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TAILORED FORMS OF TAIJI FOR DEPRESSION

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ABSTRACT

This paper intervenes in the debate about the effectiveness of 'tai chi' (henceforth *taiji*) forms tailored for specific illnesses by looking at the example of their use in the treatment of depression. In the efforts to bring taiji to the West, one movement has been toward simplification. Another is the development of tailored forms. This paper analyzes two new forms of taiji for depression, created by contemporary American teachers Drs Aihan Kuhn and Albert Yeung. I argue that studies are needed to compare the medical effectiveness of tailored forms with more traditional forms. Questions to be explored in such studies would range from the clinical to the sociological. Do tailored forms of taiji provide improved outcomes for the conditions targeted? What about the usefulness of such forms for patients with co-morbidities? Do tailored forms 'treat' one illness, but have less effectiveness in preventing the onset of other illnesses? And finally, would tailored forms better fit into a Western perspective on treating illness and therefore be more readily assimilated into the Western health care system? The analysis of the creation and dissemination of tailored forms is significant for understanding the history and development of *taijiquan* in a global context.

INTRODUCTION

In the West, *taiji* has established itself as a holistic approach to personal development and health. While it may not have been designed as a specific treatment for disease or ill health, it is currently undergoing rapid evolution in this direction. Part of this evolution is a movement to create taiji forms designed to treat specific health problems. Even a quick search on the internet reveals titles such as *Tai Chi for Arthritis and Fall Prevention Handbook* [Lam 2017], *Tai Chi for Heart Conditions* [Lam 2018], *Tai Chi for Parkinson's Disease* [Loney and Rodgers 2014], and so on.¹ By contrast, general discussions of the impact of new/tailed *taolu* or 'solo forms' are far harder to locate. Certainly, tailored forms for depression have not yet been studied comparatively, either for their efficacy or for their role in the evolution of the martial art. In the 2019 article 'Treating Depression with Tai Chi', Jian Kong et al. (Kong is an Associate Professor at Harvard Medical School whose research focuses on using brain imaging tools) argue that there is an urgent need for tailored forms of taijiquan for the treatment of depression [Kong et al. 2019].

Significantly, at least two such forms already exist. Kong's article mentions, first, the innovative form of Dr Albert Yeung (a psychiatrist based at the Massachusetts General Hospital)² and another solo set designed as therapeutic for depression created by Dr Aihan Kuhn (a doctor of Chinese medicine based in Sarasota, Florida).³

1 Dr Lam's arthritis protocol has been extensively studied for its efficacy in its target population. Among the studies on this protocol see Song et al. 2003; Fransen et al. 2007; and Callahan 2016. For a full list of studies on this protocol see Lam, *Tai Chi for Health Institute*.

2 Dr Albert Yeung is Director of Primary Care Research of the Depression Clinical and Research Program the Mass. General Hospital and associate professor of psychiatry at Harvard Medical School. His focus in treating depression includes integrating primary care and mental health and employing complementary and alternative methods for treating mood. Dr Yeung completed his medical degree at the National Taiwan University. His Doctor of Science degree with a concentration in epidemiology is from the Harvard T.H. Chan School of Public Health [The MGH Center for Cross Cultural Student Emotional Wellness].

3 Dr Aihan Kuhn has trained in both conventional and traditional Chinese Medicine. She graduated from the Hunan Medical University, Changsha, China. From 1983–1988, Dr Kuhn practiced Ob/Gyn in Chinese Hospitals [Schools and Colleges Listing, Dr Aihan Kuhn]. She has written several books including: **Natural Healing with Qigong** [2004], **True Brain Fitness** [2010] and **Simple Chinese Medicine** [2009]. Besides her work in natural healing, Dr Kuhn is a teacher of taiji and qigong, and offers certification programs for instructor training [Dr Aihan Kuhn, Natural Healing Education, 2021].

In other words, while this emergent domain in medical studies seeks to understand and describe the effects of taijiquan on health, there are significant gaps in our knowledge about the effectiveness of forms tailored for specific health issues, such as depression. Against this backdrop, this article presents suggestions for future research seeking to bridge these gaps. It singles out depression because in 2017 the World Health Organization released data finding clinical depression to be the world's single largest contributor to global disability. Depression is also the major cause of suicide, claiming 800,000 lives per year [WHO 2017].

