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Penetrating the
Reality of

AIKIDO

A Rational Approach
to a Mystical Art

Zen & the Art of Mercy

Conquering
Without Killing

Shogun

Epilogue for a
Samurai
Spectacular

Close-Up:

Robert Clouse

Hollywood's Premier Martial
Arts Director Speaks Out on
Bruce Lee & Jackie Chan

Comparative Systems

Five Masters Compare
Defenses Against Advanced Attacks



PENETRATING THE REALITY OF AIKIDO

A Rational Approach to a Mystical Art

By Sandra Segal

Harvard graduate Dan Furuya teaches aikido according to the universal laws of science. Since the human body is subject to natural laws, all of its movements can be explained in terms of kinesiology, physiology and physics. By propagating his art in this universal language, Furuya demolishes the mystical barriers normally associated with aikido. It becomes at once a rational method for the masses.

Can aikido teach you to harmonize with the essence of the universal, control mystical, seemingly magical powers, and lead an opponent to destruction not by force but by blending with his ki?

"No," counters Harvard graduate Dan Furuya, the director and chief instructor of the Hollywood Aikido Club, and one of the leading exponents of aikido in America today. Although many masters of aikido use these and similar phrases to describe their art, Furuya insists that this tends to distort aikido's true nature. In a significant departure from traditional practices, he claims that aikido is a realistic art that can be taught—and learned—through rational analysis.

"Rather than teach aikido from an esoteric viewpoint," Furuya says, "I wanted to teach it in the language of science. Since the human body is subject to natural laws, all of its movements can be explained in terms of kinesiology, physiology, and physics. Science is a universal language, and by teaching aikido in those terms, there will be no barriers to learning the art."

Furuya reached these conclusions through his twenty years of searching for aikido's underlying principles. "I began studying aikido when I was 12," Furuya recalls. "I studied with a variety of masters who taught aikido in the traditional way. You never asked any questions. You

watched and watched, and then you trained and trained.

"Then in 1969, I went to Japan for three months of intensive training under the head master Kisshomaru Uyeshiba, son of the founder of aikido, Morihei Uyeshiba. Here I still watched and asked no questions. But to watch a master is to be inspired, and I found it easy to learn. When I returned to the United States, I needed another way to ensure I could continue training correctly."

Even though Furuya had been authorized to open a school on his return, he still didn't feel qualified to teach. "I knew the techniques, I knew what to do, but I couldn't see one line going through all of the techniques," he says. "Finally, I took a piece of paper and a pencil, and I sketched out a basic technique. I asked myself, 'Why does it work? What are the dynamics of the technique which make it effective?' I stared at that paper for three frustrating days, and finally I realized that my research had to follow a new direction."

After this realization, Furuya set out on a course of intense personal study of anatomy, physiology, kinesiology, and psychology, as well as religion and philosophy, relating everything he learned to aikido. It was the study of kinesiology which gave Furuya a rational way to understand aikido. Kinesiology is the scientific study of human movement. It provides an integrated understanding of how the principles of physics and the laws of motion operate in the human body. By analyzing the body's movements, a kinesiologist can find out what is actually happening when an athlete runs, jumps, catches a ball, etc.

Furuya's breakthrough came when he applied a kinesiological analysis to aikido movements. He explains, "In kinesiology, an effective movement is one in which the body acts as an integrated unit, and does the maximum amount of work with the minimum amount of effort. By clarifying the basic principles of aikido movements, we can see what makes a technique effective."

If the student or teacher does not have this understanding, he will be unable to pinpoint the reasons a technique is not working. "In training, your teacher may correct your mistakes by saying, 'Put your right foot here, straighten your posture, raise your right arm, lower your elbow.' But these

just correct the *symptoms* of the problems, not the *causes* of them," Furuya explains. "It's like a doctor learning the symptoms for a disease, and not the disease's source."

To help his students understand the structure of each technique they study, Furuya shows them the physical principles which make the technique work. For example, he explains the first few movements of *tanto tori yokomenuchi kote gaeshi*, a knife striking attack to the side of the neck, in these terms. "In this technique, as the knife is coming down toward your neck, you must step in to block the arm with a circular movement of your hand," Furuya says. "You must catch the opponent's arm exactly at the right point near the elbow. If you catch his arm too close to his shoulder, you meet too much resistance from his body mass. If you catch it too close to the wrist, you are in danger of being cut by his knife."

