan and the name itself implies this since the philosophical concept of Taiji is the mother of yin and yang. DeMarco (1997) writes that, “[t]he yin-yang interplay is the foundation of taiji’s boxing routine. It is the impetus of the flowing movements. Throughout the taiji routine, practitioners experience the fluctuating pulse of yin and yang” (p.55). Derrickson (1993) writes, “Taiji is movement which expresses the ultimate duality, yin and yang. This interplay of opposites encompasses all movement in Taijiquan. For example, in stepping one distinguishes the weighted or *yang* leg from the less-weighted or *yin* leg. Ward Off is counter-balanced by Roll Back, and so on” (p. 67).

Picture 1 is relevant in understanding how the principle of opposites applies to Taijiquan. In this drill the arms (in Wardoff position) must remain strong and firm while the waist and legs must remain loose and relaxed. The strong arms keep your defense (i.e., guard) from collapsing and the relaxed legs and waist allow you to remain elusive as your opponent seeks your center. Even within the arms there must be a looseness that allows you to sense the opponent’s force and neutralize effectively.

In this exercise, as in the yin-yang symbol, there is yin within the yang and yang within the yin. If you have too much yin then your partner will overpower you, collapse your guard, and knock you off balance. If you have too much yang then you are stiff and not listening and can easily be knocked backwards. The key to successful Taijiquan is balancing the opposites, and the principle of contradiction that is characteristics of dialectical thinking.

The principle of relationship or holism can be found in Taijiquan's emphasis on body mechanics as well as the interdependent self as described in detail above. Zhang, San-Feng is credited with the following:

Once in motion,
Entire body must be light (Qing) and agile (Ling),
(It) especially should (be) threaded together. (Yang, 1999, p. 1)

The mechanical emphasis on relaxing the muscles is designed specifically to facilitate the body moving as if "threaded together." Fa Jing (explosive power) is only generated by the explosive whip-like motions that require a relaxed body that moves as one. The force generated by a Taijiquan strike is compared to that of a whip. A whip is soft and has no sense of tension or rigidity but when used to strike can be extremely penetrating. Movements in Taijiquan emphasize relaxation not just as a health benefit, but also as a source of whip-like martial power.

It is a truism in Taijiquan that the entire body should be involved in each movement. If you are moving your arms while your legs and waist are stationary then you are very likely doing something wrong. Zhang, San-Feng is credited with the following:

The root is at the feet,
(Jin[g] or movement is) generated from the legs,
Mastered (i.e., controlled) by the waist
And manifested (i.e., expressed) from the fingers.
From the feet to the legs to the waist must be integrated, and one unified Qi. (Yang, 1999, pp. 3-4)

The emphasis on movement originating in the legs, directed by the waist and manifesting in the hands is another central focus of Taijiquan and something routinely emphasized in Dr. Yang, Jwing-Ming's instruction. The whole body must work together as if a string of pearls to manifest the whip-like energy that is at the heart of Taijiquan Jing manifestation. Similarly, DeMarco (1992) writes the following:

A hand strike, for example, actually starts from the heels allowing energy to move through the legs, waist, torso, shoulders, arms and then into the hands. The end result is a blow stemming from the whole body, not just muscular power from one arm. (p. 15)

In addition to the above mechanical focus on holism, the more esoteric side of Taijiquan emphasizes that the body is a microcosm for the universe. What happens

outside of us on a macro-level scale also happens inside of us on a micro-level scale. The focus on the body as manifesting yin and yang are but one example of this view. Derrickson (1993) states that “[b]y combining movement based on the Five Elements and the Eight Trigrams, Wang was indicating that such movement was a microcosm, an expression of the entire cosmic order on a small, personal scale” (p. 68).

The principle of relationship or holism is also clearly seen in the interdependence emphasized in Taijiquan. As described in more detail above, Taijiquan emphasizes connecting and adhering to one’s opponent. Even as a martial art, the emphasis is on working with the force provided by your opponent and working in harmony with this energy. Fighting against this energy is working against the Dao. Harmony with nature and the energies provided by nature emphasize that you are in a relationship with nature and your opponent. Wile (2007) writes that the:

fusion of body, mind, and breath in a moving meditation creates the perfect balance of excitation and relaxation required for the “flow” experience, and by centering the self in the radical present sets the stage for experiencing rare moments of spontaneity (*ziran*) (p. 24).

This feeling of “flow” is a reference to the psychological state where one feels completely absorbed in a challenging task and loses a sense of self and time (Csikszentmihalyi, 2008). Experientially, the loss of self-critical thought experienced in flow could also be perceived as a deeper connection with one’s surroundings. In the flow state, one’s awareness as an isolated individual decreases as one’s awareness of the connection and interdependence with the environment increases.

Perhaps the clearest manifestation of Taijiquan’s emphasis on holism is the name itself. Taiji is that which creates yin and yang out of wuji. It is the progenitor of life and it is what connects all things. The Grand Ultimate Fist is the embodiment of the yin-yang philosophy in a martial art. It is the attempt to create a martial art based on understanding and harmony rather than on power and dominance.

V. Implications and Conclusion

In his critical review of the connection between Taijiquan and Daoism, Wile (2007) asks, “is taijiquan a good vehicle for exploring Chinese culture, and in particular Daoism?” (p. 37). He answers this question by arguing that the physical movements and focus of the solo form, and in their application as a martial art, are “a perfect fit” with Daoism. The central thesis of this paper is that the study and practice of Taijiquan is a good vehicle for exploring Chinese cognition as well. There are clear parallels between research on East-Asian cognition and central aspects of Taijiquan. Taijiquan is a form of international education that can be used to increase awareness of East-Asian beliefs.

The practice of Taijiquan clearly emphasizes the interdependent self over the independent self. The main focus of Taijiquan as a martial art is on listening to one’s opponent and adjusting to the yin and yang fluctuations of your opponent. A master of Taijiquan has superb Listening Jing and knows the intentions of the opponent

while keeping their own intentions hidden. The dialectical orientation found in East-Asian thought is also clearly evident in Taijiquan. The principle of change is seen in the solo form's constant changing from yin to yang and back as well as in the martial strategy of capitalizing on the moment of change in your opponent. The principle of contradiction is evident in the emphasis on substantial and insubstantial and the balance that must always be maintained between them. The principle of holism is evident in many aspects of Taijiquan including the focus on interdependence, the mechanics of the movements, and the name of the art itself.

The connections between Taijiquan and the cross-cultural literature on East Asian thought and cognition have two clear implications. First, the study of Taijiquan is more than just the study of a form of movement or a martial art. It is more broadly the study of the East-Asian emphasis on interdependence and dialectical thought. As such, Taijiquan is an excellent vehicle for teaching Westerners about multiple aspects of traditional East-Asian culture. This fact raises interesting possibilities for Taijiquan as a form of international education. Second, the priming research indicates that even short-term exposure to the interdependent self induces a more holistic and dialectical cognitive mode. This implies that students of Taijiquan may be improving their holistic cognition abilities and perhaps even their sense of connectedness to the world around them. It is also plausible that individuals with more interdependent and dialectical orientations might be more likely to study Taijiquan than other martial arts. It is also plausible that long-term practitioners of Taijiquan will be more interdependent and dialectical in their orientation than the average person. These potential psychological components of Taijiquan practice have yet to be investigated.

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