



Pa Kua Chang

JOURNAL

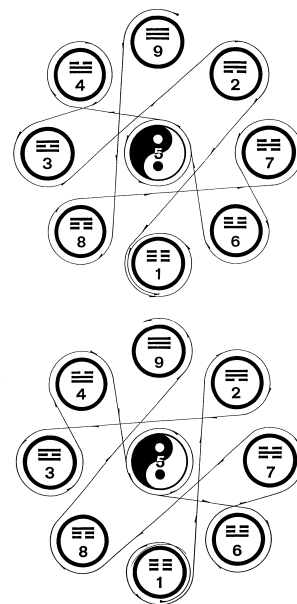
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Sept/Oct 1996

Fu Zhen Song's "Tornado Power"



An Interview with Liang Qiang Ya



ALSO IN THIS ISSUE:

**Mechanics of Ba Gua
Power**
by John Bracy

**Principles of Internal
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by Tim Cartmell



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About the Pa Kua Chang Journal

The *Pa Kua Chang Journal* is published six times a year. Each issue features an interview with, or article by, one or more Ba Gua Zhang instructor(s) from mainland China, Taiwan, the United States, and/or Canada. The interviews will report on each instructor's background, current program, training methods and teaching philosophy. By utilizing this format, the intention is to give students an opportunity to get to know prospective teachers and to let teachers possibly gain insights and ideas from learning about the activities of their colleagues.

Chinese names and terms will be romanized using the pinyin system of romanization except when an instructor prefers his name romanized differently. The title of the Journal appears in the Wade Giles system of romanization as it was the system we started with and we kept the original title. Whenever possible, Chinese characters will be listed in parentheses following the first appearance of Chinese terms and names in each article.

The ideas and opinions expressed in this journal are those of the instructors being interviewed and not necessarily the views of the publisher or editor.

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Editor's Corner

Journal Contents

This issue is for those of you who have called us and asked that we publish some exercises and form movements that you could learn and practice. Liang Qiang Ya has been good enough to allow me to take a half dozen rolls of film of him performing various exercises and form moves from Fu style Ba Gua Zhang and present them here in the Journal. I know that there are other readers who may feel like we put too many photos of exercises in this issue, however, I ask that you be patient because there are many others who have called and asked for this kind of thing.

When publishing a magazine like this, where there are so many things to cover in only six issues a year, it is difficult to put a large variety of material in any given issue and still have any one topic covered in depth. I would prefer to have only one or two topics per issue that are covered in depth than to present a large number of topics only exposing the surface.

I have readers who call and say that we should present more exercises, others want more applications, other want more history, others want more philosophy, other want more *qi gong*. We are trying to please everyone over the course of the year, but it is difficult to do when we only publish 32 pages six times per year. If you don't see anything that interests you in this issue, please be patient, we will try to get around to those topics that suit your particular interest.

On the Cover

Famous Ba Gua Zhang instructor Fu Zhen Song demonstrates the classic Ba Gua "white ape offers fruit" posture

Fu Zhen Song's Student, Liang Qiang Ya, Talks About Fu's Famous "Tornado Power"



Fu Zhen Song (1872 - 1953)

Imagine this – you are thirteen years old and have an interest in studying martial arts; one day your Uncle (married to your father's sister) brings one of the most famous and highly skilled martial artists in China over to your home and asks your family if this guy could live there with you. This is a man who had studied Chen style Tai Ji with the Chen family, studied Ba Gua with one of Dong Hai Chuan's (董海川) direct students (Jia Feng Ming - 賈鳳鳴) and one of Yin Fu's (尹福) students (Ma Gui - 馬貴), studied Wu Dang sword with Li Jing Lin (李景林), and has been close personal friends with Sun Lu Tang (孫祿堂), Yang Cheng Fu (楊澄甫) and many other of China's famous martial artists. Sound like a fantasy or a story line to a Hong Kong Kung Fu flick? Maybe so, but this is exactly what happened in 1945 to a thirteen year old Liang Qiang Ya. His uncle, Sun Bao Gang (孫寶剛), one of Fu Zhen Song's (傅振嵩) top students, brought Fu Zhen Song to Liang Qiang Ya's home in Canton and asked

Liang's parents if Fu could live with them.

Fu Zhen Song had moved from Northern China to Canton in 1928 to teach martial arts on behalf of the Central Martial Arts Academy in Nanjing (for more detailed information about Fu Zhen Song, please refer to *Pa Kua Chang Journal*, Vol. 2 No. 6 and Vol. 5, No. 2). During World War II, Fu had left central Canton and moved his family to the northern outskirts of the city because the provincial martial arts academy where he was teaching was closed down. He was traveling quite often during the war and wanted to take his family to a safe place. After the war, Fu returned to the city alone in order to re-establish himself before he brought his family back to the central part of the city. When he first returned he did not have much money



Fu's Student - Liang Qiang Ya



One of Fu Zhen Song's top students, Sun Bao Gang, shown above, was Liang Qiang Ya's Uncle

or many students. The city had been devastated by the war and many of Fu's old students had dispersed. Sun Bao Gang helped Fu find a place to live with his relatives. Luckily for Liang Qiang Ya, he was one of those relatives.

From 1945 until Fu's death in 1953, Liang Qiang Ya was with Fu everyday. He studied with him, traveled with him, and helped Fu teach classes as he got older and more experienced in the art. In a lengthy interview conducted in August, 1996, Liang discussed Fu's Ba Gua Zhang with *Pa Kua Chang Journal* and placed an emphasis on Fu's famous "Tornado Power." In this article we will present Liang's thoughts about Fu style Ba Gua and Liang will demonstrate some exercises and form movements which help to develop "tornado power." Special thanks to San Francisco based martial arts instructor George Xu for translating during the interview.

Studying With Fu Zhen Song

One aspect of Fu Zhen Song's teaching and practice that Liang Qiang Ya thinks is important in understanding Fu and his Ba Gua method is how Fu always changed and improved himself throughout his life and teaching career. Fu loved to research martial arts and continually sought out highly skilled martial artists in order to study, learn and compare. Fu not only learned from a number of highly skilled teachers when he was young, but continued to study and share the arts with other famous martial artists as he got older. He learned Yang style Tai Ji from his friend Yang Cheng Fu and studied Sun style Tai Ji and Xing Yi from Sun Lu Tang in exchange for teaching Sun his Wu Dang sword. Fu had studied Wu Dang sword from General Li Jing Lin and taught the sword skills to Li's troops. Li Jing Lin was a famous Warlord General from Shandong Province. He was especially skilled with a sword, having learned the Wu Dang sword skills from Sung Wei Yi, and was known by the nickname "first sword of China." He taught his skills to Fu Zhen Song and then hired Fu to teach his Army. Li not only recruited the top sword fighters from around the country to serve in his Army, he also invited the top martial artists to visit with him and exchange skills with him and each other. In this environment, Fu gained exposure to a vast number of martial artists and added this knowledge to his own.



Li Jing Lin was Fu Zhen Song's Wu Dang sword instructor

As a result of his research, Fu developed new training techniques and forms, often synthesizing various styles, ideas, techniques, principles, and concepts from the various internal arts and from the numerous martial artists to which he had been exposed. He was not afraid to expand and broaden what his original teachers had taught him and create new movements, concepts, theories and ideas. Fu developed many forms and training methods on his own and thus truly created his own unique styles of Ba Gua and Tai Ji. Additionally, because of Fu's continual evolution and development of his art, Liang says that the students who studied with Fu in the early years of his teaching career did not necessarily learn the exact same forms, drills, exercises and techniques that the students who trained with Fu later in his life had learned.

Some Ba Gua Zhang instructors and practitioners have referred to Fu style Ba Gua Zhang as being "unorthodox." My question to them would be "what is orthodox Ba Gua Zhang?" Dong Hai Chuan taught every student differently based on the fundamental principles of his art and his student's unique background, physical characteristics, aptitude, and special abilities. Every one of his students and student's students who taught complete systems of Ba Gua did the same thing. The underlying philosophical foundation of this art is based on the theory of change and adaptability. So how can anyone define some Ba Gua moves as "orthodox" and disregard others as being "unorthodox" when there really is no such thing a "orthodox" or "standardized" Ba Gua Zhang? Because Fu Zhen Song created a very complete system of Ba Gua that remained true to the underlying principles of the art and was extremely functional for him, I would say that his approach to the art was far more "orthodox" than those systems which were handed down identically to each student of the system. Ba Gua Zhang is about developing creativity, not learning choreography.

Liang Qiang Ya states that as Fu Zhen Song grew older, he began to simplify his practice. In his later years he concentrated all of his knowledge into a couple of simple forms by developing his "Tai Ji Lightning Palm" form and his "Liang Yi Fist." In creating these forms, Fu took the essence of Ba Gua Zhang and the Sun, Yang, and Chen styles of Tai Ji, extracted moves from his other forms such as Liang Yi, Si Xiang, and the Ba Gua Dragon Form, and added his favorite moves from all of the forms and sequences that he knew. This synthesis provided a means for Fu to be able to sculpt a lifetime of experiences into a few simple forms which he could practice everyday.

Fu's "Tornado Power"

In describing Fu's Ba Gua, Liang Qiang Ya says that the focus of Fu's style was in the twisting, spiraling, turning, and walking motions involved in producing a "tornado power." He says that one uses tight, quick *kuo bu* and *bai bu* stepping to make the body spin like a tornado. The palms shoot out from the body like rope darts, or like rocks being propelled out of the



Fu Zhen Song holding his 38 pound stone ball training apparatus in 1920

spinning winds of a tornado. Liang explains that this tornado power is not only expressed in the horizontal plane. Depending on how the body is used and how the arms are coordinated in conjunction with the body movement, the "tornado power" can be used along vertical, horizontal, or diagonal paths. Additionally, the power can be used in spirals that move from large to small or from small to large circular paths. Liang says that this energy can be expressed in all dimensions. He compares it to a spinning ball by saying "when a ball rotates, energy can shoot off from any point. There are an infinite number of tangents off of a sphere."

Many practitioners of Ba Gua have watched Fu stylists spin like tops during the execution of their forms and wonder about the functionality of this practice. Why spin around like that? What is it good for? How would that be used in a fight? Because they don't understand it and have not practiced it themselves, many will immediately dismiss the moves as being useless. The skepticism concerning these moves becomes even stronger in the minds of practitioners who have not labored to learn them because many of the students demonstrating these moves at tournaments are far from mastering these

moves and they look very awkward, unbalanced, unstable, and weak. However, in watching someone like Liang Qiang Ya execute these moves with a high degree of skill, continuity, stability, whole body connection, power, and finesse, one immediately begins to grasp the effectiveness and usefulness of this practice.

When discussing movements which involved spinning and turning the body 180, 270, 360, or more, degrees, the first thing to realize is that these moves are not unique to Fu style Ba Gua Zhang. As Liang stated in our interview, "all styles of Ba Gua have these moves. Fu style just happens to emphasize them more than the others." After Fu Zhen Song died, Liang researched numerous other styles of Ba Gua in order to compare them with what he had learned from Fu and so he is quite familiar with all of the prevalent Ba Gua styles which have been taught in mainland China over the past fifty years. In conducting his research, Liang discovered, as I also have discovered during my travels and explorations in China, that most styles of Ba Gua practice these spinning moves. However, in the majority of Ba Gua systems the student will not

be introduced to these moves until they are at the more advanced levels of practice simply because they are very difficult to perform correctly. Because the advanced levels of training were not taught in public classes, these more advanced maneuvers were not propagated very widely. They have become somewhat characteristically related to Fu style Ba Gua simply because Fu taught them to all of his students.

You cannot pigeon-hole any particular Ba Gua moves. You cannot look at someone practicing Ba Gua and say, "that move is from Fu style and that other move is from Sun style." Ba Gua is Ba Gua. If you take the time to explore the depth of Ba Gua and gain exposure to many different systems and methods, you will realize that there are very few Ba Gua moves that are unique to any given teacher or system. Each system will have its own unique form sets, training sequences, and developmental programs, however, it is rare that you find a move in one system of Ba Gua that other complete systems do not practice at all.

Why Spin?

Like all other maneuvers practiced in Ba Gua, the functionality of the spinning and turning movements is two fold. One is its developmental aspect and the other is its practicality in combat. The developmental aspect of the spinning movements involves their ability to increase the practitioners stability, balance, whole body connection, awareness, and fluidity. The practicality in fighting primarily comes into play when the fight involves multiple opponents. We will explain each of these concepts in more detail below.

