

Putting it all together

Another look at the teaching of Sifu Gregory Fong

Anne Snyder • July 18, 2004

In this paper, I discuss rotation and how it applies, along with companion core concepts, to i-chuan training. In an earlier paper,¹ balance, power, six directions and using the centerline were addressed. That was written a few years ago, and naturally my understanding has grown, as has the teaching of Sifu Fong. Perhaps revisiting some of these core concepts within the context of rotation will give a simpler understanding of this art. At the end of the paper, there are instructions for exercises that students may use to make these concepts come alive in their own practice. As always, the fine teaching, excellent example and seemingly inexhaustible patience of my teacher, Sifu Gregory Fong, receive my deepest appreciation and gratitude.

Yi

Every action starts with a thought.

— Gregory Fong

For purposes of this paper, let's agree that yi means intention.² To build muscle and mental alertness, I-chuan practitioners often recall a specific physical experience and recreate it in their bodies. Rather than picking up a 10-lb dumbbell over and over again, they pick it up once and thereafter cause their body to respond as if the weight was still in their grasp, still heavy. Then they can build upon the original experience to further strengthen their bodies by “picking up” a 100-lb weight.

Intention, then, is the difference between (a) daydreaming about picking up some heavy weight and (b) precisely setting up the body to prepare to lift a 100-lb weight using good structural support and appropriate muscle strength. If you move like you're picking up a 100 lb weight and, at the last second, it disappears, your yi is heavy, but the change in resistance from what is expected to what is actually present leads to power.

¹ See “I-Chuan Basics” at <http://i-chuan.net/pages/snyder.pdf>

² Yi is usually translated as mind, but herein we are looking at an active mind in the midst of directing real physical and mental work. It is that quality of directing or “intending” that we are discussing.

Why stress resistance? Whether it's a heavy weight or a hot rock, physical stimuli command instant response. There is no time to decide whether or not to respond: it simply happens. The type of yi we are training for is this sort of second-nature response. For example, when one reaches out to stop a door that is about to slam shut, there is no need or time to think about how to do it: the intention and motion are one. Through appropriate use of different types of resistance, yi makes a thought real. Without resistance (and the yi needed to handle it) one may be pursuing empty actions, a kind of mindless kungfu. Likewise, thought without action is daydreaming. Hence the name: I (intention) plus chuan (martial art) means martial arts based on using intention. Movement that uses resistance connects yi with the body.³

To train the yi, challenge yourself. You are asked to sit down and stand up at the same time. Sounds impossible, yet that is your challenge. You must sink downwards, yet you cannot do it. You must stand up, but it is impossible. This is one of the ways I-chuan teachers invoke contradictions to transmit their lessons. In fact, the mind works differently when a goal is perceived as impossible, yet compulsory. Changing the way you approach these problems will push your training deeper. Raise the neck, sit down while standing, and do it against (and with) resistance. Further, as you stand up, don't just do it one time; don't allow yourself to move without resistance and do make sure you are always sitting down (yet never fully seated).

Just as the body has its physical core, so the mind could be said to have a core of intention and mental focus (yi) that allows physical responses to proceed naturally. Ideally, the yi guides the body's rotation using strong intention to aim directly at the target without forcing either the quality or direction of movement. Developing this kind of intention in daily practice builds a habit of alertness and unified movement that no amount of daydreaming or analysis could reproduce.

Transforming resistance

A pearl grows in an oyster because a piece of trapped sand irritates its delicate membranes. If some ultra-aware oyster somehow struggled to get rid of the grit, it might tear its own delicate membranes and embed the grit even more. To protect itself, it smoothes the surface of the grit by covering it with layer upon layer of protective,

³ I and yi are different spellings of the same Chinese word, both pronounced "yee."

translucent coatings. It can't eliminate the irritation by ejecting it, yet it must eliminate the irritation, so the oyster transforms the prickly grit into a smooth, lustrous pearl.