Pharmacological treatments for major depressive disorder have been criticized for such reasons as intolerance, side-effects, delayed therapeutic response, limited effectiveness and high relapse rates [Penn and Tracy 2012]. Interestingly, much research on taiji and depression has focused on severe depression, also called major depressive disorder [Lavretsky 2011; Yeung 2012]. This may be because in this population the use of antidepressants alone has had limited effectiveness in leading to remission [Corey-Lisle 2004; Trivedi 2006]. To avoid medication side-effects in pregnant women, another area of research has focused on taijiquan for prenatal depression [Field 2013].

Some studies have pointed toward the potential of these practices as an adjunct therapy to pharmacotherapy and/or psychotherapy. Evidence has included improvement on standard scales used to measure depression, such as the Beck Depression Inventory and other similar scales [Wang 2009]. Two measures of inflammation, c-reactive protein and interleukin-6, biomarkers for respectively major depressive disorder [Chamberlain 2019] and mood disorder [Hodes 2016], have been known to decline after patients practice taiji.

However, the evidence for the effectiveness of taiji on depression has more recently been called into question. Seshardi et al [2021], in a review article, look closely at three studies which attempt to establish an association between the practice of taiji and a reduction in symptoms among patients who suffer from depression [Yeung et al. 2012; Yeung et al. 2017; Lavretsky et al. 2011] and conclude that the evidence from these studies is 'insufficient to draw conclusions' [e8]. This assessment may have been inevitable given that the two studies included by Yeung et al. were pilot studies with small sample sizes. The gap between the conclusion of Yeung et al. [2017] (that 'the primary treatment, taiji improved treatment outcomes for Chinese Americans with MDD over both passive and active control groups') and the very different conclusions of Seshardi et al point to the need for larger studies.

TWO NEW TAIJI SETS FOR DEPRESSION

Both Aihan Kuhn and Albert Yeung have written books on the treatment of depression. They use different approaches. Their explanation of why these approaches are valuable varies, and this variation leads to differences in the sets they have created. Both situate the healing qualities of taiji in a larger context. The modifications made by both Kuhn and Yeung have at their root deep compassion for the depressed person and the desire to make taiji both accessible and effective. In her book, *Tai Chi for Depression* [2017], Kuhn presents her tailored form for depression.⁴ She sees the practice as an important component of a balanced lifestyle, along with diet, Daoist study, and a general attitude of letting go of negative thoughts and memories to help avoid 'qi stagnation'. More specifically, in the creation of her set she has combined Chen and Yang style material along with movements from qigong practices [Kuhn 2020b]. Her clinical understanding of depression is rooted firmly in her training in Chinese medicine.

The models of depression in Traditional Chinese Medicine (TCM) and Western medicine are based on different theoretical and cultural frameworks. In TCM, depression is sometimes referred to as *yu* or *yu-zheng*, which indicates that *qi* is 'not flowing, entangled, blocked or clogged' [Ye et al. 2019: 2]. In TCM, the onset of emotional change is closely related to the health of the viscera. More specifically, the onset of depression is fundamentally linked to stagnation of liver qi, then also to dysregulation of the spleen and the heart. In TCM, the heart, in addition to its role as the circulator of blood, regulates mental activities through its role as storing *shen* (consciousness, emotion and vitality) [Ye et al. 2019].

Kuhn explains that she has created a taiji form with the desired effect of opening the liver energy, elevating heart energy and harmonizing spleen energy. Thus, her primary explanation for how her form reduces depression is tightly linked to TCM theory. She further explains that her goal is to produce a 'smooth chi flow through the whole body' and to 'nourish the organ systems' [Kuhn 2020a]. It should be clarified that the organs in traditional Chinese Medicine, as referred to here, are not understood as the Western organs. As Ted Kapchuk explains in *The Web That Has No Weaver* [Kapchuk 2008], there is no simple correspondence between the Chinese and Western medical systems of classification.