Ba Gua Zhang is an art which should be taught in a gradual progression, starting with very simple movements and moving steadily to more and more complex ideas, movements, and techniques. If students cannot maintain balance, stability, whole body connection, fluidity, continuity, awareness, and focus while executing simple movements, they will never be able to grasp all of these vital concepts when executing the more complex motions which are characteristic of Ba Gua Zhang. However, if a student can demonstrate all of the above listed principles in the execution of simple moves, then they are ready to learn moves that are slightly more complex so that they can work to achieve all these principles at a higher level of difficulty. The more uncomfortable the body becomes in the execution of a motion, whether it be uncomfortable in terms of flexibility, balance, stability, or orientation, the more difficult it becomes to remain continually focused and relaxed. As all practitioners of internal arts know, remaining mentally focused, relaxed, stable, balanced, and aware are all crucial to success in combat. Therefore, in the execution of forms, the more one can challenge the body in the execution of complex movements, the more prepared one will be for the combat environment. However, as stated above, the progression to these difficult movements should be gradual. If a beginner starts out with complex moves, there is no foundation and it will be very difficult for that individual to improve



Liang Qiang Ya practicing Fu Style Ba Gua

at a consistent pace.

The spinning and turning motions which have been associated with Fu style Ba Gua and “tornado power” should not be attempted by beginner or intermediate practitioners because they are not really ready for these moves. They will be unstable, off-balance, disoriented, and disconnected. However, once a student can maintain all of the important requirements of good Ba Gua practice in the execution of less challenging maneuvers, then he or she is ready for the complexity of the spinning moves. If a practitioner can expertly execute the tight and quick *kuo* and *bai* footwork, rapidly spinning body movements, and coiling and twisting arm motions, of the tornado spinning motions, know how to come out of the spin sharply, accurately and crisply at any instant without becoming unbalanced or disoriented, then this practitioner has reached a high level of Ba Gua skill and has a very functional combat tool. Liang Qiang Ya says, “If I can turn fast with power, connection, awareness, and fluidity while keeping my center and maintaining control, I will have an advantage in a fight. Ba Gua is based on the principle of moving. This is its main characteristic. So we must have as a goal in practice to learn how to move faster in the execution of difficult maneuvers.” He adds, “When turning, the upper is fire and the bottom is water. The upper is light and free, the bottom is heavy and sunk. The power is free, but also strong. The whole body must be straight to have a center. The chest is loose and alive, the feet grab the ground.”

Liang says that in application, being able to execute the quick spinning motions while remaining centered and balanced is useful when fighting multiple opponents. You can attack one opponent and then quickly turn to attack another without losing stability, power, awareness, or focus. He states that when fighting, Fu Zhen Song liked to attack his opponent’s vital points using his fingers like steel darts. Fu’s fingers were like iron rods and a well placed poke would immediately finish the opponent, leaving Fu the opportunity to turn and address any other attackers. In order to help maintain his finger strength, Fu would exercise with a 38 pound stone ball. He would manipulate the ball with his fingers while executing his Ba Gua movements in order to develop finger strength. Liang said that Fu also liked to throw the ball up into the air and catch it on his chest in order to develop his body.

While turning your back on a skilled opponent in the execution of a spinning motion during a fight is not a smart thing to do, and thus the quick turning and spinning motions executed in forms practice would more directly apply to the multiple opponent scenario, these spinning motions do have a developmental aspect in training for the single opponent situation. In a fight, the Ba Gua practitioner is going to rely on his footwork and his ability to change directions rapidly in order to gain an advantage on his opponent. If the practitioner cannot change directions rapidly and still maintain stability, centeredness, and continued



Liang Qiang Ya visits Dong Hai Chuan’s hometown in Wen An China and pays his respects at Dong’s memorial

awareness, he or she will be at a disadvantage when executing the change. When executing a maneuver such as the single palm change, where the practitioners focus, energy, and awareness changes from one side of the body to the other, there is a point during the execution of this change, especially if the change is executed rapidly, where the practitioner can easily lose orientation and/or awareness. This point occurs when the brain is switching control from the left hemisphere to the right hemisphere. In the execution of the single palm change, the Ba Gua Zhang student should work to maintain constant focus and awareness all the way through the change. This is one reason the practice is first executed slowly and then gradually works up to a fast paced change.

Once the student has learned how to execute a maneuver such as the single palm change while maintaining balance, stability, centeredness, connection, and focus, progressing to moves such as the 360 spinning, which is prevalent in Fu style, will further challenge the student’s ability to maintain all of these aspects of good Ba Gua practice. If the student can learn to spin rapidly and maintain full awareness, focus, centeredness, balance, stability, and connection, then he or she will probably be able to maintain these components when faced with the fast paced chaotic confusion of a real fight. Therefore the spinning and turning motions become an excellent developmental tool for the practice of maintaining stability and awareness while rapidly changing directions. In practice you purposefully place yourself in a disorienting situation (spinning 360 degrees or more) in order to practice remaining focused, aware, stable, centered, and oriented. It is highly unlikely that one would actually spin 360 degrees or more when fighting single or multiple opponent’s, however, it is an excellent training tool.

The “Tornado Power” Movements

In this section of the article, we will present numerous training movements and exercises which will help you build a good foundation leading to the execution of the tornado power movements. We will also present a number of variations in the arm motions which can be practiced with the spinning footwork and body movements.

Liang Qiang Ya says that it is important for the beginner to learn correct *kuo bu* and *bai bu* footwork prior to executing any of the turning and twisting movements of Ba Gua. In Ba Gua practice, all upper body motions are initiated in the footwork in a coordinated and connected manner. When the footwork is correct and the body is connected, the whole body can move as one integrated unit. Liang states that in the beginning levels of practice the footwork must be correct or the student will lose the whole body connection when he executes complex and rapid body motions. Liang further stated that “The change is initiated in the footwork and the palms follow the step by changing simultaneously. The walking is like a dragon, the turning and shrinking like a monkey, the changing posture is like an eagle, while being stable as a tiger.”

Basic Exercise #1

In order to prepare students for the movements of Fu style Ba Gua Zhang, Liang teaches a number of basic skills exercises. This exercise is a simple body twisting and coiling drill which will help loosen the body and build a degree of body coordination that will be useful when this motion is added with complex *kou* and *bai* footwork.

Photo 1: Begin by shifting the weight to the right leg and turning the right hand so that the palm faces toward your face, which is looking to the right. The arm is twisted such that the elbow is pressing inward as the thumb rotates outward. The left hand is pressing rearward away from the body.

Photo 2: Push off of the right leg allowing a twisting motion to be initiated at the ankle and propagate up the body as the hips and waist turn to the left and the weight is shifted to the left leg. The right hand turns and presses down and away from the body as the left hand scoops upwards and twists in a coiling motion to face upward and towards the face. As before, the elbow presses inward so that you feel the a twist from the shoulder all the way out to the hand.

Continue this exercise by shifting and twisting from one side to the other in continued repetitions. Insure that the whole body twists from the ground up to the hands.

Basic Exercise #2

This second exercise, shown on the following page, helps the beginning practitioner with their body coordination, flexibility, and leg strength. This exercise also is a preparatory exercise to some of the more complex twisting and coiling movements of the exercises and form sequences which follow.

Photo 1: Begin this exercise in a horse stance with the left arm held out away from the body and level with the ground while the right hand is held near the left ribs. Both hands are forming loose fists.

Photo 2: Drop both hands down and allow them to swing in a circular arc across the front of the body.

Photo 3: The arms continue to circle in an arc and come up over the head. As the arms come up over the head, Step back with the right leg so it crosses behind the left.

Photos 4 & 5: After the arms reach a point directly above the head and the right foot is behind the left, the body and hands drop straight down.

Photo 6: From the low squatting position, begin to stand up as you twist the body to the right and bring the arms up in a circular arc above the head.

Photo 7: Continue turning to the right until the arms reach the original position on the other side of the body.

Photos 8 & 9: Repeat the exercise on the other side.

Basic Exercise #1



Photo 1



Photo 2

Basic Exercise #2



Photo 1



Photo 2

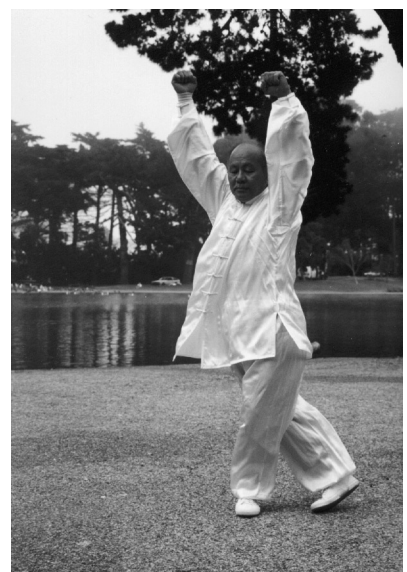


Photo 3



Photo 4

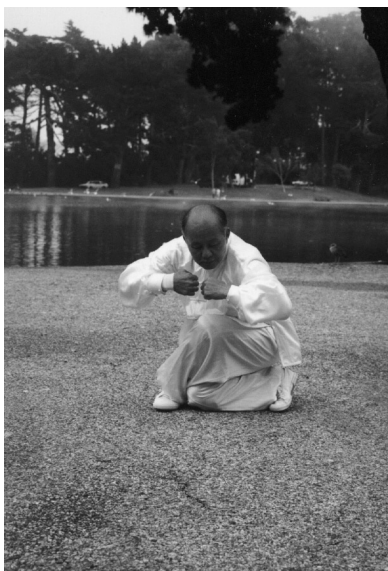


Photo 5



Photo 6



Photo 7

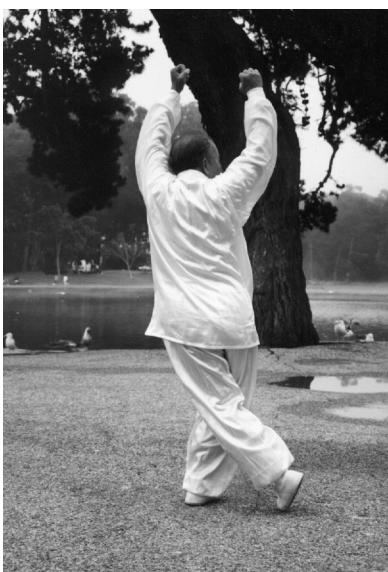


Photo 8

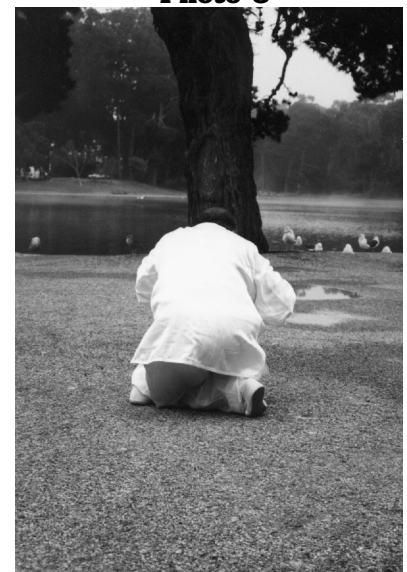


Photo 9

Basic Exercise #3



Photo 1



Photo 2

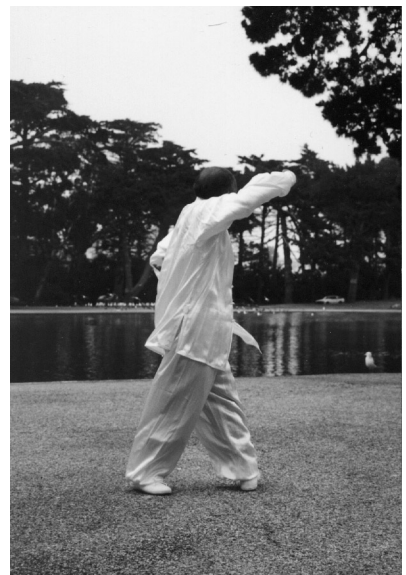


Photo 3



Photo 4



Photo 5

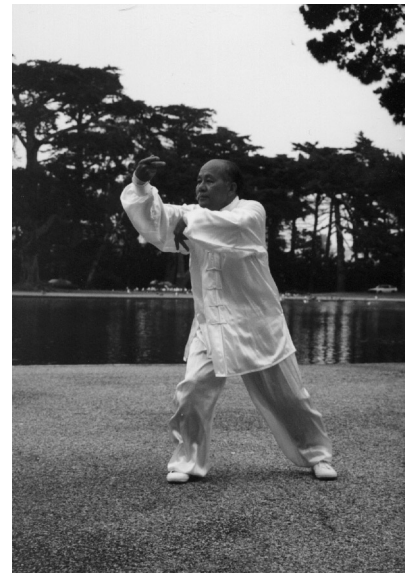


Photo 6



Photo 7



Photo 8

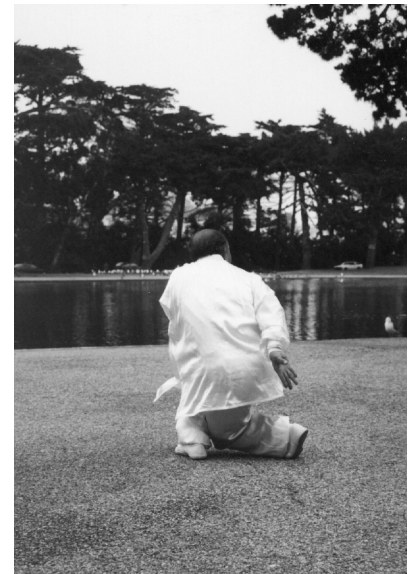


Photo 9

Basic Exercise #3

This next exercise, shown on the previous page, adds some coiling and twisting upper body motions to the basic exercise shown as exercise #2.

