Putting the "I" back in "intelligence" or:

Remarks on I-Chuan Training

Every rider must not only ride but also think, as only a thinking rider will be able to attain his goal in a relatively short time without spoiling his horse. Col. Alois Podhajsky, The Complete Training of Horse and Rider.

1. I began my martial arts training while in graduate school 20 years ago in Cambridge, Massachusetts, where I was an enthusiastic if not particularly talented karate (Shotokan and Goju-ryu) student. Later on, I studied yang style t'ai chi for a number of years in New Haven, Connecticut. I began studying with Sifu Fong when I arrived in Portland about four years ago. The pages that follow represent my best attempt to make sense of what I have learned from him. I am profoundly grateful for his tireless efforts to teach me something of his art. Any misunderstandings on display below are entirely my responsibility.

2. The Chinese term "I-Chuan" is sometimes translated as "mind boxing" or "mind fist." I suggest, however, that we can understand better what this form of training involves if we translate "I" as "intelligence" instead of as "mind." Perhaps because of the ways we have traditionally conceived the relation between mind and body, the term "mind" often suggests to us something more detached and intellectual than is, in this context anyway, intended by "I." In particular, "mind" connotes thinking, calculation, and contemplation in the sense of problem solving or detached reflection, whereas what is intended by "I" is more a matter of skillful responsiveness to the world. It is this sort of responsiveness that I-Chuan aims to develop, and it is this sort of responsiveness that, for reasons I will explain in the following pages, I associate with intelligence.

According to one useful definition, intelligence is

> the capacity for knowledge and understanding, especially as applied to the handling of novel situations; the power of meeting a novel situation successfully by adjusting one's behavior to the total situation; the ability to apprehend the interrelationships of presented facts in such a way as to guide action towards a desired goal. (Webster's New International Dictionary, second edition)

Some have found it illuminating to distinguish between theoretical intelligence and practical intelligence. Examples of the former seem to include the sort of intelligence on display in the exercise of mathematical or scientific expertise. The mathematician or scientist is typically thought to be adept at solving certain sorts of intellectual problems. By contrast, a skilled rider of horses seems to bring a more practical sort of intelligence to bear on his situation. He must know, for example, how to negotiate one jump so as to be ready for the next.

Like any distinction, however, that between theoretical and practical intelligence is more complicated than it may at first appear. In particular, it is perhaps little more than prejudice to suppose that the person with great theoretical intelligence is smarter than his apparently more practically oriented counterpart. For each of them has what can relevantly be described as skill at responding to what the definition of intelligence quoted above calls "novel situations." Just as the skilled chess player must respond to novel or unforeseen situations on the board in the course of a game, so the skilled boxer must respond to novel or unforeseen situations in the course of a fight. And both of them must, as it were, think ahead, being open to more distant eventualities as they appear -- several moves or several punches down the road. As I understand it, I-Chuan training aims at the development of a form of intelligence in just this sense. The I-Chuan

practitioner aims to develop his or her ability to respond intelligently to the novel situations he or she encounters in the course of life. And just as there is no obvious limit to the novel situations a person may encounter, so there appears no limit to one's ability to develop the relevant form of intelligence.

3. The notion of sung-gian is of great importance in understanding the sort of intelligence I-Chuan aims to develop. On a fairly literal rendering, "sung" means "relaxed," and "gian" means "firm." The I-Chuan practitioner is told to develop his or her sung-gian, and it is most natural to understand that teaching as telling one to learn to relax and firm up one's muscles more and more quickly -- to punch, for example, with a smaller and smaller 'wind-up'. Someone who has good sung-gian is able more quickly to relax and firm up his or her muscles than is someone whose sung-gian is poor. He or she would, for example, be faster out of the starting blocks in a 100-yard dash than would someone else; his or her movements would be more "explosive."

Such an understanding of the term, however, may encourage an overly mechanical picture of what is intended. For the sort of relaxing and firming up in question is precisely the intelligent responsiveness to novel situations that makes I-Chuan unique among martial arts training. A machine -- a clever robot, for example -- could perhaps relax and firm up more quickly than any human being ever could, but it is difficult to understand what it would mean to credit a machine with responding intelligently to its situation. Certainly a machine could be built to strike harder than a person could. But it is unclear what it would mean to say that machine hit something intelligently. Consequently, there would be little sense in attributing sung-gian to a machine. Machines don't respond to situations; they can only react.