"Beginners often do not have the proper timing necessary to catch the attacker's arm at the right point above the elbow. When the student does catch the attack, his body is stretched out, and he is in a vulnerable position."

"A kinesiological analysis of his movement may show that the student is moving ineffectively, rather than too slowly. In a common instance, the student will lift his lead foot first when he begins his forward motion. All of his weight then shifts to his rear foot. This will decrease the length of his stride and slow the movement of his body. I tell my students to move like a track runner, pushing off with their back foot. This projects their body forward with more speed, power, and efficiency of movement."

"Many aikido teachers consider this point insignificant, but when the knife is coming toward your head, every split second counts. Using your body effectively may be necessary for survival. Knowing how to move correctly is the foundation of proper technique in aikido."

Furuya's analysis of motion and body mass can make apparently weak techniques more powerful. *Kokyunage*, for example, is a simple technique, but one which is difficult to do correctly because of its subtle nature. "When you practice it incorrectly, you see it doesn't work," Furuya explains. "You turn and throw someone, and he won't go down. Your teacher may say, 'This is just for practice in breakfalling.' But if you understand the exercise, you see that to make it work, you must first break the balance of your opponent. This is done by first bringing him downward, and then providing the forward movement for a fall. That is the definition of a fall in this instance, a downward and forward movement which brings his center of gravity outside his base area."

"By understanding the two forces involved, you can do the technique so it will work. Then, instead of just hoping the opponent will take a fall, you will know his balance is broken and he *must* fall when the technique is done correctly."

Furuya demonstrated the technique,

"Knowledge must be translated into action."

Wang Yang-Ming, Chinese philosopher



emphasizing a downward pull of the opponent's arm. A slight forward movement of his hip quickly brought the opponent down.

To complement a kinesiological analysis of the body's movements, Furuya also applies physiological principles. For example, he will use his knowledge about the body's nervous system to explain how

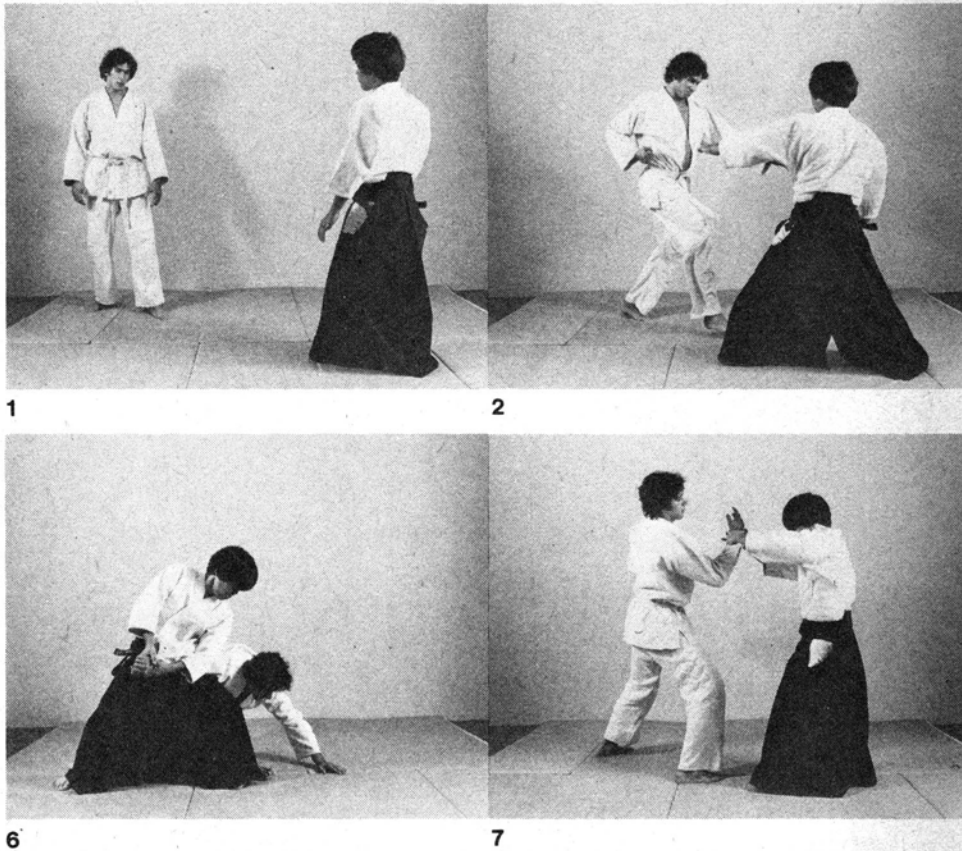
a simple downward push on the opponent's arm can be a highly effective technique for a takedown. "If I hold someone's arm and begin pushing down on it, my opponent senses how much power to use to resist me. He gets feedback from the nerves in the muscles which lead to the brain. But if I touch down, that is, if I begin a quick downward movement the