4 The movements of Kuhn's form for depression are: Taiji Preparation, Parting Wild Horse's Mane Empowers Dan Tian; Step Forward, Brush Knee; Step Back, Open Energy Channels; Circle Hands, Punch Forward; Circle Hands, Squat, Left Fist Upward; Turn Body and Lead Energy, Push to Right; Circle Hands, Squat, Right Fist Upward; Turn Body and lead Energy, Push to Left; Circle Yin-Yang, Side Fly, and Elbow Strike to right; Circle Yin-Yang, Side Fly and Elbow Strike to Left; Fair Lady Moves the Shuttle (in Three Directions); Left Kick, Right Punch; Elbow Strike Back; Circle Arm Forward and Punch Up; Circle Arms, Empower Dan Tian; Taiji Ending [Kuhn 2017].

Suffice it to summarize for our purposes, that the Western organs are somatic structures, while the organs in Chinese medicine are defined by the activities associated with them.

In Western terms, Kuhn emphasizes the importance of vagus nerve stimulation [personal correspondence, June 2, 2020]. The vagus nerve is a cranial nerve complex which relays relaxation from the central nervous system to the body. It is regulated by breathing. Various forms of meditation and mind-body exercise produce an increase in vagal tone. The explanation of vagal nerve stimulation as the mechanism of action of taiji for depression follows Gerritsen and Band, as a general explanation for how contemplative practices such as meditation, yoga and taiji affect health, including cardiopulmonary fitness, immune function, psychological health, anxiety and executive function [Gerritsen and Band 2018]. In contrast to the TCM theory explanation, where certain movements are directly related to counteracting depression, the model of vagal nerve mechanism of action is a more generalized explanation, but one widely accepted in Western medicine through our understanding of stress reduction.⁵

In contrast, in the book *Self-Management of Depression* [Yeung 2009], Yeung bases his study on a Western understanding of the etiology of depression. His approach focuses on empowering the patient to self-manage depression by providing tools to 'reset priorities in their lives, challenge maladaptive and irrational thinking patterns that may undermine self-care, and discover the motivation to accomplish goals they set for themselves' [Yeung 2009: 12]. In his model, the physician's role shifts from *authoritative* to one of *partnership*. Along these lines, noting that depressed patients have difficulty remembering complicated transitions and long forms, Yeung's taiji form for mood follows a model of teaching taiji elements without transitions, as introduced by Peter Wayne in *The Harvard Medical Guide to Tai Chi* [2013].⁶ Thus, Yeung's form could perhaps be compared with more traditional qigong practice. The distinction might, in part, depend on the way in which his form is taught: the demonstration of martial applications, for example,

5 Although the exact mechanism by which the vagus nerve would mediate an effect of taiji on the nervous system has not yet been determined, Shenbin Liu et al's recent research demonstrating an anti-inflammatory response to low intensity electroacupuncture stimulation via the vagal-adrenal axis in mice may eventually contribute to our understanding of this pathway. Liu is a postdoctoral fellow in the lab of Qijufu Ma at the Dana Farber Cancer Institute and the Harvard Medical School [Liu, Wang, Su et al. 2020; Liu, Wang Su et al. 2021].

6 Here is the link to view Dr Yeung's form, called 'tai chi for mood'. This can be found embedded in Jian Kong's 2019 article, 'Treating Depression with Tai Chi: State of the Art and Future Perspectives'. It is also on YouTube: <https://www.youtube.com/watch?v=08IFKIXb3bA>

would link the practice more strongly with taijiquan. But, overall, the evolution of tailored and simplified forms may serve to blur the traditional distinctions between taiji and qigong.

Interestingly, at a lecture at McLean Hospital (January 22, 2020), Yeung was asked whether he designed his form to emphasize the opening of energy of any particular meridian or organ. Yeung replied that he had not but had instead chosen aesthetically pleasing elements and combined them in a way that would be easy to remember.⁷ This is consistent with his goal to empower the patient to function as independently as possible and to have self-efficacy in their own healing. Rather than relying on TCM theory to explain how taiji and qigong help lift depression, Yeung looks to Western research on the benefits of mindfulness. Western models on meditation show an attenuation of the stress response (where the sympathetic nervous system stimulates the adrenal medulla to produce adrenaline and noradrenaline) through, what Herb Benson has coined, the 'relaxation response' [Benson 1975]. According to Yeung, 'the exact mechanisms of qigong's and Tai-Chi's effects on physical and mental well-being are unknown', so he looks to the stress reduction model to provide a theory for the effectiveness of the meditative movements of taiji [Yeung et al. 2018].