Photo 1: Begin this exercise with the hands held out in front of the body, left hand low, right hand high, as if holding a ball.

Photo 2: Curl the fingertips of the left hand inwards toward the body, palm still facing upward, as you turn the right hand to face upwards. The right hand moves slightly upward as the fingers point toward the rear and the palm faces up. This movement is accomplished by rotating the right wrist.

Photo 3: Execute a pronounced *bai bu* step with the left foot. Begin to twist the body to the left as the left hand moves behind the back with the fingertips leading the way. The right hand presses outward in a position held out in front of the face.

Photo 4: Continue twisting the body as the body drops down into a low squatting posture. The right hand is still pressing outward and is held in a position in front of the left shoulder. The left hand has coiled behind the back and the fingers have begun to turn back to the outside as the palm presses downward and away from the body. The head turns to look at the left hand.

Photo 5: Stand up and turn back towards right. Once the weight is firmly planted on the right leg, take a *kuo bu* step with the left foot. As you do, the left hand comes up in front of the body and the right hand comes up under the left in a *fan zhang* maneuver. In the photo, Liang's left hand is resting just inside the right elbow at this point.

Photo 6: Continue turning back towards the right, bringing the hands across in front of the body. Shift the weight to the right leg and twist the hips to the right. When the hands have come out to a position about 90 degrees to the right of the original starting position of photo 1, both hands curl inward towards the body with the fingertips leading the motion.

Photo 7: Shift the weight back to the left leg as the right hand drops down to the height of the ribs and the left hand comes up on the outside of the right arm. The left hand rotates outwards away from the body as it moves upward. The right hand begins to twist inward with the fingertips facing the body and moving to coil under the arm.

Photo 8: Execute a *bai* step with the right foot and begin twisting the body to the right. The fingers of the left hand rotate 270 degrees and the left palm ends facing upward. The right hand is coiling behind the back.

Photo 9: Continue turning the body as you drop into a low squatting posture. The left hand is pressing outward and is held in a position in front of the right shoulder. The right hand has coiled behind the back and the fingers have begun to turn back to the outside as the palm presses downward and away from the body. The head turns to look at the right hand.

Continue this exercise as long as desired.

Basic Exercise #4

The fourth exercise, shown on the following two pages, builds from the hand motions of the last exercise. This is one of many variation of the "serving tea cups" exercises which have become characteristic of Ba Gua Zhang practice.

Photo 1: Starting from a horse stance posture, shift the weight to the right as the arms come up on the right side of the body. The arms are relaxed and the wrists loose.

Photo 2: Shift the weight to the left, turning the waist to the left. Allow this motion to whip the arms out to the left. The left hand extends outward, palm facing up, as the right hand comes in by the left elbow, palm facing up. Be sure to coordinate this motion of the arms with the movement of the hips and torso.

Photo 3: Turn the hips and shift the weight to the right as the arms follow this motion to the right. Now the right hand is extended outward, palms facing upward, while the left hand comes in by the right elbow, palm facing upward. Again, coordinate the movement of the arms with the movement of the hips and torso. The first few movements of this exercise are excellent for training whole body connection, coordination, and alignment.

Photo 4: Now turn the hips back to the left as in step 2, however, you will now allow the left hand to coil behind the back while the right hand comes up in front of the face, palm facing inward. The left hand coiling is exactly like that practiced in basic exercise #3.

Photo 5: After the left hand has coiled behind the back, fingers leading the way and palm facing upwards, the left hand turns palm facing upward and swings back around to the left with the fingertips facing away from the body. The right hand drops down in front of the chest.

Photo 6: The left hand continues circling around with the palm facing up. It comes outside of the right hand and up by the face. The weight is shifted back to the right foot as the left hand comes up by the face.

Basic Exercise #4

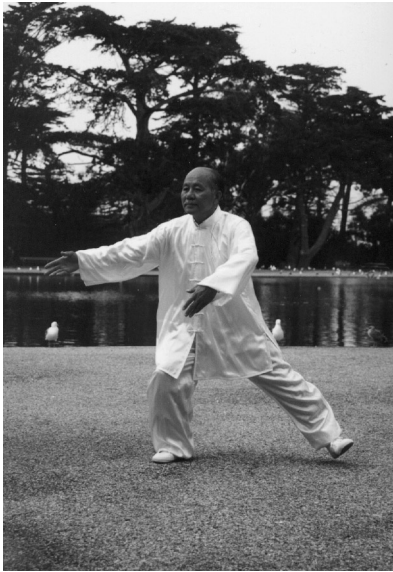


Photo 1



Photo 2

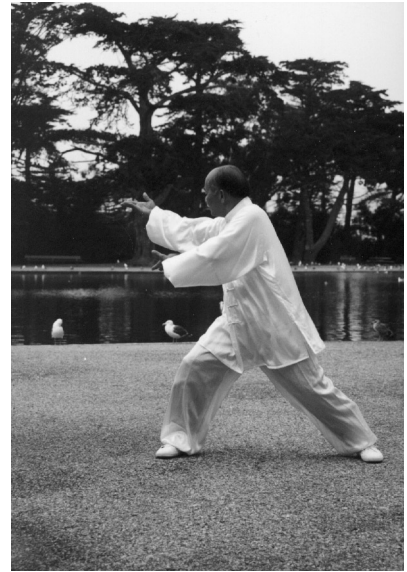


Photo 3



Photo 4



Photo 5

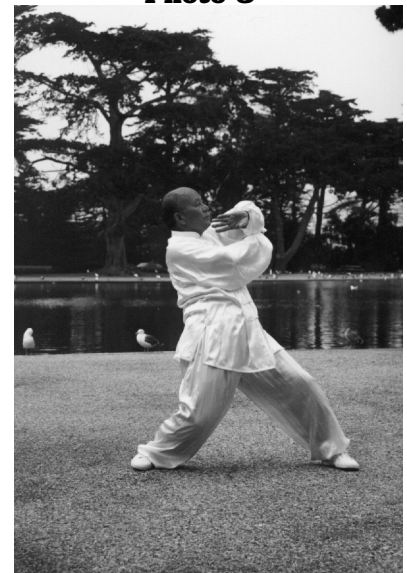


Photo 6



Photo 7



Photo 8



Photo 9

Basic Exercise #4 (con't)



Photo 10



Photo 11



Photo 12

Photo 7: The left hand continues its spiral and chops outward with the pinky edge of the hand leading the chopping motion. The right hand falls in beside the left elbow.

At this point the left hand has navigated through the entire “serving tea cup” motion. It started facing upward with the hand in front of the body and the fingers facing away from the body (photo 3). The left hand then coiled under the left arm and behind the back, palm still facing upward (photo 4). The left hand then turned with the fingers facing away from the body and moved back towards the left, palm still facing upward (photo 5). The left hand then came up in front of the face, palm still facing upward, thumb facing away from the face (photo 6). The left hand then ended in a position in front of the body with the fingers facing away from the body, palm still facing upward.

If you analyze this motion you will see that the palm is always facing upward and the fingertips navigated a full 360 degree circle two times to bring it back to its original position. Many of you may be familiar with various versions of this exercise. When practicing the version shown here in the photographs, be sure to have the motion of the hands connected to, and powered by, the body. In the photograph sequence, you can see how Liang gains power from the waist and legs in the sequence of photos 5 through 7. In photo 5 the weight is forward and the hips are twisted to the right. As the palm comes back in photo 6, the weight is also shifted back to the right leg and the hips are turned towards the left. The motions in photos 5 and 6 have loaded up the power to spring forth in photo 7 when the motion of the weight coming forward and the hips turning the body to the right help to express

the power in the hand as the arm whips around to strike. When practicing, pay attention to these details in order to aid in the production of whole body power. If you simply coil and twist your palms and arms around without having the motion come from the legs and waist, you will only have empty, expressionless movements.

Photo 8: The left hand begins to turn toward the face as the right hand begins to turn inward to coil under the right arm in preparation for the repeating this exercise on the other side.

Photo 9: The body turns to the right as the right hand coils behind the back.

Photo 10: The right hand circles back to the left, palm still facing upward.

Photo 11: The right hand comes back towards the face as the weight shifts back.

Photo 12: The right hand comes around and chops.

If you practice basic exercise #3 for sometime, it will help prepare you for basic exercise #4. It is essentially the same exercise, however, instead of coiling down to a low posture, the energy of the motion is brought back around for a forward cutting strike. In spending the time to practice exercise #3, you will develop the strength, flexibility and coordination which is required to properly execute exercise #4 with whole body power.

Basic Spinning Motion (Horizontal Power)

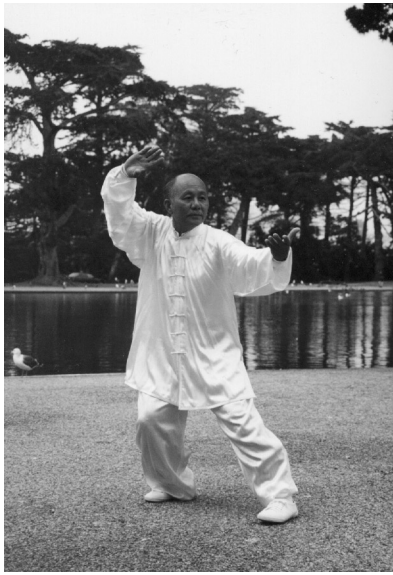


Photo 1

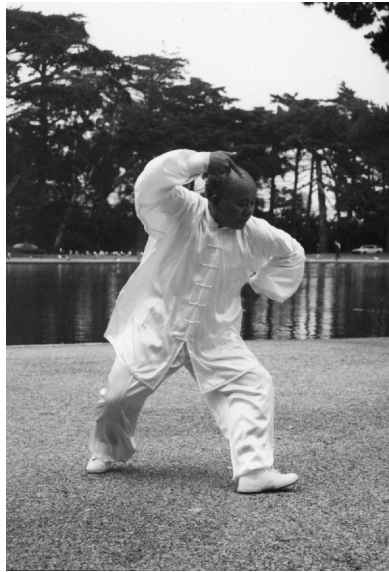


Photo 2

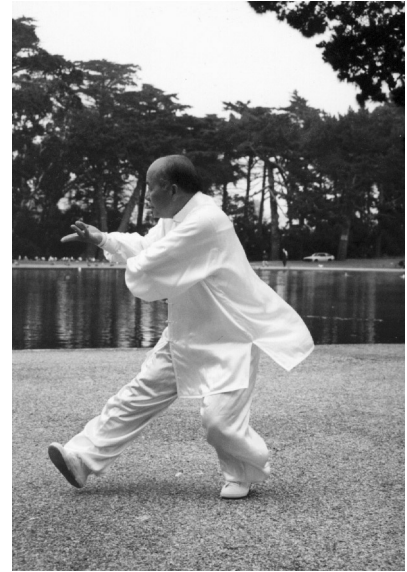


Photo 3



Photo 4



Photo 5

Basic Spinning Motion (Horizontal Power)

This next exercise demonstrate the basic spinning type of motion prevalent in Fu style Ba Gua Zhang.

Photo 1: Liang begins in a static posture. The posture is not important here, it could be any number of arm postures.

Photo 2: Liang executes a large *bai* step and coils the left arm behind the back as the right hand comes in front of the face. This arm motion is similar to that which began the coiling motion of the previous exercise.