What is the lesson here? Resistance, at first a block to training, must be transformed into something else. Going along with resistance briefly may help to overcome it. Now resistance has many faces. We may procrastinate, obscure, misinterpret, or avoid difficulties: that is emotional and psychological resistance. Lack of understanding causes confusion, frustration and misguided efforts: mental resistance. Any of these can be harmful or counterproductive, both in life and in training. Yet assiduous training may help transform one's outlook, transforming these kinds of harmful conflict into more useful kinds of resistance.

Once you have worked through whatever excess types of resistance bedevil your training, you just do the work no matter what. Physical resistance may come at first from using heavy weights or thick rubber bands to lift or pull or push: basic sweat-producing activities. Then you work on using recreated experiences to teach you how the body works as you continue to develop your physical nature. This work can teach a little every day so that, in the end, you really do know something about what you are doing and how you are doing it. It is not a question of believing in the style, and one doesn't have to over identify oneself as a Yang or Chen or I-chuan practitioner. Do not be concerned about such things at all: they will not help you learn. In fact, such things will distract you away from the learning and doing of training.

What kinds of resistance will help us learn? They can be conjured by the brain from real experiences. Not exactly imagination or visualization, the idea is to transform a combined mental and physical "picture" of resistance into the real thing⁴ by recreating previous physical experiences. Lightly at first, then heavier, using your spine as an axis and your neck as the rudder, do the work with the muscles in your legs, arms, neck, back and chest exactly as you would if you had to push a real piano or carry two ten-gallon buckets full of water. With so much heavy physical work in progress, your brain can't wander. Why not? In a real situation, you know the piano will crush you or you will spill good water. It is the strength of your yi that keeps you on track. So, as Sifu Fong instructs us, "you do the real thing without the real thing."

⁴ See Appendix I for relevant exercises in this area.

On balance

Using resistance is not enough. The resistance and therefore the physical work of training must be balanced, not just once, but constantly. Core requirements for training include learning how to balance one's movements first while standing, then while moving, and finally with, and in opposition to, a partner. Rotating through the joints from ankle to wrist helps maintain connections from muscle to muscle. To learn from these activities, one must balance both limbs and exertion while doing the intense physical work of I-chuan training (more on that later).

How does one approach the issue of balance? First, one learns to stand and balance the angles where bones connect (joints). One adjusts and aligns the skeleton by continuously monitoring and correcting the angles of the joints so that they are effectively supported. Do the knees and toes point in the same direction (and is that direction toward the opponent)? Does the spine stretch a tiny bit because the neck is slightly pushing upward and the tailbone is pulling downward?⁵

Once aligned, one learns to create opposing forces by using many combinations: by balancing left hand with right foot; by pulling the left arm back while pushing forward with the back of the right hand; by pushing the knee out in one direction so the other knee can move forward in the opposite direction, and so on, until one is both active and balanced. Though you may begin your training with an equally balanced structure, when you move, you use a dynamic balance: perhaps 60% here, 20% there, 10% and 10%. These proportions change constantly as one moves. One may lose, readjust and recover balance repeatedly, responding both to an inner sense of balance and to external stimuli.

In practicing to expand outward by first adjusting for the skeleton's equilibrium and then by using small muscular movements appropriately in all directions, one is working with "stillness in movement" as well as "movement in stillness." This is one of the most often quoted, and most often misunderstood, directives of Wang Hsiang Chai, founder of I-chuan.

If Wang was telling us both to embody standing requirements while moving and embody moving requirements while standing, one should be aware that it takes a great

⁵ If standing (zhan zhuang) is unfamiliar to you, please have a look at the other papers on this website: they discuss in depth the many fundamentals of standing and/or give step-by-step instructions.

deal of mental and physical work to do this for more than a few seconds and it is easy to mistakenly think about moving rather than actually move. Likewise, one can think about being still while moving, but the stillness is not there⁶. Both body and mind will likely either relax or tighten too much. If too relaxed, a loss of attention and firmness leads to muscular collapse and daydreaming. Or, if too tight, constriction and rigidity ensue.