Conclusion: Possible Future Directions for Research

Some directions for future research follow. To my knowledge, no one has asked in a systematic way whether tailored forms of taiji for depression are more effective than traditional or simplified forms. However, Kuhn has observed some shifts in her students after they practice her form for depression. Kuhn writes that after they study her tailored form, students show 'great improvement in overall emotional health: more laughter, joking, happy, more positive, better social skills and more creativity' [Kuhn 2020a].

7 The moves Yeung has included are: Beginning; Grasp the Sparrow's Tail; Single Whip; White Crane Spreads its Wings; Brush Knee and Step Forward; Wave Hands Like Clouds; Part the Wild Horse's Mane; Strike the Tiger, Left and Right; Appears to Close; Draw the Bow and Shoot the Tiger; Embrace the Tiger and Return to the Mountain; Cross-hands and Closing. His Beginning is similar to Wayne's Raising the Power except that in Yeung's presentation, as the hands come up, the legs straighten, while in Wayne's move the opposite is true. One way in which Yeung's form for depression differs from Wayne's approach, is that Yeung generally alternates doing a move on the left side, with the right side, while Wayne repeats one side many times before shifting sides. Both rely on simplification to make taiji easier for Westerners to learn and so to obtain the benefits of practice.

Her comments are provocative and researching them may yield some insights. Kuhn's observations might be grouped into three categories: joy and humor, social skills, and creativity. All three categories of effects could be distinguished and explored separately. For instance, creativity has been described as having a dichotomous face in psychology. It has been associated with both well-being and certain types of mental illness [Fink et al. 2014; Crabtree and Green 2016]. Art history abounds with cases illustrating both. Many claims have been made that taiji increases creativity, and these associations call for research in their own right [Feurst 2014; Wayne 2013].

The very concept of designing a tailored taiji set for depression, as it is put into place by Kuhn, seems to suggest that various postures or movements alone can elevate mood. In their article, 'Can Tai Chi and Qigong Postures Shape Our Mood? Toward an Embodied Cognition Framework for Mind-Body Research', Osypiuk, Thompson and Wayne [2018] suggest that there may be a reciprocal relationship between posture/movement and mood in taiji and qigong. The authors summarize studies that look at postures of pride/powerlessness and anger/joy/sadness, as well as movement studies that examine smoothness/sharpness and shapes [going towards or away from the body] and their relationship to mood. The postural and movement categories analyzed in the West include 'slumped' versus 'expansive postures', and the victory shape commonly made by athletes after winning at their sport [Hall, Coates, and LeBeau 2005; Raney et al. 2015; Cuddy 2018; Tracy and Matsumoto 2008]. These are very simple postures in comparison with the refined and subtle movements of taiji.

In books on medical qigong, as in Kuhn's book on depression, a link is suggested between taiji movements and their effect on specific organs (in the Traditional Chinese Medicine understanding of them). But these associations are descriptive only: there is no research data yet to support them. Thus, there remains a philosophical and cultural gap between what is experienced in the Traditional Chinese Medicine system, and what is known in Western medicine.

As explained above, Yeung's form for depression does not emphasize any specific moves or shapes, but instead simplifies. Future research could explore whether his goal in creating this form is met. Do depressed patients indeed find his form easier to learn? Does it take less time for them to do so? Do more patients stick with classes in his form and do they continue to practice at home? Six months after the classes, what are the effects? Does doing Yeung's tailored form thus increase the efficacy of doing taiji, for depressed patients?