moment I touch my opponent's arm, there is not enough time for the message to get his brain to resist. The arm will automatically go down. This principle has a wide application in many of the aikido joint techniques."

Furuya's teaching methods are especially useful in correcting a student's errors. He says, "A teacher may see that a student's

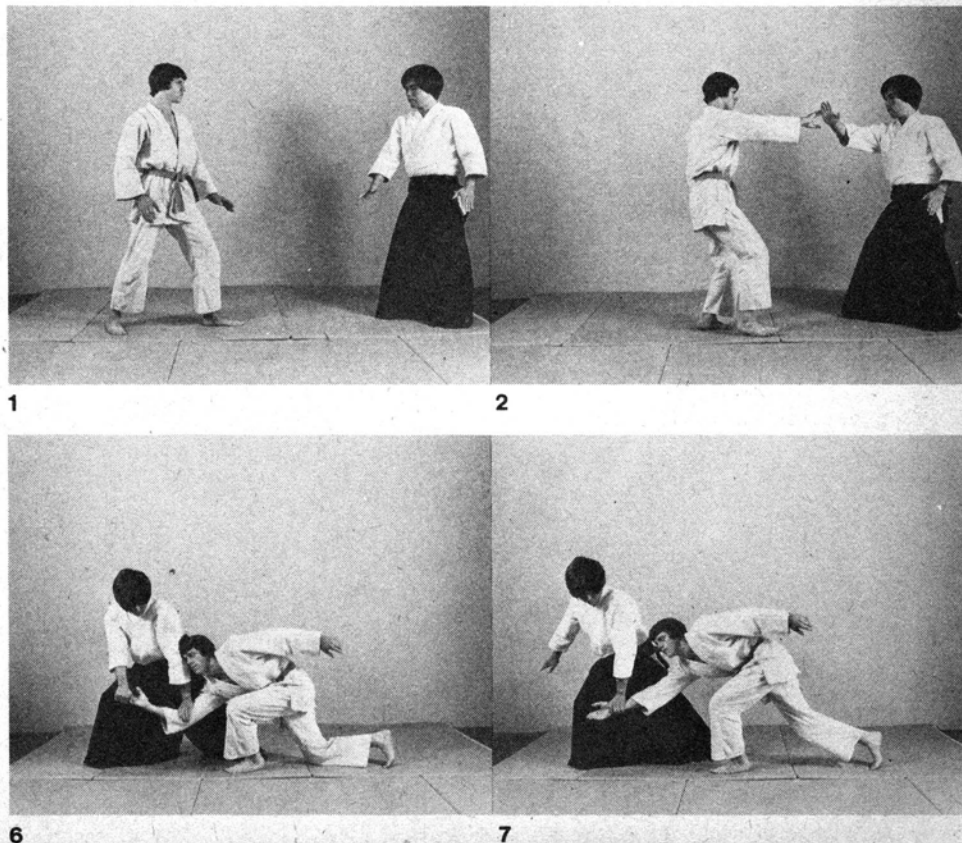
Munetsuki Kotegaeshi

1. Dan Furuya squares off with his opponent.
2. As the opponent delivers a blow, Furuya sidesteps to evade it.
3. As he turns to move in as close as possible, he catches the opponent's elbow.
4. Furuya slides his right hand down the opponent's wrist, dropping his arm and breaking his balance at the shoulder.
5. Furuya pulls up the opponent's arm, locking it. This immobilizes the opponent's body and forces his weight onto his left arm.
6. As the opponent tries to force his body up against the lock, Furuya leads the opponent's hand down in a circle.
7. Pivoting around, Furuya uses his body weight to create torque against his opponent's wrist.
8. Continuing the pivot, he upsets his opponent's balance.
9. Furuya completes the turn, focusing his power in his hips. This energy is transferred into the opponent's wrist, lifting his body off the ground.
10. With the power of the technique fully released at the final moment, the opponent is thrown to the ground.