The notion of responsiveness I use to characterize the kind of intelligence developed by I-Chuan training is difficult to characterize precisely, in large part because although in a sense deliberate, such responsiveness is in another sense involuntary. Nevertheless, a useful example of the sort of responsiveness I have in mind is provided

by my wife's Pit Bull. Lucy Belle is a relatively young dog whose hips are sound. If, while she is standing, one exerts light but firm pressure with the palm of one's hand on her rump just above her tail, it is quite easy to feel Lucy Belle's body simply expand into one's hand. The harder one presses, the more she expands. Most important, there is no interval or gap between the pressure one exerts on her and her response. There is, as I will suggest in a moment, only one thing going on here. That is to say, she does not first bend her back legs to take the pressure and then press back. She starts by pressing back, and not just at the point where pressure is being exerted, but all over her body.

To imagine what it would be like to respond oneself to a similar pressure, one might proceed this way: stand relaxed with slightly bent legs while someone standing on a chair exerts smooth but firm pressure downward on one's shoulders. Consider how one might resist such pressure. It is not at all unlikely that one would simply push back by sinking down a bit and then standing up. But pushing back is a reaction to pressure, not a response in the relevant sense. The muscles involved in responding to such pressure are the muscles one uses, for example, to carry a heavy backpack. Indeed, they are the muscles that one normally uses to keep oneself standing while waiting for a bus. By and large, one does not have to think about which muscles those are, and one would find oneself in considerable difficulty if matters were otherwise. However, when called upon to use those muscles deliberately -- in response to pressure of the sort envisaged -- one has no idea how to do so, and resorts instead to the clumsy reaction of pushing back. As long as it feels as though there are two movements involved -- first, the downward pressure on the shoulders, and second, the upward pressure from the legs -- one is reacting, not responding.

Another way to appreciate the difference between reacting and responding to pressure is to notice that because pushing back is simply a reaction, if the pressure to which one is reacting is suddenly removed, one will suddenly find oneself pushing into a void. Imagine, for example, pushing against a wall that suddenly disappeared: one would

likely fall forward. But the sort of intelligent responsiveness developed by I-Chuan training really does respond to the pressure in question. If I react to pressure, there are two separate movements, which is why I will lose my balance if the pressure to which I am reacting is suddenly removed. By contrast, if I respond to the pressure, there is in an important sense only a single movement in which two people participate. When the pressure is removed from one side, therefore, there is no loss of balance on the other. Thus, Lucy Belle does not come off her feet if I suddenly remove the pressure on her rump; she simply and immediately returns to her normal relaxed state. Similarly, the I-Chuan practioner would fare better with disappearing walls than will his more reactive counterpart! The speed with which one returns to the natural relaxed state is a good guide to the quality of one's sung gian.

4. This same emphasis on "I" -- on intelligent responsiveness -- explains the relative lack of set "forms" in I-Chuan training. From the standpoint of I-Chuan, the learning of a fixed form is the death of intelligence. The repeated performance of a t'ai chi form or karate kata tends to become mechanical. From a fighting standpoint, perfecting this sort of mechanical performance is a waste of time, akin to learning a rule without learning how to apply it. But even this way of putting the point is misleading and fails adequately to acknowledge the role intelligence plays in this sort of training. For many martial arts students learn the "applications" of the various moves in the forms they practice without their appreciating the sense in which those same applications are just as mechanical as the forms from which they are taken. Applying a rule cannot be done mechanically; it requires intelligence. To be effective, the application of a technique must be an intelligent response to the situation the practitioner confronts. Otherwise even the slightest change of the opponent's position can be devastating.

The absence of fixed forms in I-Chuan training can be frustrating for the beginner. The earnest student seeking guidance from his or her teacher frequently thinks of learning as a matter of mastering forms and techniques. In I-Chuan training, however, the student

is being taught to think, and thinking must always be done for oneself. In the end, therefore, what is less is more: the teacher's unwillingness to dole out forms and techniques, his refusal to stick to a regular routine of exercises, his reluctance to give the student something to 'take home' is -- seemingly ironically -- the greatest form of generosity. For what the student is learning is indeed to think for himself, and not to have the teacher do his thinking for him.