If however, you can keep the same mental and physical state you have achieved in standing, that is, working with mind and body engaged, you can constantly search for, discover, and correct any inactive areas of your muscular work or unsupported positions of the skeleton. Also be alert to eliminate mental distractions and rigidity. As it turns out, the more active you are, the more alert you are, and the more alert you are, the more active you are.

Six directions

Now if you've achieved equal balance in all directions as we just discussed, and you are also alert and active, how can you possibly take a step? To actually go anywhere, you have to emphasize forward/backward, or left/right, or up/down: the balance is therefore dynamic and unequal. For example, when you walk down the street, you are likely balanced, but notice how the weight shifts as you move forward.⁷

When you work on balance, what is it that you balance? One answer would be muscular exertion in six directions. "Six directions" refers simply to the aggregate of forward/backward, up/down and left/right. When you move, you are, or should be, expanding somewhat in each direction, but mostly reaching in the direction of your target. As discussed earlier, in order to move, dynamic (unequal) balancing comes into play. With an opponent in the mix, you are now dealing with an exponential increase in the number of directions you have to deal with, or so it may seem.

Not only do you have to deal with your own up/down, right/left and forward/backward movement, but also your opponent's: plus you are both moving, recovering and readjusting continuously. Since the balance is now totally dynamic, you may observe

⁶ Dead, empty movement is not the stillness we are looking for here. Consider the difference between a balloon that is freshly inflated and one that is a few days old.

⁷ Since you have two feet, the direction of movement is actually diagonal, going from back left to front right, shifting weight to then carry the body forward from back right to front left, and so on.

that most of the time you are out of balance as is your opponent.⁸ Eventually, you may find that you can maintain your balance by skillfully responding to changes in the six directions. As you continue to work at it, you may find that all you really need to be aware of are your own six directions: this is all your brain can handle and, done properly, it is enough to do the job.

Rotation

Why does Sifu Fong endeavor to teach students how to use rotation as part of their training? As one begins to move by rotating the joints and to think about that kind of movement by applying the resulting insights, one discovers that not only the head, neck and torso, but also the arms and legs each have a central axis. At any given moment, the bones meet at optimal angles to create a particular supportive posture while the skeletal muscles contract and expand, rotating to create a particular quality of movement. Ideally, the yi aims at the target and sparks the nerves to activate the muscles which rotate slightly, pulling the bones into position in a connected, weighted sequence extending outward toward the target.

By learning to slightly rotate the joints from wrist to ankle while moving forward, the student learns to extend his whole body, reaching toward the target with the extra torque of a screw driving into wood.⁹ In fact, one rotates both toward the target and away from it, which keeps the body movement continuous and muscles active. By rotating not just from elbow to shoulder, but more completely from ankle to wrist, one can pull together the various parts of the body to move in a coordinated, unified manner. The degree of rotation called for is very small, but cumulative. By recruiting adjacent muscle groups, the action of rotation pulls (or pushes) the next group by twisting a tiny bit forward (or backward) which in turn recruits the next group. This active chain or “domino effect” results in a dynamic, unified muscular motion, that is both efficient and effective.

⁸ How to use this imbalance and how to find your own balance within it will be one of the subjects I address in my next paper.

⁹ Torque is the turning effect produced when force is applied to a rotational axis. Applying torque to a stationary object will make it rotate in the same way that applying force to an object causes it to move in a straight line. More on this in a subsequent paper.

Endurance

One of the most common problems in training happens because the brain is smart. The brain will find moments in a sequence where it can take a rest. It is natural and normal to rest, says the brain, but when you do so, you may forget what you are doing and lose concentration. You definitely lose momentum and any build-up for endurance training. This is what Sifu Fong calls “empty return.”

Allowing your brain to wander and permitting your body to habitually produce an “empty return” when training will make exercise easier, but since you are effectively asleep at the wheel, you will feel lost, gain little physical or mental benefit and, in the end, get nowhere. When you go forward to deliver a punch, you usually have both power and focus, but as you move backwards, away from the opponent, it often happens that you lose focus and then your body collapses, even slightly. If your opponent is alert, he will use this kind of reaction to his advantage.