Katatetori Kotegaeshi

1. Furuya squares off with his opponent.
2. As the opponent grabs, Furuya moves his hand directly toward the opponent's face.
3. The hand movement toward the face begins to upset the opponent's balance, and exposes his side to Furuya's punch.
4. As he strikes, he steps in . . .
5. And pivots around, drawing the opponent's arm down as he turns.
6. When he completes the rotation of his hips, the opponent is again off balance.
7. Furuya shifts his body weight to his outside foot, drawing the opponent further off balance.
8. As the opponent tries to regain his balance, Furuya follows his movement, keeping the opponent's arm outstretched.
9. As he turns his hips, Furuya applies torque against the opponent's wrist.
10. By completing the hip rotation, Furuya throws his opponent.

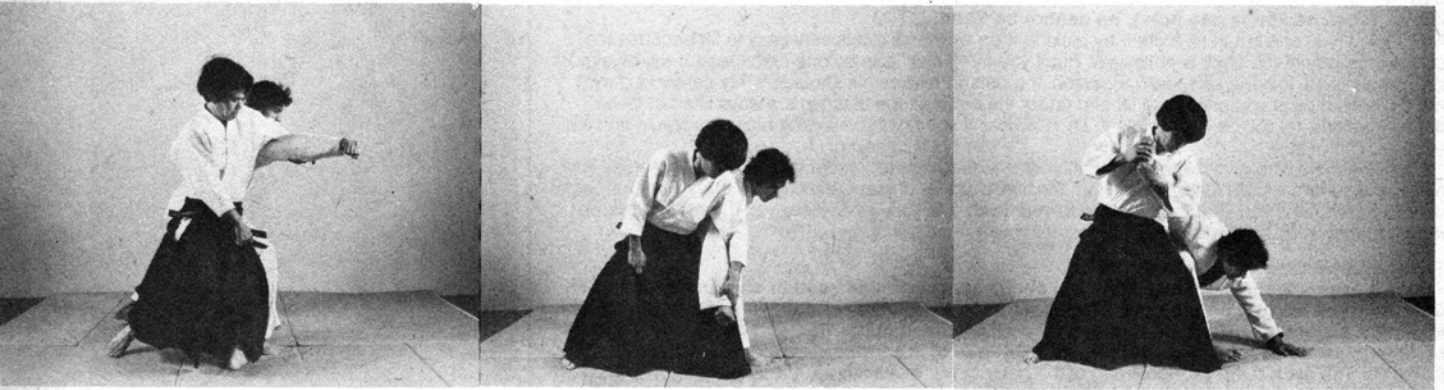


hip is weak, and say, 'Put strength in your hip.' The student can't do it, not because his hip is weak, but because the hip is not supported by the back leg. If he understands the basic principles of body movement, the teacher can say, 'Straighten your back leg to support the hip.' Or a teacher may say, 'Your shoulder is too weak. Strengthen the shoulder.' Well, the

shoulder may be too weak because the body's center of mass is too high, and this draws the heel of the rear foot up. The teacher should say, 'Bring the back heel down.' This will center the student's balance in his hips, which strengthens the position of the shoulder."

Since this rational approach to aikido is highly innovative—and thus controversial—