Photo 3: Liang now executes a very big *kou* step which swing the entire body around 180 degrees. The left palm turns upward and the right palm comes underneath the left arm in a *fan zhang* maneuver.

Photo 4: Liang once again executes a large *bai* step to turn the body another 180 degrees. As he does this, the left hand swings around in front of the body while the right hand coils under the right arm and shoots backwards.

Photo 5: Liang once again executes a large *kou* step turning his body another 180 degrees. As he executes this step, he plants the right foot and shoots his power out of the "spinning tornado" and along a straight path. His right arm has coiled back in front of his body during the turn and then shoots out like a dart to attack.

You will notice that in the execution of these few moves, Liang has spun around 360 degree two times. It is the pronounced *kou* and *bai* footwork that has facilitated this maneuver.

Spinning Motion with Vertical Power



Photo 1

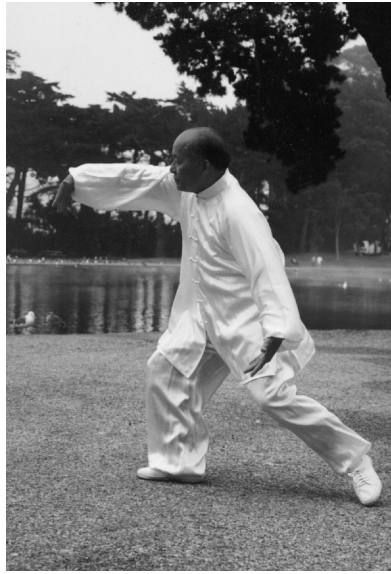


Photo 2

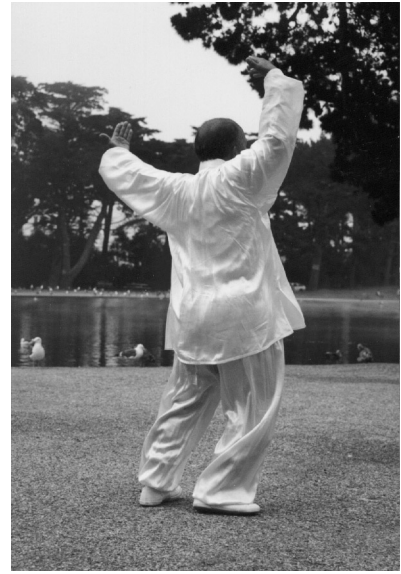


Photo 3



Photo 4



Photo 5

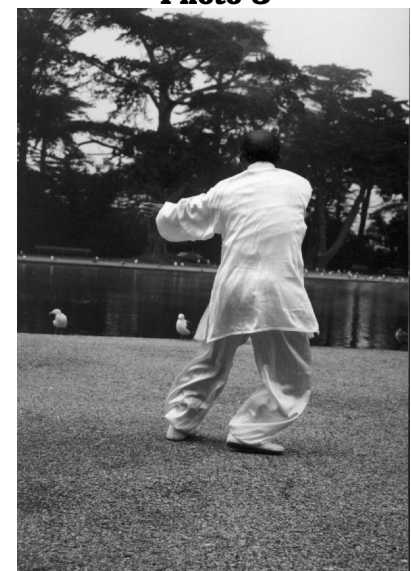


Photo 6

The Spinning Motion with Vertical Power

This next exercise demonstrates the basic spinning type of motion expressing power along the vertical plane.

Photo 1: Liang begins in a horse stance holding a standard posture. Again, the exact arm position is not important.

Photo 2: Liang takes a bai step with the right foot and turns toward the right. The right hand is brought straight up along an arcing vertical path while the left arm comes down along an arcing vertical path. The right hand is facing palm down while the left hand is facing with the palm up.

Photo 3: Liang executes a kuo step with his left foot and lifts both arms up over the head, still traveling

along the vertical arcing path. Here the turning of his body around his centerline has been converted into a vertical arcing energy through the expression of the arms.

Photo 4: From the position in photo 3, Liang could chose to continue the vertical power by dropping both arms down along the same circular path they began navigating in the previous movements, however, he chooses to now come out of the spin and off the arcing motion and execute a straight piercing palm strike.

Here, Liang executes the bai step and allows the right hand to come down and coil under the arm as the left hand comes down in front of the face (as in exercise 4).

Photo 5: Liang continues the bai step and turns the

Spinning Motion with Horizontal Spirals



Photo 1



Photo 2

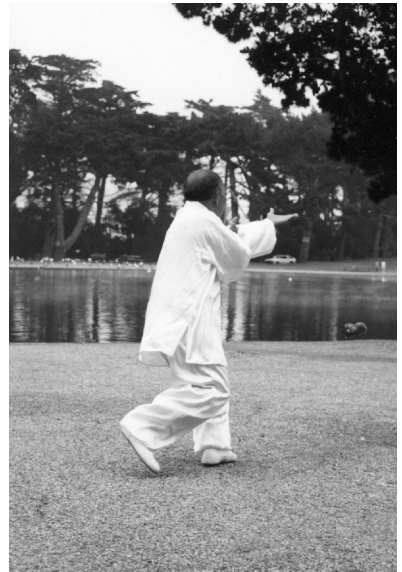


Photo 3



Photo 4



Photo 5

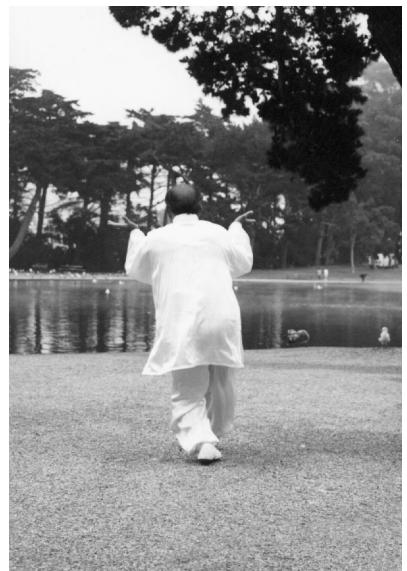


Photo 6

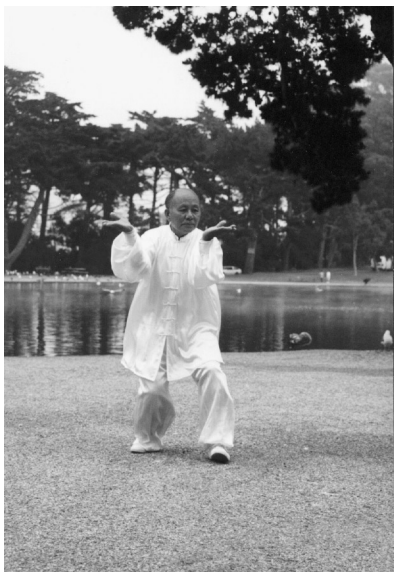


Photo 7



Photo 8

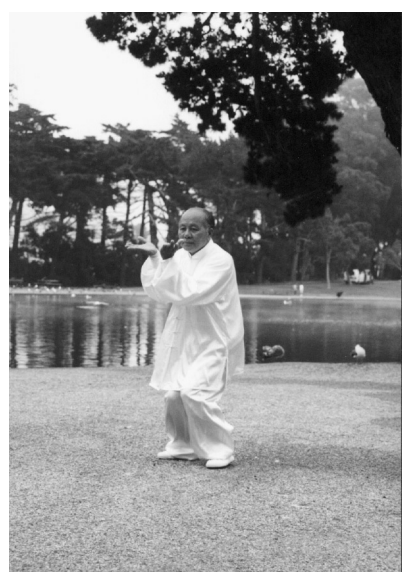


Photo 9

body to the right. The right arm begins to rotate in the direction of the thumb facing up (in preparation for the piercing palm) and the left and tucks in behind the right elbow.

Photo 6: Liang now takes a straight step forward with the left leg and executes the piercing palm with the left hand.

The Spinning Motion with Spiraling Horizontal Power

This next exercise demonstrates the basic spinning type of motion expressing power along the horizontal plane in a spiraling movement.

Photo 1: Liang begins in a right weighted static posture. Again, the arm position can be any variety of things here.

Photo 2: Liang begins by executing a *fan zhang* maneuver with the left palm coming under the right arm and both palms turning to face upward.

Photo 3: Liang executes a large *bai* step and turns his body to the left as he continues to execute the *fan zhang* maneuver.

Photo 4: Liang executes a large *kuo* step and turns his body 180 degrees. At this point the hands have come together in the classic “white ape offers fruit” posture and then have begun to spread out to the sides. Liang has now turned 360 degrees. Note that at this point (as in any situation where the *kuo* step has been executed) Liang could change directions and start spinning the opposite way. However, in this demonstration he continues spinning in the same direction he started.

Photo 5: The palms continue to spread out to the sides as Liang takes the next large *bai* step and turns his body 180 degrees. At this point the arms reach full extension and Liang assumes the classic Ba Gua “green dragon spreads its wings” posture with the arms.

Photo 6: Liang executes the next *kuo* step and begins to bring the palms back in toward the center of his body into the “white ape offers fruit” posture.

Photo 7: Liang executes the next *bai* step as the arms continue to move in towards the center.

Photos 8 & 9: Liang continues turning until the palms have reached the center position.

In this sequence, Liang has demonstrated how the vertical power generated by the turning of the body around its center can be applied in spiraling motions which move from small to large and back to small again. When the student learns how to generate this “tornado power” and apply it with the motion of one or

both palms moving from inside to out or from outside to in along circular paths and spirals, he or she may discover many valuable applications. Remember that spinning 360 or 720 degrees is an exercise. The functionality of these moves may only require a turn of 45, 90, or 180 degrees. However, having worked through the exercises and learned how to execute these exaggerated turns, twists, and spins while remaining centered, balanced, stable, aware, coordinated, and focused will greatly help you execute your applications of much smaller, tighter, and crisper movements in combat.

Probably the most important component of these movements is the execution of accurate, crisp, and quick *kou* and *bai* steps. If the steps are not correct, the turning motions will be awkward and unbalanced. Notice that for each step Liang executes, his body turns 180 degrees. This means that it only takes two step to turn a complete circle. Being able to execute a two step complete 360 turn while remaining connected and stable is vital in developing these moves. It is also important to have developed an adequate degree of flexibility in the hips and pelvic region so that you can execute a very large *bai* step and still keep your knees facing the same direction as your toes. Keep this in mind when practicing in order to avoid possible knee injury.



Liang practices Wu Dang Sword

Spinning to Produce Diagonal Power

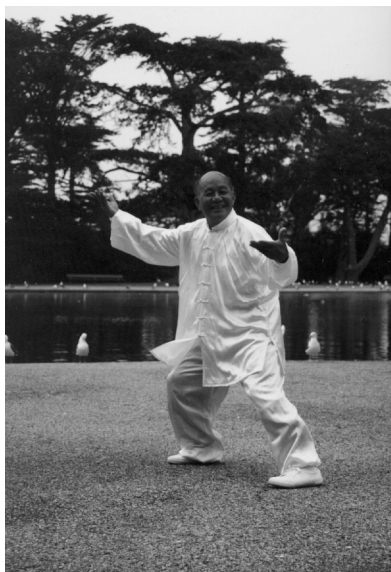


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8

The Spinning Motion with Diagonal Power

Thus far, Liang has demonstrated how power generated from a rotation of the body around its central axis combined with employment of the *kou* and *bai* footwork can be translated into horizontal, vertical, and spiraling power in the arms and palms. In this final example, Liang will show how the spinning motion can be used for the generation of a diagonal power. This exercise will utilize the motion which was practiced in basic exercise #1.

Photo 1: Liang begins in a static posture. The exact arm position is not important. You may choose to initiate from a variety of arm positions.

Photo 2: Liang begins the motion by turning his body to the right, bringing his right hand up above his head and bringing his left hand down in front of him, fingers facing downward, palm facing towards him.

Photo 3: Liang now executes the *bai* step with his right foot and turns his body towards the right as his right palm comes over his head and begins to move downward and under the right arm, fingers leading. His left hand continues to scoop upward and across the front of his body.

Photo 4: As Liang executes the *kuo* step, the left hand continues up to a position in front of the face and the right hand continues back. The palms are moving exactly as practiced in basic exercise #1.

Photo 5: With the next *bai* step, Liang's palms have completed the movement as described in basic exercise #1. Compare the arm position here with that shown in photo 2 on page 8. You will notice that thus far in this sequence of moves the right hand has moved from high to low in a diagonal motion across the front and to the back of the body while the left hand has moved diagonally across the body from a low to a high position. This motion of the palms represents the diagonal power which Liang is trying to demonstrate here.