Conversely, what trains mental focus (yi) to be active is maintaining strong intention under relentless physical stress. To extend the discussion of yi begun earlier in this paper, if you put yourself in a situation where you cannot endure and yet you have no choice but to endure, you will experience a state of mind where you can learn to pay deep attention, and even deeper relaxation. Then, when you face an opponent, the mental confusion and physical stress of combat won't throw you off because your mind and body are relaxed enough to work together and stay on task. That, to me, is the true meaning of sung/gunn, which is, among other things, necessary to build endurance (more on that later).

Now endurance does not mean shifting into high gear immediately and staying there. That will only burn up energy, make muscles tight with accumulated lactic acid and, unless you're under 18, it will take longer for the body to recover. To gain endurance, one trains in a lower gear for as long as possible so that any toxins produced by the exercise are metabolized and eliminated, muscles are trained to be flexible and strong, but don't add bulk. Working this way enhances your mental and physical abilities to remain relaxed while working hard, and therefore maintain your effectiveness and power under stress.

Through training, not only can one develop endurance, they may also find that joints become looser. In fact, a tiny space between the joints may become available. This should allow smoother, more efficient work. Also, one may notice a stretchy, supported quality

of movement begins to develop. This comes first from proper alignment and then from what Sifu Fong calls the “domino effect” mentioned earlier: alternately opening and closing the skeleton by expanding and contracting the muscles in a rotational sequence without ever completely relaxing or completely tightening their grasp: in Chinese, this last concept is called “ sung/gunn.”

Rotating through six directions with sung/gunn

Like many of the concepts in this training, sung/gunn (relax/tight) uses two extremes to indicate the desired middle realm. Simultaneous relaxing and tightening occurs when you do real work. You pick up something heavy and, naturally you relax just enough so that you don’t become exhausted by the effort (building endurance) and you tighten up enough so that you don’t drop it (building yi). It means being prepared to apply appropriate resistance even when the amount, speed or direction of force is unexpected. It may be faster or heavier than you expected, but you are ready for it, not by exaggerating your positioning (there is no time for that) but by being relaxed and alert enough to respond efficiently.

Once you have rotation, yi and balance in motion, you may want to learn how to change direction quickly in response to a change in your opponent. One can find efficient ways to change direction by even a slight rotation of the joints. As a matter of fact, in a combat situation, there is little time to do anything more.

To take a closer look, consider that changing directions is like tossing a ball in the air. At the apogee of the arc, there is an instant of hang time before the ball falls back to earth.¹⁰ When a similar moment occurs within your movement, if you are aware of it just before it happens, you will gain an advantage and be able to go in any direction with full speed: your alerted intention will modify your movements in an instant. If your joints have loosened to the point of feeling the “space” discussed in the previous section, you will recognize that space as the place where the “hang time” just before changing directions occurs.

Imagine you are swimming in a pool and you stop moving: you would sink, right? Or would you? Is there not a break of sorts built in after the kick, when you coast thorough the water? If you don’t completely let go of your structure and some muscular

¹⁰ See Appendix II, Newton’s Laws of Motion.

tension, you can coast effectively, then increase the activity of the muscles by kicking. By alternating kicking and coasting, you can last for a much longer time because you neither burn out nor sink: you have built up your endurance. But if you want to race, you have to time the coasting more critically so that it is very short, yet allows the muscles sufficient recovery time without completely resting or stiffening. You could call this timing a kind of alternating sung/gunn.

To do this, you cannot stay at exactly 50% sung and 50% gunn. Just as balance shifts dynamically, so does the emphasis of sung/gunn alternate, tending toward relaxing for the most part, but shifting quickly and almost completely to gunn on impact. This is a somewhat difficult concept because the popular understanding of martial arts training tends to run to extremes. Either one is instructed to relax so much that the mental edge is dulled and physical responsiveness is gummy and ineffective, or, conversely, so rigid and absolute that mental and physical burnout is likely. The goal with sung/gunn is to have a natural quality of responsiveness active and available under any circumstances.