5. I-Chuan training focuses on zhan zhaung, or "standing meditation." Because I-Chuan aims to develop intelligence, it can be difficult to describe to someone who does not have experience with this sort of training. In the beginning, the work appears to be almost entirely physical, so our task of description is a little easier than it might otherwise be. There is a limited number of postures in which a student typically works, and these are relatively easy to describe. They can, for example, be photographed or drawn. What is difficult to describe is not the posture itself, but the real mental and physical work done in the posture. A beginning student is typically instructed to practice standing in a slight squat, as though simultaneously sitting on and getting out of a chair. The arms are usually maintained in a slightly rounded position with the hands held palms up in front of the body, as though the student were holding a large melon in front of him at the level of his pelvis. The student must gradually come to understand that the spine extends from the pelvis all the way to the base of the skull just behind and beneath the ears as one single chain of joints. Because the muscles in the beginner's legs are usually weak, there is a tendency for him to slide the knees forward to take the pressure off the thighs. When the student is repositioned back into the just-getting-out-of-a-chair posture, he will often raise his chest, thus swaying his lower back. This movement is usually accompanied by a tendency to pull the head back and lift the chin. The teacher will spend much of his time during the first several weeks' work with a new student simply putting him back into the posture of sitting-on-while-getting-out-of-a-chair, until the student's legs begin to be

strong enough for him to maintain the posture without constant reminder from the teacher to avoid this or that mistake.

Part of what the student is learning at these early stages is purely physical. He is above all gaining sufficient strength in his legs to maintain the slight squat for longer periods. But even at this point, the training of intelligence has begun. For the posture is designed to get the student to use the muscles that were originally intended to hold the body upright rather than the muscles he has learned over the years to use instead. Typically, a student is unaware that the weight of his body is supposed to borne by his spine, and not by the surface of his back. More specifically, the weight of the body runs down the front of the spine, where the vertebral disks are. A typical student is also unaware of the relation between his head and his neck. As mentioned above, the tendency is to pull the head back. Doing so lifts the chin, pulls the neck back down and down onto the top of the spine, pulls up the chest, and sways the lower back. Because these habits are so deeply ingrained in most students, the muscles required to hold the usual sway backed, chest up posture are the best developed. When put into the more natural but less familiar posture of sitting-on-while-getting-out-of-a-chair the student will try to use the muscles he has developed precisely in order <u>not</u> to stand in that posture to maintain that very posture. Breaking this habit and training the person to rely on the muscles that were meant to hold the body upright is part of the deeper aspect of these initial stages of <u>I-Chuan</u> training. It is important to understand in this connection that <u>I-Chuan</u> does not aim to correct the student's posture. The correction will take place as matter of course, but simply rearranging the skeleton without retraining the muscles would be pointless at best.

6. It is not until later that the student will begin to appreciate the next aspect of his training in this first posture. At the beginning, the student's experience is mostly one of challenging his endurance. Standing in a slight squat posture for any length of time without pushing the knees forward or raising the chest and without rising up in the

posture is extremely taxing. As indicated above, the muscles necessary to maintain this particular posture (with the weight borne along the front of the spine and transferred to the floor through the feet -- and not the knees!) are usually undeveloped to a surprising degree. The shaking of the legs that tends to occur during the first several months of training is a function of these weaker muscles getting their first work-out in a life time. And because these muscles are so weak, maintaining the posture for any significant length of time (even five minutes can be a challenge) is extremely painful. Consequently, the beginning student's impression of the "mental" aspects of the training is that of constantly challenging his powers of endurance. "How much discomfort can I handle?" is a perfectly common (and understandable) question at this point.

Nevertheless, other things are going on as well as simply building the muscle and the discipline necessary to stand for any length of time on a daily basis. In particular, as the muscles develop, the student learns that in response to gravity pulling him down, he must stand up. That is, he is learning -- albeit perhaps unconsciously -- to pick up his head and lengthen his spine as he sits down. This lengthening of the spine is of tremendous importance to I-Chuan training as a whole. The physical power the I-Chuan practitioner develops is a direct function of his ability to let his spine lengthen as he moves. The power of a punch, for example, is in large part a function of the spine's lengthening at the end of a step forward. At the next level of practice, the student learns the surprising fact that the movement of his limbs is a natural response to the movement of his spine. The latter movement, in turn, is in response to the movement of his head. And that movement, finally, is always in response to his environment. The sense in which the intelligent I-Chuan practitioner is learning to "use his head" is, as these remarks indicate, quite subtle and complicated.

7. Much can be learned from this first posture, but it is somewhat easier to understand the sense in which standing still involves movement (and vice versa) as one begins to practice the next posture. This position grows out of Hsing-I training, and, in a

very basic sense, is simply a matter of taking one step --of varying length -- forward out of the initial posture. I-Chuan training as whole can usefully be understood as a matter of mastering that first step. The body moving forward in one piece in a single step generates tremendous power. That power is built in large part in standing meditation simply by taking that step again and again without actually moving the skeleton.