Photo 6 through 8: Now Liang takes another *bai* step and continues with the same motion once again, the left hand and right hand change positions as demonstrated in the basic exercise #1 while the *kuo* and *bai* steps are executed.

What we have presented here are just a few of the many movements and exercises which are practiced in Fu style Ba Gua Zhang in order to teach the student "tornado power." Liang states that when you first start practicing these moves, you will not have turning power until you can keep your center and your connection. When you are connected, you will have turning awareness. Again, Liang emphasizes that anyone practicing these moves should concentrate on proper *kuo* and *bai* steps, maintaining centeredness



and stability, and keeping the whole body connected. Start out slowly and gradually increase the pace so that eventually all of these principles can be maintained while moving rapidly.

During our interview Liang said that Fu Zhen Song placed great emphasis on Ba Gua footwork and practice of the Ba Gua stepping methods. Liang said that if your footwork is not good, your Ba Gua will not be good. He also said that there was one student who studied Ba gua with Sun Bao Gong who only practiced Ba Gua footwork and the single palm change. That is all that he ever learned and with those few skills, he was an extremely good fighter.

Liang says, "In Ba Gua fighting, I use my moving to defeat your static posture. This is different from Tai Ji where the practitioner will use quietness. In Ba Gua I use my attack to make you move, then I take advantage of your move. I avoid the front, get to the side, and attack you with surprise. I use my front force against your back force." He continues by saying, "Some styles use force against force. Ba Gua uses angles and physics to redirect your power, not oppose your force."

In order to convey the principles of Fu style Ba Gua Zhang as they were conveyed by the old masters in China, Liang offered this verse:

The internal *jing* is like an ocean wave (continuously coming),

The technique is like the falling snow coming down from the sky (the technique is everywhere).

The step is like a moving cloud (moving smoothly and continuously).

The body is moving like a tornado.

Nine Palace Training

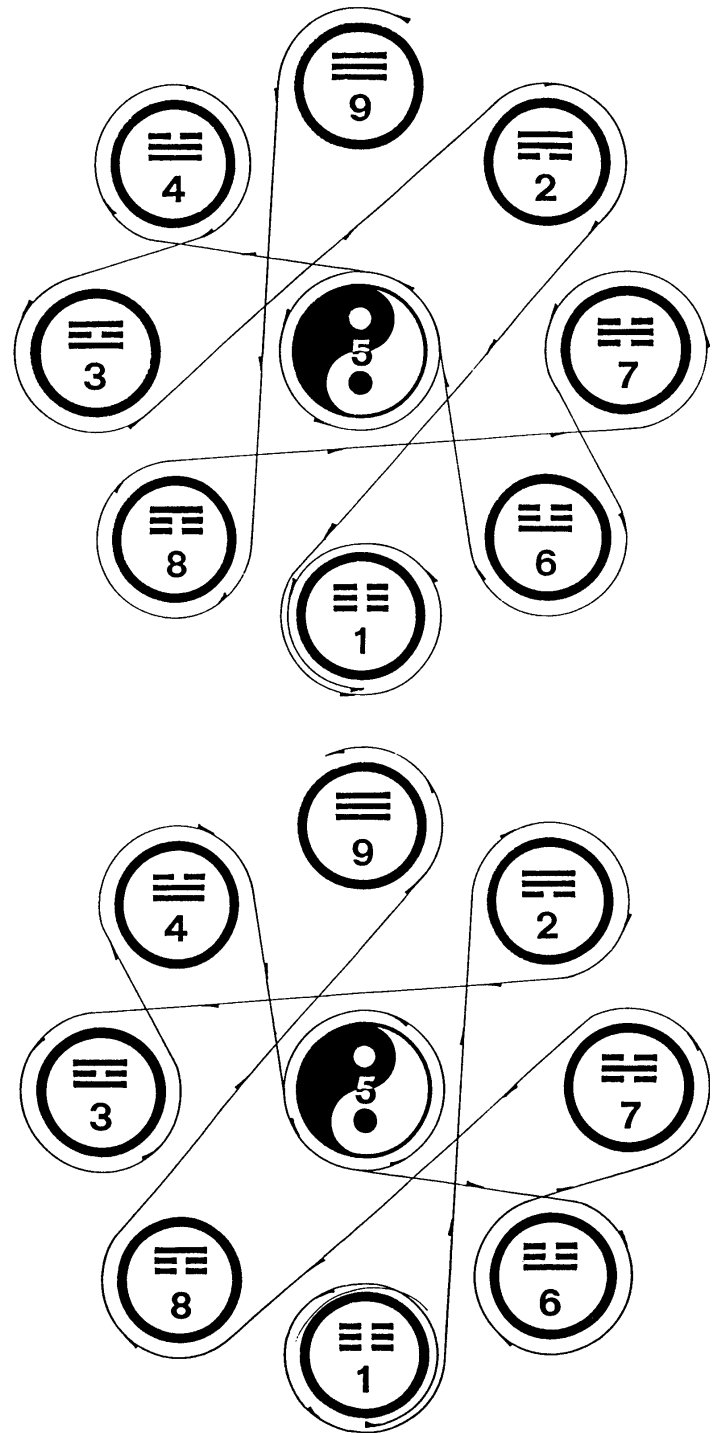
Like most Ba Gua Zhang schools, an advanced practice of Fu style includes the use of the Nine Palaces. Liang said that once the student has an understanding of the *kuo* and *bai* steps and their application in producing the tornado power, the student will then learn to apply the footwork to the Nine Palace arrangement. He said this practice is especially important for learning how to deal with multiple opponents.

The “nine palaces” consist of eight poles placed in a circle with one pole in the center (see diagrams at right). Liang said there were several different practice routines that the students would practice while using the nine palaces. However, he said that it was important that the student would have first progressed through the standard Fu style Ba Gua forms such as Yin Ba Gua, Yang Ba Gua, Liang Yi, Si Xiang, and Dragon Style Ba Gua. He said that the Dragon form Ba Gua came after study of the Yin Ba Gua and Yang Ba Gua. After the student had studied the Dragon Ba Gua, the practice became based more free style movement than on any standard form routine. This kind of free style movement was practiced when one entered the nine palace training.

When practicing with the nine palace poles, Liang said that one moves continuously in a free form manner. Sometimes the practitioner will move amongst the pole while trying not to touch any of the poles. Other times the practitioner will contact the poles by striking with the palms, feet, legs, or the body. He states that in training to move amongst the poles without touching them the student is training lightness, freedom, and aliveness. In striking the poles the student is training to condition the body and produce power.

The diagrams at right show the path a practitioner would navigate amongst the poles when first learning the nine palace training. The lower diagram shows the first path while the upper diagram shows the return. In other words, the practitioner starts by walking a complete circle around pole 1, then heads towards pole 2 in the Northeast corner, goes around that pole and heads towards pole 3 in the west, etc. Once the practitioner reaches pole 9 as indicated in the lower diagram, he then heads back to pole 8, etc. as indicated in the upper diagram. When he gets back to pole 1, he has completed one circuit.

In closing, Liang Qiang Ya said that Fu Zhen Song did not teach directly. He said, “You had to be smart to learn because Fu would not give you the essence. You had to ‘eat’ everything and then figure it out for yourself.” He said that Fu would beat his students, but never tell them how he did it. If you asked how he did it, he just kept beating you. Liang said, after you get beat and watch others get beat, if you were smart and practiced hard, you could begin to figure out what he was doing.



**Ba Gua Nine Palace Diagrams from
Fu Zhen Song's Ba Gua Zhang System**

Liang Qiang Ya is currently living in El Cerrito, California and accepting private students. If you are interested in studying with him privately, call (510) 237-0870 to make arrangements. He is also conducting a few group seminars, see seminar listing on the inside cover of this magazine for the next seminar date.

Mechanics of Power in Ba Gua

by John D. Bracy

Guo Gu Min (郭古民) lived from 1880-1968. Those who knew him say that when he had the lightest contact with his opponent his adversary would be tossed. A subject of endless discussion among practitioners of Ba Gua is the legendary and effortless power and ability of martial artists like Guo. In the summer of 1995 I attended the international Ba Gua conference in Beijing, China. Zhan Shui Fen, a teacher and theorist from Chang Chuen, China presented a paper on the subject of how Guo and others like him achieved such power and sublime skill. According to Zhan how they developed it can be understood by applying principles of physics. Zhan believes that this analysis unveils the deeper secrets of Ba Gua and the other internal arts.

In his paper Zhan discussed:

1. The nature and definition of *song* (鬆), the importance of its development and its understanding in light of modern physics.
2. How the mind directs internal power via control of elasticity and direction of spring like coil.
3. Understanding correct posture for angle of attack and effective power.
4. Metaphysical aspects of practice.

1. The nature and definition of *song*, the importance of its development and its understanding in light of modern physics.

Song is spring like power essential to Ba Gua mechanics.

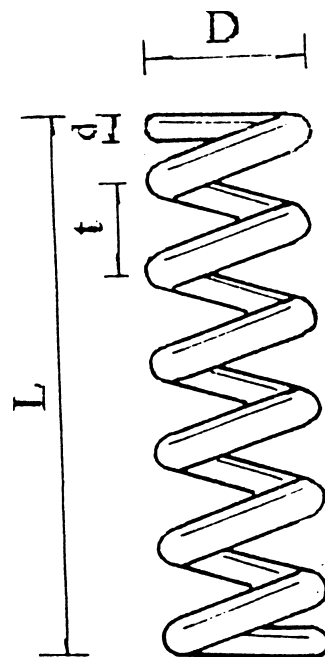
Understanding and being able to employ *song* is essential to acquiring internal power. It is the core of correct Ba Gua practice. The word "*song*" has no exact equivalent in English language. It might be translated as "tenacity" or "tenaciousness" and refers to a quality of resistance, but not looseness. Often translated as "looseness" or relaxedness, these terms lack exactness in translation since *song* applies to a principle of physical resilience such as being a "springiness," not hard nor loose. Applied to the model of the human body, it describes physical attributes much like that of a spring. Its quality is so much like a "spring" that Zhan uses the analogy of a spring and applies laws of mechanical engineering to the human body and study of the internal martial arts.

Zhan believes *qi*, internal power, is largely explainable by the relaxed yet tenacious, "springy" power of *song*. According to Zhan, the *dan tian* is the

most important and central aspect of the spring quality in human body mechanics. The spring at the *dan tian* causes the internal power to spread to the entire body and energetic channels. (what he refers to as the "four extremities & *ren, du mai*"). Implementation of this concept begins with a special kind of "relaxedness" which leads to a powerful effect in combat. This "relaxedness," is not loose and without structure, but, again, like a spring which maintains resistance and tenacity.

According to Zhan, the secret of full power rests in mastering the hard and soft since hard and soft together equals life and power while separation of these aspects in the body equals death. Hardness makes a spring brittle and rigid thus its value is limited. Too soft of a spring becomes a "slinky" toy where the tension of the spring is nearly insignificant. The optimal spring lies in the middle of the spring continuum and possesses the greatest tenacity, resistance and spring like quality.

Thus, to study this concept we can use the analogy of a spring. In diagram 1 below taken from Zhan's paper, the energy of *song* is explained.



- F = Force
- L = height
- D = Diameter of coil
- t = distance between each coil (of spring)
- d = thickness of wire
- K = Spring Constant (Flexibility as it relates to "d"; index of how much force it takes to compress the spring.)

The following is germane:

1. When d is greater, K is greater. When d is smaller, K is less ($F=K\Delta t$)
2. Δt = Change in compression of spring (change in t as it relates to distance between the coils)
3. When d is greater, Δt is smaller (to store the same amount of energy). When d less, Δt is greater (to store the same amount of energy).

Zhan says that tension in the body is analogous to coil thickness and that the power a spring has in a static situation is like a human body in *song* status. Therefore, to increase or decrease "internal force," change " d ," which in the human body is done by control of *song* (tension in the body).

Imagine two springs one with larger d , one with smaller d . Different degrees of force are required to compress these springs to the same level. More d takes more energy to compress. To a certain point, the more tension you release, the greater the internal power. This principle applies to practice of Ba Gua Zhang.

In applying this model to the practice of internal martial arts, Zhan's point is that a practitioner who is more tense has less internal power potential. This is because he possesses more d , or "coil thickness" (tension). In comparison, a less tense practitioner has greater internal power potential since, his " d " or "coil thickness" (tension) is less.