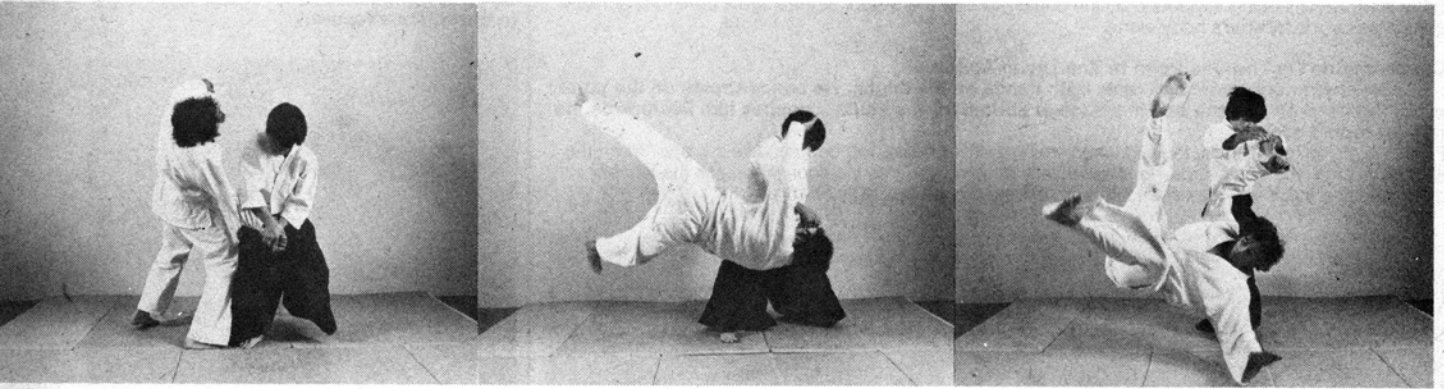
Furuya knows there will be criticisms aimed at his methods. "People will say, 'Why go through this, to break down the aikido movements? By becoming too analytical, don't you lose the flavor of aikido?' This is not true. Rather, we enhance the understanding of aikido, bringing the art to a higher level and intensifying the training experience. As the



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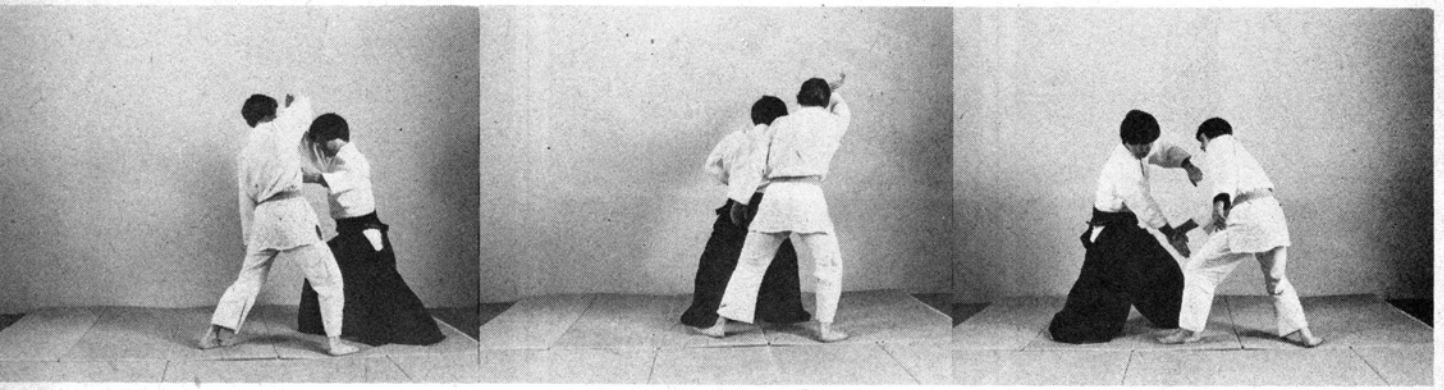
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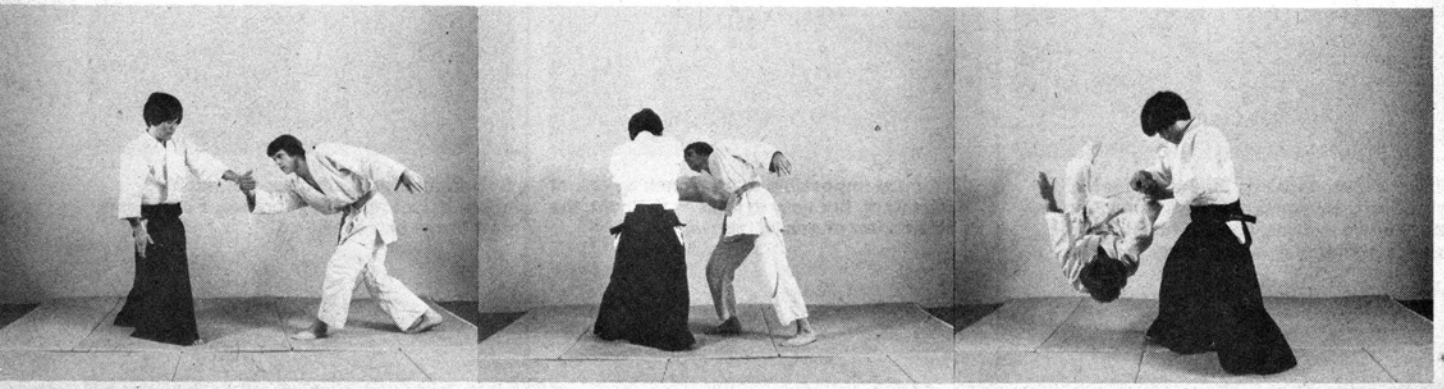
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DEMYSTIFYING KI