The external aspect of this second posture may be described in the following terms. The student stands with one foot roughly a shoulder width in front of the other. seventy to eighty percent of his weight in placed on the back foot. Each knee should be kept over the instep of the corresponding foot. Rotating the knee out of this position in any direction prevents proper skeletal alignment, and can damage the joint. The back foot is turned 45 degrees inward -- with the toes facing forward, as though one were getting ready to step forward. The front foot is facing straight ahead. The arms are positioned as though the student were hugging a sizable tree, with his palms facing downward. The head and spine are as they were in the first posture, except that the head will be turned slightly to gaze forward in the same direction as the front foot and knee. The wrist of the forward hand is in line with the front toes, knees, and the student's gaze.

The internal aspect of the posture is quite difficult to describe, but the student will not go far wrong if he imagines that as he is getting out of a chair, he is taking with him the tree he imagines himself holding. Thus, the thumb sides of the arms are pulling in toward the torso. At the same time, though, pressure is being exerted to keep them from collapsing into the chest. If the tree is to be lifted, then the arms must also be pulling up. Again, however, the arms are also pulling down; otherwise, the student would lift them over his head. (At a later stage of practice, the student adds the directions of left and right to those of front and back and up and down. The main point at this stage as elsewhere is that there be real muscular resistance felt in the posture. Simply forming a mental image of oneself trying to uproot a tree accomplishes nothing.)

If one actually tries to lift a tree out of the ground, one finds out a number of other things about this posture as well. In particular, one finds that the movement starts with the head. If the head is left out of the movement, one simply pulls one's body down the trunk of the tree. Similarly, one finds that much more of the body's strength is mobilized if one, in effect, pulls up on the front knee (without lifting the foot off the ground). Again, one does not have to think about these particular muscular responses to trying to lift the tree; they happen involuntarily. But one can see clearly that these movements are necessary by inhibiting them.

The mental and physical work of this second posture consists in large part of maintaining this sort of muscular activity without actually moving the skeleton. But it is important to appreciate that this activity must be dynamic, not static. The student must continually lift the tree out of the ground, not simply pull up and hold that posture. In practice, one continually slides between contracting and collapsing. The ideal situation, however, is the activity of working the muscles responsible for movement without actually moving the skeleton. This requires dedication, diligence, and a certain dogged determination to accomplish. It is essential to proper training, moreover, that the muscles used be involuntary. Consequently, the student must always endeavor actually to discover which muscles are involved in various actions, rather than deciding beforehand which ones to use. This discovery is possible only if the student forms real intentions to move in the ways the teacher recommends.

Another way to get a glimpse of the sort of work involved in this (or any posture) is to practice a single pushup, just holding the body off the ground with slighly rounded arms. For a variety of reasons, it is best to hold this posture on one's fists, rather than on the palms. As it happens, the only way to maintain this posture for any length of time is to relax both the hands and the chest. If one tightens the chest and clenches the fists, the arms must do all the work to hold the body off the ground. On the other hand, of course, if one completely loosens the fist and chest, one will simply drop to the ground. With the

right amount of tension in the chest, fists, and arms, the muscles along the core of the body (in the torso and neck) do the work of holding the body in the pushup position, but they do so involuntarily. Certainly, I have no idea precisely which muscles to use in this way, but with practice the appropriate muscles are developed to a point that holding the posture for at least a few minutes is relatively undemanding. For the purposes of our illustration, however, the main point is simply that these are the muscles to use when in the second standing posture. It is these muscles that are used to maintain the arms in their position as though holding a tree. Of course, without the resistance provided by the floor, one must use other muscles of one's own to keep the arms rounded. The significance of the pushup is only that it provides an easy way to see how the involuntary musculature can be called into service: simply relax the wrong muscles (the fists, arms, and chest) to the right degree, and the right muscles begin to work naturally. Standing meditation in I-Chuan training works in exactly the same way.

In this second posture, the beginning student's first impressions of the training are far from pleasant, for this posture is even more physically demanding than the first. The source of the challenge seems relatively straightforward: in order to step forward, the leg remaining behind, as it were, must bear the weight of the body. Consequently, where one was once resting one's weight on two legs, now one is resting it mostly on one. And just as before, most of the first several months in this posture is spent developing the muscles necessary just to maintain the skeletal structure in question. The really interesting (and painful!) work comes, however, as one moves beyond maintaining the posture to working in and actually understanding it.