2. How the mind directs internal power via control of elasticity and direction of spring like coil.

The mind and "Song."

The mind via the central nervous system controls the degree of tension of the "spring" in the body to create the *song* effect. Signals from the brain cause muscles to tense or relax. Thus, thought and mindset, as well as basic flexibility, are important. Thought and emotion are causal in creating gradations in body relationships and corresponding muscular tension. Applying the spring analogy to the human body, Δd are conscious and unconscious, trained and habitual gradations of muscular tension. Since d is central to the optimal spring function, Zhan offers a *tsung* "spring" paradigm, which defines spring as internal power.

However, controllable tension (*song*) is never "on" or "off," but realized by degrees, the other aspect in the "tension continuum" being elasticity. "Springiness" is bi-polar, and elasticity of bi-polar muscles and tendons. Another way of saying this is that *yin* and *yang* must be balanced. Correct elasticity is productive of internal force (*nei jing*). The following rule applies:

ELASTICITY = SPRING = INTERNAL POWER

Force can be broken down into internal and external.

According to Zhan external force is a product of normal weight and mass rules interacting with the

earth's gravity. It is created by the human body's resistance against the earth. This force, is called "*wai li*" or external force, since it comes from the outside.

Unifying your entire body's inner "spring" coil and bringing this to focus on one point will result in "*nei jing*" or internal force. Then, according to Zhan, "internal power" is the result of the body's force being concentrated to one point with mechanical principles originating inside the body. In other words, the "spring" release of pressures originating inside the body must have a focal point and be channeled or force will be dispersed and useless.

Zhan believes that since Ba Gua is the art of coiling, the potential for Ba Gua to develop internal power is superior to other arts. The entire art of Ba Gua can be said to be like a continuous coiling spring.

The interaction of spring power and the mind.

Internal *jing* is directed via action of the mind which controls the channel of force. In regards to the development of Ba Gua Zhang skills, this internal *jing* principle is applied through *yi* (intent). The classic songs of Ba Gua say:

"Concave the chest and the *qi* will sink.

With the back rounded, relax the shoulders

and
the *yi* (intent) will extend."

Zhan says that although the classics say that *qi* circulates and fills the myriad points of the body, it is problematic that the source of *qi* isn't discussed. Zhan believes that *qi* is based on physical mechanics described earlier. It comes from *song* and is generated from *song*. Thus, according to Zhan, the only way to "practice *qi*" is through *song*. The correct way to train is brought about by correct movement. Correct movement releases *song*, and if movement is incorrect *song* will be defective and internal power cannot be released.

"Song" defined

Zhan explains that "*song*" is not weak, but tenacious. True strength is both hard and soft ("strong and tender"). If too hard, it interrupts the ability to apply the true laws of physical mechanics ("true natural principles") and *jing* (force) will lack; if too soft, there will be no structure. According to the classics, "that which is too hard will break." Too hard becomes stiff, stiffness = stagnant energy. Excess hardness = death. "*Song*" is alive, not dead. Only in the condition of balanced and merged hard and soft is *tsung* produced.

Zhan suggests the following classical poem as a training guideline:

Silent as a mountain
movement as fast and
"uncatchable" like a rabbit.

In this poem the mountain represents solidity and resolve. The "uncatchable" rabbit, is the adept with the springy and ever changing quality which represents the epitome of evasive movements.

More on "Song"

When the condition of *song* exists, you have the ability to "*fa jing*" (transmit internal force), respond instantly at any moment, fluidly and without hesitation. According to Zhan, "*You fa jing* and then instantly at completion of *fa jing* you return to *song*."

Zhan gave the following advice about "song:"

"Many who have some understanding of *song* pay attention to its principles until it is time to use it. They overly focus their attention on the object or use overextended movements and lose principle. If you pull a rope from the floor it will become vertical, but drop it and it has no form." This suggests that acquiring softness is not enough to achieve *song*. The body, without *song* and the mind directing it is as powerless as the limp rope.

Ba Gua is an art based not on torque, nor momentum but on coiling and stretching of both common and rarely used muscles and tendons. Only when the tendons and corresponding muscular tension are released can "song" reach the perfect state. Master the principle by releasing tension and using spiraling movements.

3. Understanding correct posture for angle of attack and effective power.

The importance of correct posture.

The classics say: concave the chest, keep the back of head pulled up, the pelvic tilting forward. Straighten your back (align structure, this does not mean straighten the back completely vertical). This position allows the waist, pelvic, and legs to release *song*. Through practicing this posture *jing & li* (internal power and physical force) is able to transmit through the shoulders.

Zhan's position is to consider the spine's angle. Diagram 2 illustrates the natural curvature of the spine.



Diagram 2

Diagrams 3 and 4 compare two ways of transferring force through the body.



Diagram 3

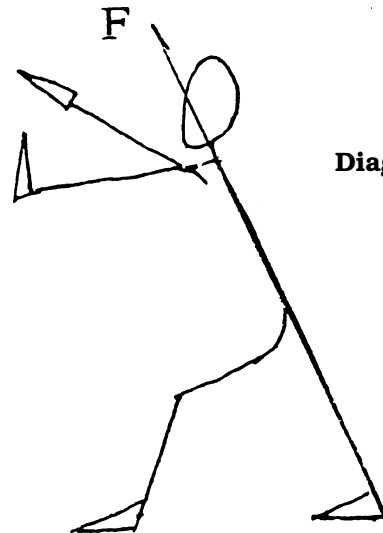


Diagram 4

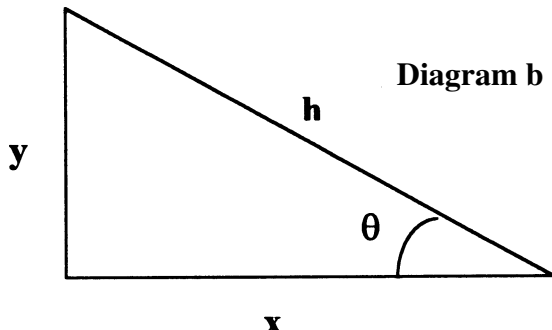
In diagram 3 from Zhan's paper efficient and correct force and power does not transfer through this posture since it is not aligned efficiently along the axis of force. The principle from physics was applied known as "cosine of theta (Θ)," where the transmission of force is disturbed due to the Θ angle. The Θ angle in the diagram shows the disturbed axis.

In diagram 4 the posture more effectively conducts power since the Θ angle which disperses the line of force is reduced or eliminated. Zhan suggests the following formula for understanding the transmission of power,

$$F1=FCOS\Theta$$

In diagram 3 the force generated along the F axis is reduced due to the Θ angle. In other words, F in diagram 3 is weaker than F in diagram 4.

An example of cosine of theta ($\cos\theta$) relates to a man opening two different heavy windows that slide up to open. In one case the man is able to put his body directly underneath the window and press straight up. In the other case, the man has to reach over a desk. (See diagram a). In the former, the angle of force is more direct; in the latter, the force opening the window is at an angle to the ideal line of force, thus creating a θ angle. Cosine of θ is the ratio of the length of the horizontal side of the right triangle to the hypotenuse. See diagram b:



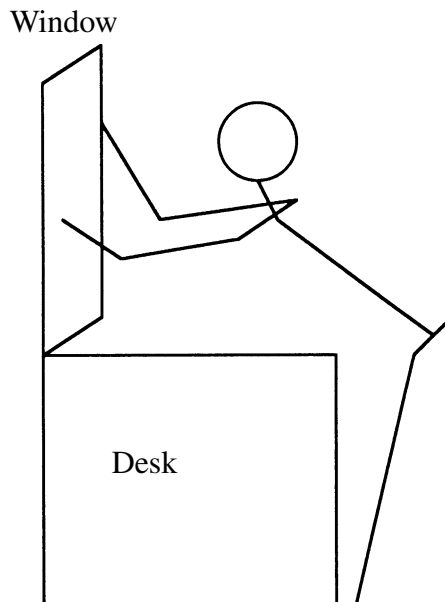
$\cos \theta = x / h$ "ratio of length of horizontal side to length of hypotenuse"

x = length of horizontal side of triangle

y = length of vertical side of triangle

h = length of hypotenuse

Diagram a



4. Metaphysical aspects of practice.

For the most part Zhan's discussion of internal power centered on principles that could be explained according to laws of physics. Exceptions to this rule occurred when the discussion turned to that of *qi* intermingling with intent and/or mind. Zhan says that the concept of Yi, "intention," extends beyond the limits of the physical body. As in the case of many traditional internal martial art theorists, sometimes Zhan intermixed concepts of mystical with mechanical to explain power and *qi*.

According to Zhan when the *qi* is concentrated at the *dan tian* (the traditional center of *qi*) it will rise to the top of the head and even "extend through the top of your head."

He quoted the classical Ba Gua song's advice to evenly circulate the *qi* that many of us already know: Keep your mouth closed, tongue on top of the inside of the mouth, breath thru the nose.

Extending your "mind" beyond the limits of the physical body.

These are some aspects of *qi* circulation: The lower abdomen is the base of *qi*. *Qi* "moves like clouds" within its system. *Qi* and the ability to manipulate it is linked to *yi* (intent). *Yi* is very important since ability to understand and experience *qi* as sensory data beyond the physical limits of your nervous system is linked to its development. An example of extending the nervous system beyond the body is when someone is able to sense strong emotions when they enter a room.

In Conclusion:

Zhan, via extrapolation of principles of physics, presents an interesting way to look at internal power. His analysis provides a fascinating arena for discussion and blending together Western ideas of power with the mystical. At this time these models only goes so far since it doesn't fully explain more mystical aspects of *qi*. There may be further explanation in the future when instrumentation or other ways of understanding internal power can be proposed. For the time being I am glad that internal power theorists leave room for the mysterious.

About the author: John Bracy is Director of the Hsing Chen School of Martial Arts in Orange County, California. He began martial arts training in 1967. In 1981 he was introduced to Ba Gua Zhang by Ho Shen-Ting of Taipei, Taiwan. In 1988 he became a student and 5th generation lineage holder under Liu Hsing-Han of Beijing, China. He is presently working on several Ba Gua books and video-tapes.

The Basic Principles of Internal Arts Combat

by Tim Cartmell

The following is an excerpt from Tim Cartmell's excellent book, Effortless Combat Throws. This excerpt contains four of the eight basic principles Tim outlines in the first chapter of the book which form the basis for all of the techniques that are shown in the book.

This section is perhaps the most important in the book. All of the subsequent entries and techniques will refer back to the principles presented here. These principles are the very heart and soul of the Art. It would be best to study this section until you have a good intuitive grasp of the concepts included here before moving on to the Body Use Exercises and the throws themselves. Remember, the principles are what make the throws work.

The concepts covered in this section cover the basic principles of applying the throws on another. Principles of body use are covered in the next chapter.

PRINCIPLE ONE: NON-OPPOSITION OF FORCE

This is perhaps the most basic rule we will follow. The ideal is to never directly oppose the force of the opponent with our own force. In a direct confrontation of power against power, the contender with the greatest strength will invariably win. This is naturally the case between untrained individuals and while it may be martial, it is not martial "art." The practical worth of a technique should be considered in light of its potential universal applicability or lack thereof. If a technique is only useful against the smaller and weaker it should be recognized as such and the individual needs to take honest stock of his or her own potential strength. The techniques included here all fall under the category of potential universal applicability, meaning with the proper set-up, they will work on anyone, regardless of differences in strength. But as stated above, the best technique is useless unless one has the opportunity to apply it, another way of stating the proper set-up must precede the throw. Even if our strength is equal to the opponent's, if we use force against force we will alert him to our intentions of impending attack and the opponent will reflexively pull back and go on the defensive, making the application of a technique all the more difficult. Therefore, we seek to never oppose force with force in order to create the possibility for an effortless throw.

Non-Opposition of Force: Methods

1) Maintain Safe Distance:

There exists a minimum distance between you and your opponent which must be maintained if you hope to avoid the opponent's attack, connect with him and lead him into a throw without effort. I refer to this space as "Safe Distance." If you allow another to stand

within the minimum bounds of Safe Distance, it is physically impossible to prevent him from striking you if he moves quickly and directly. This is true because of the minimum amount of time it takes to process the information of the attack mentally then react to it physically. Reaction to stimuli requires a certain basic minimum interval of time; if the opponent is too close and launches a swift attack, your brain will not be able to respond quickly enough to allow for efficient defensive action. Although training will sharpen reflexes and decrease response time, once you allow the opponent inside Safe Distance his initiating the attack will preclude any hope of defense, even with trained reflexes. Since fast punches thrown in rapid succession will move so quickly the brain will be unable to respond with an effective defense, our defensive strategy should be based on dealing with the very source of the opponent's power, his torso, and not on his hands and feet. While the hand may be quicker than the eye, the torso is not. Safe Distance is the amount of space which forces the opponent to either lean his torso forward (to punch or grab), backward (to kick) or move his whole body forward with a step in order to be able to reach his target (us).