Sung/gunn applies to both mental and physical training. If your mind is too tight, you can't think. Your mind may become frustrated, it may quit trying to focus and thus become easily distracted. To keep the mind engaged with what the body is experiencing, relax and steady your emotions. Let go of dwelling on both negative and positive emotions that may come up as a result of the stresses of training. Ideally, you just do your work mindfully. Work and turn, push and pull, lift and lower, stand up and sit down. And, as you work like this regularly, you should naturally relax and activate your mind and body so that you are aware of what you are doing: aim your body and rotate through six directions with sung/gunn toward the target.

Testing power

Once this particular kind of resistance is successfully used to strengthen muscles and awaken the student's awareness, he may be spurred to test his progress. Using resources discovered through standing, the student has worked toward maintaining proper mental focus and a supported physical structure. As he tests power, he can train the yi and also develop a resilient physical presence. To assess progress as you develop your training, you have to really pay attention: have your "yi" fully aware and engaged because you have practiced to do so. As Sifu Fong emphasizes,

“Don’t make it happen, don’t forget what you are doing.”

If you have read other papers on this website, you have seen these words more than once. There is a reason for this: it is one of the keys to evaluating progress. Always ask yourself when you wonder how well you are doing: “Am I making it happen? Do I forget what I'm doing?” Your honest answers and subsequent modifications to what you are doing and how you are doing it will make or break your attempts at progress. Ideally, a thoroughly engaged yi improves awareness and the ability to respond quickly and appropriately.

The alert student finds many ways to test power. He maintains his own structure while disconnecting that of his opponent. He keeps his own aim true while deflecting, even slightly, that of his opponent. He makes sure his opponent is at ease, that is, he is not alarmed (and thereby forewarned) that attack is imminent. He seems relaxed, even goes along with his opponent’s intention briefly, and thereby reduces his opponent’s resistance to attack. He is familiar with how his own brain works and so can observe and understand how his opponent’s brain works, how he reacts, and adjust for both his and his opponent’s strengths and weaknesses. All these should feel the same at very slow, medium and fast speeds: alternating speeds is a primary way to test power.

In training, one exaggerates the depth of stance, the weight of resistance and the circularity and size of movements. Using heavy resistance, he builds muscles and trains his body to work continuously. The heavy work keeps his brain engaged in every step of the sequence. Using large circular motions in training, he develops unity and continuity, ideally recruiting optimal muscles he can to do the work. Ideally, spend enough time and effort to get one movement clear before moving on, but don’t spend too much time on any one movement.

Some suggestions on how to proceed with training might include the following: Be patient. Start working on lots of things, eventually choose a few, one or two, then everything comes from those. Remember, everything you do, you cannot do. When you move, ten thousand muscles pull you down. Align the back so it is continuously being relaxed, the belly firms up as you push forward against resistance, when resistance disappears, power shoots out. Actively engage in whatever you do.

At some point, the instructor may suggest to the student that he vary the work through changes of speed, timing or weight so that the student doesn’t become slow or

muscle-bound. He shouldn't rely on drilling techniques and expecting to use them just so in combat. Rather, he does a few techniques and directs his learning toward responding quickly, while maintaining yi. He doesn't get so excited that he loses his structure, focus or balance. He trains slowly to develop precision and quickly to do the same thing fast.

To prepare for combat, he tests the training by moving lightly; still using resistance but now it is of a different sort. And his mind is not imagining a set sequence of actions and reactions, yet it is not unaware of the interactions as they proceed. To think through a sparring match would result in certain defeat: you just can't think that fast. But not to think at all would fail as well.

If you track what you are doing and seize openings as they appear, you should be able to use the training that has become second nature to you. Expect your opponent to take advantage of any lapse in focus, telegraphed intention or weaknesses and exploit them. If you can, use these experiences to test your training. It really doesn't matter whether you win or lose, but whether or not you learn the lessons of training.