We can begin to understand the work in question by reminding ourselves of some of the facts of walking. To walk, a foot must move forward. To achieve that, the body's weight must be taken off the foot moving forward. To do that, one's weight must be put on the foot remaining behind. The student's first thought will likely be that putting the weight on the back foot is accomplished by lowering himself onto it, repeating, in effect,

the squatting movement of the first posture. If he has been paying attention, however, he will realize the most important fact of movement: namely, that it begins with the head. Let me explain.

In natural movement, the spine follows the head, and everything else (the limbs) follows the spine. Ideally, the spine follows the head, piece by piece, one vertebra after another, all the way down to the pelvis. One can get a very real and immediate sense of what makes this sort of movement "natural" simply by inhibiting it. That is, if one tries deliberately to move forward without first moving the head and pays close attention to what happens to the body, one can see clearly just what sort of muscular-skeletal disaster normally passes for walking. But care must be taken to describe accurately the movement of the head and spine in taking a single step forward.

What seems to happen is this: the head releases off the top of the spine so that the spine can lengthen. As the spine lengthens, the body's weight is transferred onto what will become the back leg in the step. Thus, rather than sitting down on his back leg only to stand up a moment later as he picks up his front leg to move it forward, the student lets his spine lengthen into the movement. The back leg does indeed come to take the weight of the body, thus freeing up the front leg to move forward, but this all happens as the head moves forward and up in the direction of the step. Thus, the spine gets longer as weight is put on the back foot. The alternative would be to compress the spine onto the back leg, which action, if one actually tries to do it, makes moving forward pretty much impossible.

Another way to understand how the head and spine relate in I-Chuan is to notice how many people respond to the instruction to lift the head: they will simply pull the head back and up. The only result of proceeding in this way, however, is to clamp the head down on top of the spine and then to force the whole thing backwards while tucking in the chin. This is extremely uncomfortable and makes it impossible to respond intelligently to one's circumstances. The alternative is simply to let the whole spine

lengthen back into the body. The sensation, however, is distinctly of the front of the spine lengthening into the body's core, not into the back. In this way, the whole torso goes to work without the muscles of the neck being at all tight. As far as I can tell, it is impossible to do this if one pulls the head down on top of the spine; one must begin by freeing the head from off the top of the first vertebra. Lengthening the spine in this way is the intelligent alternative to tucking in the tail and pulling back the head.

So that's the first part of the movement of taking a step: the head moves forward and up as the spine lengthens the weight of the body onto the back foot. The second part of the movement is fascinating: as the front foot completes the step, the spine lengthens again. Both movements of the spine are (or should be) involuntary, but the second movement can be easier to experience. As the body's weight is transferred onto the front foot, the bones of that foot spread slightly. This last event (at the front foot) triggers a postural reflex -- an involuntary muscular response -- that can clearly be felt in the neck (and lower abdomen, if one's chest is relaxed) as the spine lengthens once again.

It is interesting to note that the movements of the head and spine seem to be initiated by breathing. Thus, if the student can avoid lifting his sternum on the in-breath, the spine will naturally lengthen. If, on the exhalation, the student can remember to drop his chest as he frees his neck (that is, if he lets his chest be relaxed and inhibits the tendency to pull the head down onto the top of the spine), the spine will similarly lengthen. The effect of letting the spine lengthen in response to the breath is that the weight is kept firmly on the feet during both breaths. If, on the other hand, the student tightens and lifts the chest, then the body's weight will rise off the feet on the in-breath, thereby letting the power generated by the body's structure evaporate. In practice, this means that one is very vulnerable to attack on the in-breath. A skilled martial artist will therefore be alert to his opponent's in-breath as an opportune moment to push or punch him off his feet. An opponent who lifts his chest on the in-breath in effect does half

one's work for one. A punch at that point -- as the weight goes off the feet -- just helps the opponent along in the direction his breath is already taking him.

As far as head, spine, and legs go, that's what seems most basically to happen during a step forward. The basic Hsing-I posture practiced in this part of I-Chuan training is simply a single step maintained for as long as one can. That means that, as odd as it sounds, one is moving while standing still. And that brings us to the next stage of training.