The innovation in both Kuhn's and Yeung's forms concerns the sequence of movements, or the external form. But, taiji practice also has

an internal aspect. One element of this internal cultivation is known as *song*.⁸ *Song* is defined by Payne and Crane-Godreau in their 2013 article, 'Meditative Movement for Depression and Anxiety', as relaxed and well-rooted, and 'grounding', or stably connected to the ground [Payne and Crane-Godreau 2013]. They hypothesize that grounding might help stabilize mood swings and reduce depression and anxiety. In fact, it seems that there are several different traditions of *song*. According to Marceau Chenault – training manager at Shanghai Qigong Research Institute and author of *La danse du souffle: globalisation d'une pratique de santé: la tradition chinoise du qi gong* [2020] – 'song is taught by many teachers or masters, and many schools have their own method of fang song' [personal communication, October 31, 2021].

I have not found any study in English that compares the various methods of song, but I have found references to at least two different traditions. According to George Ho – a chiropractic doctor from Vancouver and author of many articles for *T'ai Chi Magazine* – and his co-authors Rebecca and Jennifer Ho: Master Yang Chengfu (1883-1936) passed a tradition of *song* to his student Zheng Manqing. It is this tradition of *song*, presumably passed to Wayne through his teacher, Robert Morningstar, a student of Zheng Manqing (1902-1975) that I have been studying. Based on Wayne's description in his book and my personal experience in classes he has taught, I would define this practice of *song* as a sinking of energy and attention into the *dantian* area. Both qigong and taiji are ideally practiced in a state of *song*.

In traditional texts on taiji, the *dantian*, is located about 1.3 to 3 inches below the navel and behind it. According to Mantak Chia [2002], in *Tan Tien Chi Gung*, the *dantian* is, in the Taoist energy paradigm, the storage place for qi energy in the body, and the 'center of awareness' [Chia 2002: 3]. Bringing one's focus and attention to this area is the foundation of rooting. George Ho, Rebecca Ho and Jennifer Ho explain

8 In a typical presentation, the teacher explains that the Chinese character of song represents a woman pulling out her hair pin, so that the hair can cascade down. Scott Park Phillips – author of *Possible Origins, A Cultural History of Theatre and Religion* [2016] and *Tai Chi, Baguazhang and the Golden Elixir* [2019] – in his blog [Phillips 2014], explains that male hairstyles in China, particularly during certain periods, were highly regulated. Furthermore, according to Marc Abramson, hairstyles were viewed in both Inner Asia and China as 'markers of political allegiance' [Nicola DiCosmo and don Wyatt 2014: 125]. So, Phillips explains that a man's pulling out the hairpin could be interpreted as 'dropping in rank' or 'choosing to give up status' [2014]. Phillips sees the implications of the act of a man letting down his hair with a wider lens and interprets it as 'to let go of social obligations, social stresses and social conventions' [2014]. As the character for song has no gender in and of itself, the teacher's choice of imagery – describing either a woman or a man taking down their hair – determines whether song is related only to the personal, or also to the political.

that *song* has martial arts implications: 'Master Chengfu Yang referred to "song kai" as a mental and physical state that was ready to process the force from an opponent. If the mind and body are tense the body cannot react in a taiji manner and will be reactively defensive to the incoming force' [Ho et al. 2019: p.21].

Marceau Chenault explained to me that another tradition of *song* (or more fully, *san xie fang song gong* – 'relaxation method with the three lines') was developed at the Shanghai Qigong Research Institute in the 1950s and is well-known because it was researched for clinical use. Although the method is described as having been created at the Shanghai Institute, Chenault writes that perhaps a better description of its history would be as a process of 'revival'. He further explains that 'Fang Song practices are probably as old as Taijiquan or Qigong' [personal communication, October 31, 2021]. This method has been described by Kenneth Cohen, in *The Way of Qigong: The Art and Science of Chinese Energy Healing* [Cohen 2000], as a qigong method of deep relaxation used successfully at the Shanghai No.6 People's Hospital for the treatment of asthma. This qigong exercise or series of exercises includes a body scan and the releasing of tension from various parts of the body.