Standing at Safe Distance from our opponent, if he does not move his body (torso), his hands and feet will be unable to reach us. So as long as an opponent stays outside Safe Distance, he may make any manner of aggressive motion, verbal threat or mean faces and we remain completely safe. But as soon as he breaches Safe Distance we must react. After training you will be able to intuitively judge Safe Distance and will automatically adjust your position relative to the opponent in order to maintain it. The great benefit of this ability is that no matter how fast the opponent or skillful the attack, you will always have ample time to respond and gain an advantageous position. This is an example of using time and space to our advantage. The combatant who utilizes time/space as an ally has a decided advantage over the one who does not.

The ability to recognize and maintain Safe Distance alone will enable you to avoid getting "sucker punched" and will afford you the opportunity to deal with an opponent you may be hard pressed to beat once he lands the first unexpected blow. Although it is true one will not always have the option of starting a fight from Safe Distance, and there are other ways of dealing with close range attacks without using force against force, maintaining Safe Distance whenever possible between you and another or others perceived as a potential threat makes time/space your ally and best initial line of defense.

2) Move Off the Line of Attack:

No matter which form a particular attack takes, the main thrust of force moves along a single line. Whether

the attack takes the form of a blow with the hand, a kick, a grab or a rushing tackle, the primary objective in defense is to avoid the entire flow of momentum and not to deal exclusively with the attacking weapon itself (this concept is analogous to the bullfighter avoiding the rush of the bull's entire body rather than trying to block the bull's horn. And just like a bullfighter, we want to avoid the attacker's center of power, his body, not only his fist or foot). As the hand is quicker than the eye, it is futile and dangerous to stand in the opponent's attack line and attempt to ward off individual blows; this type of defensive strategy will inevitably result in the use of force against force, and if the opponent is strong and fast, will most likely also result in your being struck. Whenever possible, we will move off the line of attack (sometimes this is not an option, as when you are pinned against a wall or on the ground), blend with the opponent's momentum, join centers and lead him into a throw.

Since attacking momentum moves at us along a straight line from the attacker's centerline, there are only two directions we should not go, we should neither move directly toward nor directly away from the opponent's centerline as it generates force in our direction. Obviously, if you move straight forward or straight backward along a straight line, you will never be off it. Moving directly forward results in a head on collision which is the most extreme case of force against force. And while moving straight back may allow you to avoid the opponent's initial attack, you are directly in line for the next attack, and the opponent will be able to run forward faster than you could hope to run backward. Therefore, whether moving in early or avoiding the opponent's power until his momentum is spent, we will always seek to move at an angle off the line of attack and will avoid moving either straight forward or directly backward.

3) Intercept Early/Avoid Late:

During an attack, there are two points at which you may apply force without clashing directly with the force of the opponent. The first is when the opponent's intent is committed to an aggressive action but his body has just begun to move. The second is after the opponent has delivered his attack and is at the end of his momentum (his energy is spent). As an example of intercepting early, imagine your adversary has cocked his fist behind himself in preparation for a big roundhouse punch. If you move in immediately, before the punch has a chance to build up any momentum, and press your palm against the opponent's biceps, he will be unable to complete the punch and very likely will be repelled backwards as he pushes himself off of your palm. If your own body is lined up correctly, it will take very little effort to hold the opponent back or repel him in his awkward position. This same principle may be applied to counter-striking, or achieving an advantageous position simply by changing your angle in relation to the opponent just as he begins to punch. It is important to distinguish this type of defensive entry from your attacking the opponent first; in this case, the opponent's intent is committed to

attacking you and he has begun to move (you may, of course, attack the opponent first, but that is a different case).

If you do not have the opportunity to intercept early, in order to avoid clashing with the opponent's power at its peak, you must wait until the attacking momentum reaches its end and begins to slow. With proper timing and positioning, it is possible to join with the opponent at this time and lead him into a throw without resistance. For example, if an opponent steps in to shove your chest with both hands and you move to the side turning your body out of the way, you will avoid his force altogether; as the opponent's push reaches the end of its momentum it will be relatively easy to reach out and grab his hand, as it will be close to stationary at this point. You may choose to follow the opponent's momentum in as he retracts the blow and use that force against him, or you may add a small force in the same general direction of the opponent's attack, pulling him off balance. From here, the opponent may again be led into a throw without struggle.

Attacking force is weakest in the early stage before momentum has a chance to develop and after the momentum is spent. Attempting to connect with or stop a blow between these two points will most likely result in a clash of force against force and should be avoided. Imagine a large and heavy bookcase which tips over and falls to the ground. If we are standing in the path of its fall and are able to reach up and check the tipping bookcase early, just as it begins to fall, we may stop its downward momentum with a very small resistant force. It will be a simple matter to stop the bookcase's momentum before it has a chance to build. Once the bookcase begins to build momentum, our only safe option is to jump out of the way and allow it to fall harmlessly to the ground. In effect, if we are standing beneath a falling bookcase and wish to avoid injury, we must either intercept its momentum early, or avoid its momentum altogether once it is fully in motion. We need to time our movements to those of the opponent, entering and connecting by either intercepting early or avoiding the incoming force until it is spent, thereby leading the opponent into a throw without opposition.

PRINCIPLE TWO:

CONNECT AND JOIN CENTERS

The next step in throwing an opponent without struggle is to connect with him physically and join centers. The purpose of joining centers is to become "one body," so that throwing the opponent becomes as easy as moving your own body or, as in the case of a sacrifice throw, "falling down" yourself. As long as you and the opponent move as two separate entities (have two separate centers) there will inevitably be opposition and struggle. It is very important to follow the opponent's momentum initially and time your movement to it until you can take over the flow and lead the opponent where you will. The vital consideration here is that the opponent is the "leader" at this stage,

you need to follow (actively not passively) his actions until you literally “take over.” Rather than viewing a confrontation as an opponent “attacking” you with whom you must “fight,” it may be more helpful to view the same situation as a partner presenting various opportunities for cooperative action which result in his eventual downfall. Move with single minded focus on the idea that the opponent will go down, and he will do most of the work himself, you are only there to guide him. Also bear in mind that until you have caught the opponent in your own flow of momentum which he is obliged to follow, he is entirely free to change as he wishes. Consequently, we will seek only to follow and make a connection at this stage of the throw.

Connect and Join Centers: Methods

1) Blend the Motions of the Torso:

In Principle One we introduced the concept of coordinating our response to the movement of the opponent’s torso primarily, and to the movement of his limbs secondarily. We literally move our body (torso) when the opponent moves his inside our Safe Distance. In addition to moving off the line of attack at an appropriate angle, we also need to coordinate our body motion to that of the opponent. As we are moving in a more or less linear direction off the line of attack, we also need to rotate our torsos relative to the opponent’s in order to create an overall harmonious flow of momentum around the two bodies. This is necessary because our goal here is to connect with the opponent so we may join centers. The center referred to is the hip and pelvis area, the physical center of the body. This region is the seat of power and by controlling this area, we may control the opponent’s entire body.

You may rotate your body either right or left depending on the direction of the opponent’s incoming force and your position relative to him as he attacks. For example, if the opponent steps in with a right straight punch and you are to his right (outside), you will turn your body to your right as you connect with him outside his right arm. Your torso will rotate to your right as the opponent’s rotates to his left; since you are outside his right arm the motions of your torsos will blend as two sprocket-like gears, the motion of one turning left causes the other to rotate in the opposite direction. Conversely, if you were standing a little to the opponent’s left as he threw a right hook punch at the left side of your head, your torso will rotate to your left as you connect. In this instance both your and the opponent’s torso will be rotating to the left respectively. This causes a blending of motion as if you were one body spinning around a central axis. In both cases there is a harmonious blending of motion as you coordinate the rotational movement of your body to that of your opponent. As stated above, it is very difficult to try and time your movements to the opponent’s hands or feet as they move too quickly to allow for a sufficient and appropriate response. The key to blending with the opponent and making a connection from which to set up a throw lies in coordinating our response

to the movement of the other’s torso. Once you have coordinated your movement and the rotation of your torso with that of the opponent, you have, in effect, joined centers even if you have not yet physically touched the opponent.

2) Connect Where There is No Relative Motion:

Up to this point you have moved off the line of attack and have coordinated the movement of your torso with that of the opponent. Almost simultaneously you need to make an actual physical connection somewhere on the opponent’s body. The ideal place to connect is where there is no relative motion between the part of your body you seek to make the connection with (usually your hand) and the place on the opponent’s body that is “still” in relation to it. We are all familiar with the fact that if driving in a car at the same speed and in the same direction as another car in the lane beside us, we do not perceive the car to be “moving” in relation to ourselves. Even if both vehicles were moving at 100 miles per hour, it would be a simple task to reach out and shake hands with a passenger in the other car as he or she would be sitting still from our point of view. Similarly, if we hope to connect with an opponent without struggle or alerting him to our intentions, the best place to make such a connection is between points of no relative motion. This is made possible because we have already timed the movements of our source of power (our center) to that of our opponent (our cars are already going the same speed, so to speak). Our hands will now automatically also be moving in about the same direction and at approximately the same speed as our opponent’s hands, creating a condition of no relative motion between them. Now we may reach out calmly and connect without struggle.

To emphasize once again, it is most important to remember that connecting smoothly without clashing with the opponent’s force is made possible by coordinating your motion with that of the opponent. The key is to blend the movements of your respective torsos, creating the condition of no relative motion between you. This is completely different from standing your ground and trying to grab incoming punches out of the air. Remember, the hand is quicker than the eye, but the movement of the torso is not.

3) Connect Without Alarming the Opponent:

Once you have coordinated your movement with the opponent’s, joined centers, and have created a condition of no relative motion between your respective bodies, you need to establish some type of connective hold. As stated in the section above, in most cases the hand is used to touch, grab or press some part of the opponent’s body which is more or less “still” relative to it. As there is no relative motion at this point, it is possible to reach out and grasp the opponent here. It is very important to grasp the opponent lightly and without clashing with his force. For example, if you grip the opponent’s wrist forcibly he will immediately react by pulling away and you will have ruined your opportunity to lead him into a throw without struggle. In addition, gripping forcefully will result in tension

in your own body which the opponent may use to his advantage.

Our purpose in connecting physically with the opponent is to use the connection as a place to transfer the momentum of our own centers through to the opponent's center. In order to do this we have to "lead" rather than push or pull the opponent in the general direction he wants to move (the direction he is already going). Moving with the opponent and leading him through a gentle connection into our own flow of momentum will allow us to take control of the situation before the opponent realizes what is happening. Since we lead without offering resistance, the opponent cannot resist.

Sometimes it is necessary to strike the opponent to set up the throw. The above principle still applies. After the strike you must move with the opponent's reaction while making a gentle connection and then lead him into the subsequent throw (for example, it would be uneconomical to kick an opponent in the groin and then attempt to arch him over backwards after he has doubled over from the kick). Bear in mind that after striking the opponent you must move in with a throw which allows you to flow with his reaction to the strike; it is extremely difficult and often dangerous to attempt to throw an opponent by "insisting" on a specific throw. Let the opponent's reactions decide for you which throw is appropriate, then connect with him gently so he is unaware of your intentions and therefore unable to resist.

PRINCIPLE THREE:

APPLY FORCE WHERE THE OPPONENT CANNOT RESIST

Now that you are moving with the opponent having joined centers and made a physical connection, the next stage is to lead without clashing with his force. The way to do this is to apply your force where the opponent cannot resist in preparation for the actual throw. Even though you now have joined centers and are moving with the opponent in the same general direction he was originally moving, if at any time you apply your force inappropriately, (so that the opponent is able to offer resistance), the potential occurs for him to defend and counterattack. Therefore, we want to apply force in such a manner that there is no opportunity for counterattack on the opponent's part. It is at this time that we create the conditions necessary for taking over the opponent's momentum in preparation for the throw. Up until this point we are still "dancing" with the opponent as two entities in the same flow of motion. Here we adjust our positions so the opponent will be incapable of resistance when we actually transfer our momentum into him. We will take the slack out of our connection with the opponent so that there is a "bridge" between us which serves as a direct and solid connection between our respective centers. The net effect will be that the slightest movement of our center will affect the center of the opponent. Now we may transfer momentum and lead the opponent where we will.