8. As before, the first part of training at this stage is 'external' in nature: one is simply learning to adopt a particular posture. One can think of this part of training as matter of learning how to position one's skeleton. In the next part of training, however, one is learning to understand how the muscles that normally move the skeleton function. This part of the training is more 'internal', as the student begins to address the question not only of the form but also of the content of movement. The student begins to appreciate at this point that there is a crucial difference between voluntary and involuntary movement. For example, both lengthenings of the spine described above are involuntary. They are what happens naturally as one walks with a spring in one's step. If the head is not pulled down onto the top of the spine, they will happen automatically. It is quite uncomfortable, though hardly impossible, to make them happen voluntarily. (This is what happens when, for example, one makes oneself bounce while walking -- a poor imitation of a 'springy' step.) The emphasis in I-Chuan training is on letting this sort of movement happen. And the key to the sort of intelligent responsiveness I-Chuan training aims to develop is learning to let the muscles responsible for involuntary movement do the work they are meant to do. In some sense, then, this sort of training is largely a matter of learning how to get out of one's own way. How 'fast' -- or, as I prefer, how intelligent -- one's sung-gian is is largely a function of how well one's involuntary muscles function. One's voluntary movement is best supported by these involuntary movements which are, in turn, responses to breathing.

9. The difficulty of I-Chuan training at this point level lies in understanding how to get out of one's own way. Here we appreciate once again the source of the I-Chuan teacher's reluctance to teach the student set forms and more complicated postures. Learning the latter can only reinforce one's tendency to rely on voluntary movement. Progress in one's training comes only if one is willing to forgo satisfaction of the desire to learn new forms. The teacher must be 'empty handed', for he cannot teach involuntary movement. Such movement is something each student must recover for himself. What the teacher can do, by contrast, to suggest various "pictures" of movements -- running a 100-yard dash, chopping wood, rowing a boat, or ringing a large bell, for example -- that tend to invoke the sort of involuntary response he seeks. The premise of this sort of teaching is that, outside the context of training, the student already knows how to do a 100 yard dash or ring a large bell. He does not need to figure out from scratch how to perform such actions. Consequently, appealing to these already established abilities is a convenient way to encourage the use of involuntary muscles. The goal of training here is to tap into this "knowledge" and make use of it in the standing postures. This is how the intelligence of I-Chuan is developed. In a sense, it's not new knowledge that is conveyed; rather, something is recovered that had simply been forgotten.

10. Training the arms functions in just the same way. At the beginning, movement of the arms is almost entirely voluntary. Frequently enough, a student will have no real understanding of how the arms actually move. He will fail to appreciate, for example, the fact that the arm itself includes the scapula and the collar bone as well as the shoulder joint, elbow, wrist, hand, and fingers and that the arm's range of movement includes movement of the scapula and the muscles of the back. As training progresses, however, the student gradually comes to understand that there are various postural reflexes responsible for moving the arms as well as the legs. After all, no one has to think to swing his arms when he walks. This movement happens involuntarily, though again it can be made to happen as well. Similarly, if one has to lift or push a significant

amount of weight with one's arms, one will quickly learn that the movement of lifting or pushing is initiated by the head, followed by the spine, which movement in turn triggers muscles in the torso responsible for the movements of the arms. If the student is attentive, he will discover that some angles of the joints of the arms (some positions of the skeleton) are both more structurally advantageous and more conducive to involuntary movement than others. In standing meditation practice, one basically puts one's skeleton into a structurally advantageous position and then learns how the involuntary muscles work by understanding how the body actually moves.

11. The upshot of this aspect of training for actual movement -- for actually walking -- is simple: one moves just as one stands and one stands just as one moves. Ultimately, there is no difference between the two. In practice, of course, I-Chuan walking is a tremendously challenging exercise, because one learns very quickly indeed just how little conscious control one has over one's involuntary muscles. Typically, the student at this point in his training can stand reasonably well, at least in the sense that he can keep his skeleton in a structurally advantageous position. As soon as he begins to move, however, that structure evaporates. Walking practice is largely a matter of learning how to maintain that structure as one moves. One's increasing ability to do so lends further content to one's standing practice, as one gains a more precise sense of the muscles that should be working as one stands still. What the student comes to understand is that movement is not born of stillness, precisely because the stillness in question (the standing posture) was already in movement. Movement is intelligent responsiveness, and as such cannot come from stillness. The involuntary muscles are always already working. (This much should be obvious to anyone who reflects on the fact that although it takes muscles simply to stand up and not fall over, no one actually has to think about those muscles for them to do their work. In other words, the muscles that keep one upright function involuntarily. Thus, a person can carry on a complicated conversation as

she stands in line waiting for theater tickets. Imagine what this conversation would be like if she also had to think about keeping upright at the same time!)