Following Payne and Crane-Godreau's [2013] hypothesis, one research question could be whether explicit training in *song* enhances the effect of the external moves in relieving depression and balancing mood. In including *song* in a research study, the choice of which style of song practice to be included would need to be explored and might in part be based on the available teachers' and researchers' training. A methodological difficulty that could arrive in exploring this question is whether *song* must be explicitly taught for students to experience it when doing taiji. The other side of this question is whether we can establish that there are physiological changes that take place during the experience of *song*. How would we measure whether the student has learned to shift into a state of *song*? In their 2018 article, 'Qigong and Tai Chi for Mood Regulation', Yeung et al. cite a potential correlation between patterns of electrical conductivity and expected patterns of qi. But, according to Yeung, the 'reliability and quantifying [of] qi remain to be verified' [Yeung et al. 2018: 42]. These questions are related to the multiple areas of complexity present in measuring the outcome of taiji practice.⁹

Another area of research on forms of taiji created to focus on helping depression could study the problematic aspect of the single disease framework. On the one hand, tailored forms might better fit into

9 Many of the obstacles in taiji research have been described in the companion articles: 'Challenges Inherent to T'ai Chi research' [Wayne and Kaptchuk 2018].

a Western perspective on treating illness, and so be more readily assimilated into the Western health care system. On the other hand, several authors have critiqued treating any single illness in isolation. They point out that behavioral medicine and health psychology have historically ignored the co-occurrence of multiple chronic conditions, especially among the elderly [Parekh 2011; Suls 2016]. Is this a drawback to teaching a form of taiji tailored to treating depression? Would tailored forms of taiji for depression be appropriate for patients with comorbidities? If there is something to be gained by focusing on one illness, how do overall well-being ratings compare when following traditional versus tailored taiji? From a practical point of view, should tailored forms be taught alone or in combination with other qigong practices for a more holistic approach?

Another research area concerns at what point in treatment it would be best to include taiji. It might seem natural to offer taiji from the outset as an adjunct therapy for depression. But Yeung [2010] draws our attention to the study of Blumenthal et al. [1999] on the effect of either exercise, antidepressants or a combination of both on depression. In this study, the authors found that ten months after the study concluded, participants in the exercise group showed lower rates of depression than those in the combined exercise and antidepressant group. The authors do not offer an explanation for this phenomenon. One hypothesis would be that having to do both exercises and take medication reduced compliance in the long-run, and that the simpler, or more streamlined intervention was actually more effective. This research needs to be replicated in the specific case of taiji. Subjects in the long term need to be asked the reasons for their continued compliance or noncompliance with the program. Yeung uses Blumenthal's study to argue for a sequenced, rather than simultaneous, series of interventions. Further research needs to ascertain whether this is correct.

To put my study into a historical context, the innovation of tailored forms is not the first time Chinese martial arts have undergone a transformation. Indeed, there have been several watershed periods of adaptation of traditional Chinese martial arts. These include the Ming-Qing transition (ca 1644), where sects and secret societies used martial arts to protect members; the 1920's and 30's, which saw new types of organizations created (including some which integrated martial arts into the education system) and the introduction of *jingwu*, a unique approach to teaching martial arts, which instead of the prior guild system designed to restrict knowledge, had as its goal the producing of martial arts instructors, and *guoshu*, an effort to nationalize the martial arts and unify them as a sport [Filipiak 35-9; Morris 220-1; Judkins 2012]. Thus, what we consider 'traditional' arts are already the result of a process of adaptation which took place over 100 years ago and continues to this day. The development of tailored forms is not

comparable to any of these in scope, but there is a comparison to be made: in a historic shift, taiji is now being presented (or packaged) as a health treatment for a specified condition.

As for the impact of taiji on health, two overall research approaches are possible to move the field forward. One is to call for studies of comparative effectiveness, as outlined above. Which form of practice is more helpful for depression –traditional taiji or 'taiji for depression'? Another approach is to focus on documenting the pathways that are being changed through taiji practice. Wayne proposes a theoretical framework where eight active ingredients function simultaneously to improve the practitioner's health. Further research might identify the elements that mediate clinical outcome specifically in the case of depression. In this domain, Kong has begun to lay out some possibilities to be explored: including attentional control, stress reduction, modulation of the inflammatory system and increased vagal modulation of the parasympathetic and sympathetic nervous system. Kong et al. [2019] note that although these are all potential channels for the effectiveness of taiji practice in reducing depression, the exact mechanism of action remains unclear. In the end, both research on comparative effectiveness and pathway of action may emerge as critical and fruitful directions of inquiry.

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