Summary

The wise student will observe that all the concepts presented separately in this paper actually overlap and reinforce each other when used together in practice. Yet it is impossible to think of them all at the same time. One may train to embody them all and use them all simultaneously, but one can't be thinking about them and still do the work.

For example, try to think about all the things you do when you swim or walk or play baseball: you will likely find that when you think about it, you can no longer do it. The brain resists this interference, because it has already done the work. Once the brain has learned what to do, doing it becomes second nature. And yet, you do have to think.

Doing the work exactly as presented is crucial to learning. Follow your teacher's instructions and try to see how he moves. An able teacher will always demonstrate how to move correctly and will work out lessons so that an important aspect of training is presented clearly. Yet this training uses many seemingly contradictory concepts that have to be reconciled somehow for the training to make sense in any deeper way. For example, a single lesson may teach you about one leg of a table: you have to think about it, and test your results against what you've been told to figure out there are three more legs and a top.

So, do learn to analyze the lessons of training carefully. Make an effort to really see what the teacher is doing and why he presents training in this particular way. Then, thoughtfully break down these sequences, principles and structures to examine their components. Analyze them. Ask yourself why the teacher moves a certain way, where does the power come from, where does it go, what is missing in your own quality of movement, what mistakes are you making, where are your tight or loose areas, and so on. Look at the answers you develop for your questions, flip them around and become familiar with them. Ask new questions. Figure out what you want to learn and what questions you should ask to get there. Ultimately, you cannot rely on any teacher to teach you what you need to learn.

Come back to the lessons your instructor has presented in class. Then, you may find that you now understand and can apply a concept that previously you merely accepted at face value or misunderstood entirely. And you may find that it is exactly what you were asked to do in the first place. Often, you will come back to a basic task that you have worked on previously. As you continue to develop, these old ideas become new again because you see them differently. It's like seeing a faded, patched print of an old movie versus seeing a newly remastered digital version with all the detail and color restored. Same thing, but different.

By now it should be clear that analysis alone can't make your training all that it could be. Neither can simply doing unthinking physical work, though both will have some benefits. You have to have all the pieces of knowledge and experience, study them, and then put them back together so that they really work in practice.

If you habitually think in pieces, you will likely move in pieces. If you think as a whole, you can move as a whole. If you spend all your time looking without really seeing, you will find progress very slow. If you don't look further than the exact words of the teacher, you will be at a loss. And if you don't pay careful attention to the teacher's lessons, you won't know what to do. These are basic notions, indeed, but you may find that it is a significant challenge to develop them into an efficient practice.

On the following pages, I've included a few exercises that may help you to apply these concepts to your training. By using examples of pulling, lifting and throwing in response to specific stimuli, you may begin to see how I-chuan uses specific, familiar images to train the mind and body.

Appendix I: Exercises

As noted on page 1, these exercises presume familiarity with standing practice. You are asked to continue applying the requirements critical to standing as you learn to test power and begin to move. In addition, applying all the concepts discussed herein is necessary to performing these exercises effectively.

Pulling a bow: respond by rotating in six directions

Stand with your back foot (and knee) angled at 45°, front foot (and knee) pointing straight ahead, a shoulder width's distance in between. Raise both arms as if to pull a bow. That is, the front hand is stationary, palm facing the chest, elbows level with shoulders and the back hand pulling on a bowstring. The eyes and the intention push forward toward the target. Make sure you have created resistance both forward and backward (review the section on endurance which explains the concept of empty return and how to avoid it.)

Once you have a sense of resistance (you are pulling a hundred-pound bow, after all), notice how your body is responding to the resistance. Such a heavy bow would require you to set up your body to provide strong support. Lateral, abdominal and other supporting muscles then work in a specific way. If necessary, try it with a real bow or some substitute that gives you the sense of resistance not only in your hands but also in your chest, back, arms, abdomen and legs. Then try pushing off the back foot so that you pick up the body, rotating from the back foot forward to the opposite hand for impact, while carrying the body forward. Then reverse the sequence to go backwards. (Remember, it is a very slight rotation.) As you repeat this exercise, maintain the structure that you set up in the first place, keep the bow pulled open and relax a bit.