12. An important part of I-Chuan training is learning to look intelligently at the teacher's movement. In the beginning, the student sees mostly arm and leg movement, because he craves learning new forms. As training progresses, however, he learns to look at the teacher differently, and not simply to see the arms or legs moving, but rather to look for the source of the movement of the arms or legs. Often, the former appears as a quality of the teacher's movement or a quality of his standing, rather than as a movement itself. Over time, however, one learns to see the source of the teacher's movement in the head and neck. One is, in effect, learning to see his "I," to see, in other words, the intelligence of his movement or of his standing. It takes intelligence to see intelligence, however, and this aspect of the teaching is difficult if not impossible to appreciate at the outset.

13. "Test of power" and "push-hands" are also crucially important features of I-Chuan training. Like walking practice, both test of power and push-hands force the student to be brutally honest with himself (or with someone else, if the student has any ability!). Test of power exercises are simple movements one can develop oneself to see whether or not power is actually being delivered efficiently to the place one intends it should. Thus, simple shadow boxing at a variety of speeds is often a good test of one's skill. If one listens clearly, one can tell quite distinctly when one's body is behind a punch and when the movement of the arms is not only coordinated with the movement of the body but actually backed up by the body's involuntary movements. A punch delivered in this fashion conveys a definite sense of mass, with the active structure and not just the weight of the body behind it. By contrast, where the involuntary support is lacking, one's movements feel forced and ineffectual. When that support is present, however, one has the "power" the training aims to develop: intelligent power (not just the sort of strength that weight training develops).

Consider the following simple exercise. Stand in the second of the zhan zhaung postures mentioned above, left foot back. Most of the body's weight will be borne by the left leg. As before, the arms will be held as though encircling the trunk of a tree, with the palms facing down. (The image is of holding the tree to one's torso with the thumb side of the arms.) Because the torso is rotated around the spine at the angle set by the hips (that is, with the right shoulder ahead of the left), the right hand will be slightly ahead of the left. As before, the sensation of weight or fullness that should be present in the arms will be a function of the clarity with which one imagines oneself actually holding the tree. The sensations will be more or less elaborate, depending upon the number of different directions one imagines encountering resistance as one moves. Remember, the tree will be moved in imagination with the whole body (starting with the head), and not merely with the arms. The test of power exercise outlined here is simply to step forward into the corresponding posture on the other side, ending with the left foot forward. As one steps forward, the hands should be rotated into vertical fists. The body then brings the arms and hands forward into a punch at the level of the mid-torso. The sensation of resistance to the movement should be clear. It can help to imagine that one is pulling heavy weights with one's hands as one steps forward. At the end of the step, simply repeat the movement in reverse, and step back -- again, with the sensation of pulling weights -- into the original posture. This movement can be repeated as many times as is necessary to make clear to the student precisely where in the step forward and back he is "breaking up." Indeed, the aim of the exercise is simply to understand precisely where the standing posture collapses in the course of such a relatively simple movement. The reasonably experienced student should have a clear sense of the structure of his body in the "static" standing posture. He should be able actually to feel himself holding the tree. As before, sensation is important. To imagine oneself holding the tree as one moves is not simply to form an image of doing so in one's imagination. The test of power exercise allows him

to see clearly at the level of immediate physical experience where, during movement, he loses that sensation. Where the sensation is absent, there is no power in the movement.

Push-hands is a humbling exercise, but it is an invaluable test of one's developing I-Chuan intelligence. The successful push-hands practitioner must be intelligently responsive to whatever is thrown his or her way. It is abundantly clear whether one's structure is intact and whether one's movement is backed up by involuntary reflexes (whether one's sung-gian is 'fast' or, as I prefer, intelligent) when one is pushing under pressure. Ideally, one lets one's opponent do most of the work. The pressure put on the student's hands should go straight back to the opponent. Where this doesn't happen -- either because one's skeletal structure is compromised or because one's movements are entirely voluntary (which is often a function of pulling the head down onto the top of the spine) -- there is a distinct quality of sensation that indicates one is working unintelligently. Ideally, one should listen with one's neck. That is, one's opponent's movement should immediately translate into a response of one's own, and all such movements start with the head and neck releasing. How quick and effective that response is is a function of how intelligent one is. The beginner is constantly starting over; whereas the more experienced practitioner never starts and never ends.