Apply Force Where the Opponent Cannot Resist: Methods

1) Lead at the End of the Lever:

The laws of mechanics tell us that the longer the lever arm the easier it is to move a load. Applying this principle to the art of throwing we find that if we are using the opponent's limbs as handles or connections to his center, the further down the limb toward the terminus (hand or foot) that we apply our force the easier it will be to move the opponent. For example, if the opponent throws a straight punch and "locks out" his arm so it becomes like an unbendable iron bar, we will have a much easier time moving it left or right, up or down if we apply our force at the hand or wrist than if we push or pull on his upper arm. The same holds true for the leg. If a sweep is applied at the heel it will be much easier to move the opponent's foot than if the sweep is applied to the back of the thigh. The same principle holds true for the body as a whole. When moving the opponent's whole body as a unit, we can minimize effort by applying force as close as possible to the top of his head.

Even though we will not always be leading the opponent from nor invariably be applying pressure to his wrist, in techniques which involve the opponent's arm or leg as a lever, we will seek to control the terminus (near the hand or foot). When applying force at the end of a limb, we naturally move the entire limb around its proper axis, the shoulder or hip for the arm and leg respectively. Since arms rotate around the axis of the shoulder and legs swing from the axis of the hip, again we are conforming to the principle of avoidance of force against force and natural motion; we literally move the opponent's limbs the way they are naturally designed to go. Leading the opponent in concert with the inherent functional design of his anatomy allows us to position the opponent where we want him without alarming him as to our intent, as his kinesthetic sense does not register any threatening or unnatural pressures (until it is too late for him to resist).

2) Take Out the Slack:

In order to establish a direct connection with the opponent's center in preparation for the throw, it is necessary to take any "slack" out of the opponent's tissue between our point or points of contact and his torso (center). If we want to tow one car with another, the car in front will not influence (begin to pull) the car in the rear until all the slack has been taken out of the rope tied between them. Once all the slack is out of the rope, there is a direct connection between the "centers" of the respective cars and an efficient transference of momentum may take place. The same holds true of our physical connection with another whom we hope to throw. If there is any "play" in the opponent's tissue or limbs between our hold and his center, our force will be dissipated and the opponent will have time to react and counter. Therefore, we will not attempt to actually transfer our own momentum into the opponent or throw until the slack of our connection is taken out and the movement of our center's momentum will immediately have an effect

on that of the opponent. In this case, there is no time lapse or energy loss between our movements and their effect on the opponent, leaving no time (and therefore no chance) to counter or escape.

In illustration, let us imagine that we have a hold on another's wrist and wish to pull our partner to the ground. If our partner's arm is bent (leaving slack in the limb) and we suddenly jerk downward, we may succeed in causing pain in his shoulder or a "whiplash" effect but before the pull has influenced his center, our partner will have reflexively pulled back his arm. If we continue pulling at this point we will certainly be forced to resort to power against power (since we are now pulling in opposite directions). In contrast, if we gently lead our partner's arm from the end of its lever in the direction it wants to go until all the slack between our grip and the opponent's torso is removed (meaning our partner's arm has been gently stretched taut, just like the rope between the two cars in our example above), and we then suddenly apply force downward, our momentum will be transferred to the other immediately and completely and our partner will have no choice but to topple forward. This same principle can be applied in reverse to our own limbs when we want to push the opponent away from us; in this case, the slack is taken out of our limbs by compressing them into the opponent.

3) Make Use of the Opponent's Inherent Structural Weaknesses:

We seek to remain in our strongest state, relaxed and balanced and capable of fluid motion and spontaneous change. In order to use our strengths most efficiently, we need to avoid clashing with the opponent's power. The logical way to avoid using force against force and still achieve the desired result (throwing the opponent to the ground) is to apply our strength in the areas where the opponent is inherently weak. Inherent weaknesses refer to those which are inborn and universal (present regardless of size and strength). For example, because humans only have two legs, pushing or pulling the torso at a more or less perpendicular angle to the baseline (the line which runs between the two feet) will cause imbalance. This holds true regardless of size, weight, or type of stance taken. A few other examples of inherent structural weaknesses are the limits of the range of motion of the joints, the startle reflex, the inherent instability of postural misalignment, reaction time and the time it takes to overcome inertia.

Another example of an often exploited structural weakness which is not so much inherent in the static structure as created during motion involves using the opponent's energy (momentum) against himself. This is often referred to as the famous technique of "borrowing force." Application of this principle involves joining with the opponent's momentum and adding a little more in the same general direction of flow in order to move the opponent off balance. We "borrow" the opponent's force naturally as we move with the opponent, make a connection, join centers and lead him into a throw.

To sum up, we know that in order to throw the

opponent without effort it is necessary to always circumvent his power, avoiding the direct confrontation of force. Therefore, we need to apply our own force where the opponent cannot resist. Once we are familiar with the various inherent structural weaknesses present in us all, we strive to make our own weaknesses unassailable while exploiting those of the opponent to our advantage.

PRINCIPLE FOUR: TRANSFER MOMENTUM THROUGH THE HOLD

Besides applying our force where the opponent cannot resist, we must also be aware of why certain forces are applied. The goal to be achieved more or less dictates the type, intensity and duration of whichever forces are appropriate to any given situation. Since our immediate goal is to break the opponent's posture and throw him to the ground, the manner in which we apply our force will be different than if our goal was to strike the opponent and cause local tissue damage. Of course, applying percussive force at this juncture is fine if we wish to cause pain and damage a certain area, and may potentially end the fight. But if our goal is to throw the opponent (for all the reasons mentioned in the Introduction) a ballistic force applied here will more than likely ruin our chances for an effortless throw. The reason lies in the fact that percussive force will accelerate the opponent away from you and destroy the absence of relative motion you have created, which also means your respective centers will separate. Unless you repeat the process of connecting and joining centers again (which can often be done almost immediately) you will most likely have to resort to brute force to effect a throw (or continue striking the opponent, which again is perfectly acceptable and in some cases the preferred alternative if a throw cannot be "set-up" correctly). Remember, the point here is not if it is better to throw an opponent than strike him down or vice-versa; the important consideration is once you have decided to throw an opponent and have made a connection and joined centers, percussive force should be avoided during the throw.

Once we have joined centers with the opponent and have established a hold, we want to transfer the momentum of our mass through the hold into the opponent's center, creating a reciprocal reaction in his body. In the above paragraph I have alluded to the fact that this transference of momentum is somehow different than a percussive strike. The key to a smooth transference of momentum from your body to his is to continue moving into the opponent at a natural rate of acceleration (as determined by your position and direction relative to gravity). Since you and the opponent have joined centers, you must apply your force in such a manner that he becomes an "appendage," with his center subordinate to yours. The transfer of force is smooth and unbroken. This gives the opponent no choice but to follow until his balance is broken and he falls. If you have succeeded in merging with the opponent and joining centers, and

understand how to make use of inherent structural weaknesses (applying power where the opponent cannot resist), transferring momentum into him will be as effortless as transferring momentum from your center into your own arm; all you need to do is align your skeletal structure, relax completely and move your body.

Transfer Momentum Through the Hold: Methods

1) Match Rhythm:

Before we can actually transfer our momentum into the opponent without knocking him away or giving him a chance to escape, we must first match the rhythm of our overall body motion with that of the opponent's. Since our goal is to cause our own centers to become the center of rotation around which the opponent revolves, we will often be moving more slowly than him in real time in order to maintain the overall rhythm and absence of relative motion between our two centers. For example, person A and person B are standing on a large rotating disc (like a phonograph record) with person A close to the center of the disc facing outward and person B standing at the outside edge of the disc facing in toward the center. As the disc rotates, person B will be moving through space much faster than person A, but if they are looking at it each other it will appear to themselves as if they are standing still relative to one another (it will appear to person A as if person B is standing still and the background is spinning and vice-versa). There is an overall, smooth rhythm to the rotation, and although A and B are moving at different speeds there is at the same time no relative motion between them.

As much as possible we seek to move our own bodies as relaxed as possible, allowing our frame to compress and spring and our limbs to swing at the speed of gravity (see Chapter Two: Body Use). Once connected to the opponent, the angle and direction from which we apply force will allow us to maintain our own relaxed rhythm while "imposing" it on the opponent's body. At this stage of the throw it is crucial to continue following the opponent as your respective momentums flow into one overall rhythm. Then you may "entice" him to follow you, subordinate to the momentum of your center. The important point to remember here is that flowing with and matching the rhythm of the opponent does not necessarily mean your centers are moving (rotating) at the same speed through space.

2) Move the Opponent as Part of You:

We have connected with the opponent, joined centers, matched our motion to flow in one rhythm and are applying force where he cannot resist. The opponent has no choice but to follow our lead. We now need to shift our focus from following the opponent to leading with complete command. The opponent has become an "appendage" of your body and just like your own arm or leg his motion is subordinate to the motion of your center. From this point on it should be as easy to break the opponent's balance and throw him as it is to swing your own arm or leg about or

fall down yourself (in the case of sacrifice throws). The subsequent principles involving breaking the opponent's balance and causing him to fall are to help insure he has no avenue of escape or chance for counter and that you always maintain balance in case you need to follow up, escape, or deal with another attacker.

With practice you will come to "feel" when the opponent has become reliant upon you for balance and subordinate to your motion. At this point (and it will come a split second after initial contact with proficiency on your part) you must dominate the opponent's motion and breaking his balance, lead him into a throw. The longer you wait to break the opponent's balance and throw after he is caught up in your flow of momentum, the more chance he has of counter or escape. It is important to remember that our sole purpose in following the opponent and blending with him is to lead him into our own flow of momentum so we may take over and throw him where we will.

3) Lead From a "Safe Angle":

A final consideration as we transfer our momentum into the opponent is that we should always position ourselves at "safe angles" relative to him. Safe angles refer to positions from which the opponent has a difficult time counter-attacking as well as affording a safe avenue of "escape" for you if something should go wrong with the technique. For example, you want to unbalance the opponent by pulling him forward, so you step back and pull him straight toward yourself. The opponent loses his balance, but he pitches forward unexpectedly and crashes into you knocking you down and landing on top of you. You may have followed all of the above principles of joining centers and matching rhythm while leading the opponent into your flow of momentum. The problem in this example is that you were not at a "safe angle" relative to him as you broke his balance. A safer alternative may have been to do exactly what you did in the example above but step to the side simultaneously. In this case, if the opponent lunges forward he will sail past you and fall, leaving you upright and balanced.

When transferring momentum into the opponent in preparation for breaking his balance, take into consideration potential ways he may be able to counter as well as the direction of his momentum. Leading the opponent in such a way that his momentum is directed toward your center is the same as putting yourself back on the line of attack. When leading the opponent by one arm it is especially important to be aware of possible counter-attack from his free hand. Transfer your momentum through the hold or connection you have with the opponent with a smooth acceleration, neither so quickly that he is propelled away from you causing you to lose control of his center nor so slowly that he is allowed to regain his balance.

Effortless Combat Throws is available from High View Publications for \$19.95. Call 800-413-8296

Pa Kua Chang Related Periodicals

Qi: The Journal of Traditional Eastern Health and Fitness: Insight Graphics, Inc., P.O. Box 221343, Chantilly, VA 22022 - Steve Rhodes and his crew at Insight Graphics continue to provide readers with interesting information relating to all aspects of Traditional Eastern health and fitness. The magazine is produced in a very high quality format.

Journal of Asian Martial Arts: 821 West 24th Street, Erie, PA 16502 - This is a high quality publication which provides well researched articles in a scholarly fashion.

The Journal of the Chen Style Taijiquan Research Association of Hawaii: Published Quarterly by Great Publishing Company, 761 Isenberg St. #A, Honolulu, HI 96826-4541

1996 Calendar of Pa Kua Chang Workshops and Seminars

<u>Instructor</u>	<u>Location</u>	<u>Date</u>	<u>Contact for Information</u>
Liang Qiang Ya	San Francisco, CA	28-29 Sept	George Xu (415) 664-4578
Park Bok Nam	Switzerland	4-6 October	Alex Tabarin 41-22-733-5456
C.H. Chen	Brookfield, CT	19 October	Deborah Chen (203) 775-5829
John Bracy	Houston, TX	25-27 October	Alex Hay (713) 680-3033
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