Lifting a barrel: overcoming inertia

Everyone knows how to lift a barrel. Plant your feet, put your arms around it, and pick it up. You've picked up heavy objects many times so you can quickly estimate the weight and shape of the barrel. When you pick it up, you will automatically use good alignment and appropriate physical energy. There is no need to think much about it. It's an easy task and most everyone would do it correctly the first time.

For our purposes, first notice that the instant before you pick up the real barrel (when the yi says "ready, set"), the body responds instantly. At that instant, the neck pulls up the body, the back expands and the abdominals contract to stabilize the motion

while the feet push the body up by pushing down: in the next instant the movement has begun and that instant of acuity is gone. Work to keep that first second alive: this kind of yi allows the physical readiness that you are asked to sustain throughout your workout.

Now, to use i-chuan training, do the same work, but without the barrel. Since you can't see or feel the barrel to keep your attention on the task, it takes much more mental alertness and intensity (yi). Without the barrel, it's common to make the movements heavier or lighter, leaning to the left or right, or adding some other kind of extra movement or empty return. Once you lose the mental and physical picture of the real work (including its stresses and resistance) you are no longer on task. That is the challenge: acquiring a clear understanding of how the body does real work, and then developing the yi so that it directs the body to develop and use power.

Flinging hot coals: response speed

In the previous exercises, we used virtual pulling and lifting to develop mental and physical alertness in response to different kinds of resistance. In this one, we work on developing speed. Stand as in the first exercise, back foot at 45°, front foot forward and feet a shoulder width apart. Raise the arms with both elbows held as if resting on a high table with palms facing your chest. As you push off from your back foot, allow the momentum to make a path through the body and into the palms.

As your front foot angles downward and stops, allowing the momentum to proceed through the body will rotate your forearms and let the power fly outward from the heel of the palms to the fingers. The whole body goes forward, flicking the fingers out lightning fast, as if someone had just tossed red hot coals into your hand and you're flicking them away, not taking time to think about it at all.

Why picture red-hot coals? First, it's a striking image that acts directly on the nervous system. In a real situation, response would be instantaneous. Using an example that surprises or shocks you helps make the physical image both powerful and memorable. Use pictures that act on your nerves or emotions. They make the big impact that will help you the most.

It is my hope that everyone can use these ideas and exercises to learn how to experience I-chuan concepts in training and in life. You may find that as you learn how to train well, you also learn how to cultivate your physical and mental wellbeing, making you less vulnerable to the stresses of daily life.

Appendix II. Newton's Laws of Motion

First, let me be clear: I am no physicist. However, it seems useful to note that this training is based on simple laws of motion and dynamics. While I can't professionally argue the merits of any particular application of Newton's laws, I include them here with a few comments to spark the reader to consider how to apply them to training and how the body works.

Inertia

Newton's First Law Of Motion: Objects at rest tend to stay at rest unless acted on by an unbalanced force. Objects in motion tend to stay in motion in a straight line unless acted on by an unbalanced force.

Why is this useful to us? Among other reasons, it tells us why it is common to get stuck, why an unbalanced (unexpected) force is what we should be looking for in our training (it is all too common to train for an expected force, somewhat like doing a form). Also, consider the merits of being an object at rest versus being an unbalanced force, and how the view of dynamic balance expressed in this paper applies.

Acceleration

Newton's Second Law Of Motion: As force is increased, acceleration increases. As mass is increased, acceleration decreases. Therefore, force equals mass times acceleration. (force = mass x acceleration).

If you are small, you should train to move fast. If you are big, you should still train to move fast. If you are big, you shouldn't get so big that you lose speed. Also, this explains why accelerating a punch makes it more powerful.

Response

Newton's Third Law Of Motion: For every action or force there is an equal, opposite and simultaneous reaction or force.

Here's why, when an ice skater pushes off from her back foot, the front foot needs to move with the same power and speed or the skater will hit the ice. It also explains why maintaining dynamic balance is critical for efficient training.