14. In principle, much of the benefit of push-hands training -- learning, that is, to respond intelligently to the "novel situations" with which one's opponent provides one -- can be accomplished in standing meditation. For, as should be clear by the preceding reflections, the practitioner of zhan zhuang is not just "standing there." Rather, he is working all the time, responding to situations he provides himself. This, like much of I-Chuan training however, is easier said than done.

15. Finally, "health dance" represents a kind of culmination of standing, walking, test of power, and push hands. The aim of health dance is to discover -- again, at the level of one's immediate physical experience -- the source of one's power. While walking, one endeavors to maintain one's standing structure throughout movement

forward and backward. In the test of power exercises, the basic aim is to understand where one's movement has compromised one's structure in such a way as to deprive the techniques practices of any significant force. And the results of losing one's structure during push hands are usually painfully obvious. In health dance, by contrast, the student aims to find out precisely which muscles in which order are responsible for which movements. There are no set movements practiced in health dance. There, as in push hands, which movements one makes is entirely spontaneous. The point is to make sure that each and every movement (down to movements of fingers and toes) is both coordinated (so that no part of the body moves in isolation from any other part) and has the sort of intelligent content provided by the involuntary muscular response to movement. The student must determine his optimal "range of movement." Outside that range, the body loses its structure and the student's power evaporates. Indeed, an experienced student can see clearly in another's movement precisely where he has passed out of his range of movement. At that point, the quality of the movement indicates that it is entirely voluntary, thus defeating the aim of I-Chuan training.

As a simple example of such movement, consider what would be involved in stepping forward with the whole body resisting great weight holding it back. If one were to turn to the left in response to a change in the direction of resistance, the arms, for example, would have to respond appropriately. But the only way to guarantee the appropriateness of the response is to find out how the body moves, rather than to move it as one has decided beforehand that it should move. In other words, health dance is a process of discovery, not of invention. As such, it places even heavier mental and physical demands on the student than do walking and test of power. The movements of health dance are both spontaneous and deliberate, and the student must listen very carefully to how his body responds to the resistance he imagines exercised upon it. Again, this kind of listening is a form of inquiry, not of decision. At the same time, however, the student must give himself something -- whence the heavy physical work

involved in the movements of health dance -- to listen to. Nothing whatsoever is accomplished by simply imagining how one might respond to resistance. Real physical resistance in the movement must be supplied, and then one must discover how the body responds to it. Thus, one cannot decide what one's range of movement is; the answer to this question must be found out. And the particular form of inquiry without which health dance becomes, at best, an exercise of coordination without content makes clear how I-Chuan training aims to bring mind and body into alignment.

16. Just as there are no obvious limits to the number of different ways in which the student can move -- even the range of movement grows with time -- so there are no obvious limits to the mental and physical benefits of I-Chuan training. Certainly, this training serves to strengthen the body. Back, neck, and joint pains disappear. One's physical stamina increases, sometimes dramatically. One's metabolism improves. Sleep is sounder. One is more alert. As one's understanding of how the body works improves, physical exertion is less likely damaging. And so on. But what distinguishes I-Chuan from other forms of exercise is the mental work involved in developing the ability to respond intelligently to the changing demands of one's situation. The body does not simply become stronger as a result of I-Chuan training; it becomes more intelligent. Thus, because I-chuan training aims to develop a form of embodied intelligence, its development of mind and body together can be seen as a means of overcoming the alienation of the one from the other. And there are, it seems, no limits to the degree to which this form of intelligence may be developed.

17. The notions of inquiry and of embodied intelligence I have employed in these last few sections suggest a possibly helpful way to conclude these remarks. I-Chuan training makes clear that the body and the mind are constantly changing. Few of us are truly comfortable with the fact of change, and there is a more or less constant temptation to want to fix something and hold it fast. But this desire for permanence is at odds with the whole spirit of I-Chuan training. Here the spirit of inquiry and discovery demand that

one ask oneself relentlessly, “how am I wrong?,” “where has my structure collapsed?,” and “what actually supports this movement?” There are no right answers to these questions. Consider just the last one. The answer one gives to this question will change as one’s ability to respond intelligently develops. To consider oneself definitively to have answered the question is evidence only that one’s spirit of inquiry and discovery is flagging, not that one’s training is finished. In this sense, the most important question for the student of I-Chuan to ask himself is not “am I good at this?,” but rather, “how am I wrong?” Here, as in many other contexts, knowledge is the enemy of intelligence; the willingness to sacrifice one’s sense of accomplishment on the altar of inquiry is perhaps the most difficult but worthwhile lesson of I-Chuan training.

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