Uncovering The Source Of The Force

Furuya claims that all of the so-called mystical properties of ki are attributable to ordinary physical forces, and explainable by the laws of body movement. Using this rational viewpoint, he demystifies some of the classic demonstrations of ki power.

The Immovable Body

In this demonstration, the teacher concentrates on keeping one point and making himself heavy. When he keeps one point, he cannot be lifted.

FURUYA: If you attempt to lift a chair by picking it up by the seat, it is very easy to lift because the center of gravity of the chair is at its seat. But if you try to pick it up by one of the legs, it will be almost impossible to lift. It is the same with a person. If a person relaxes his shoulders, his center of gravity will be in his hips. If you attempt to lift him under the arms, as the teacher is always lifted in these demonstrations, he will be impossible to lift. However, if you lifted him by the hips, you would find he was not "immovable."

Many teachers who give this demonstration also extend one leg under the person lifting them. This puts the teacher's weight further away from the lifter's center of mass, making the body even harder to lift. You know that if you lift a weight close to your body it is fairly easy. However, if you lift the same weight further away from your body, it becomes much more difficult.

The Human Bridge

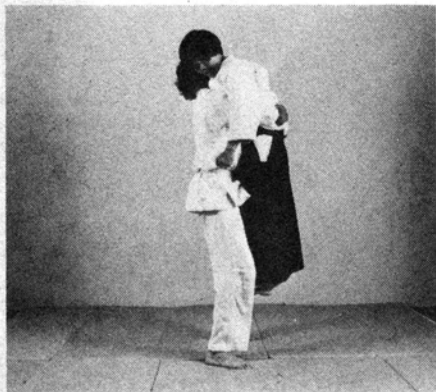
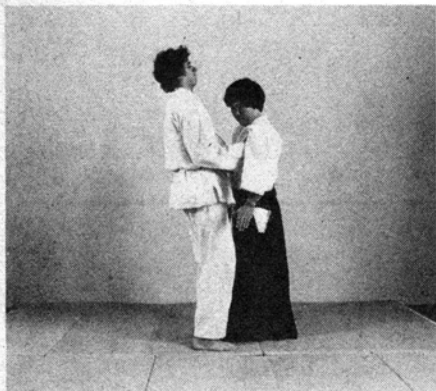
In this exercise, the teacher places two chairs apart, with his head or shoulders resting on one chair and his feet on the other. The teacher concentrates on ki flowing through his body, making it a steel rod. Three people can then sit on the unsupported part of his body. He will be able to easily support them so long as he thinks of the rod.

FURUYA: The back is the strongest part of the body. If you make it rigid, it is very strong. The two points of support also strengthen the body, just as a board resting on two saw horses can hold up a great deal of weight when the weight is placed near the supports. The people sitting at the ends of the body are basically being supported by the chairs, so only the weight of the middle person is actually supported by the teacher's body alone.

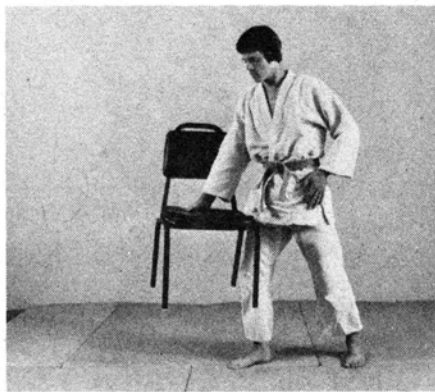
Concentrating On The One Point In The Lower Abdomen

The teacher kneels erect and rests both hands on his thighs. He concentrates on the point in his forehead and on the one in his lower abdomen. If a student pushes him backwards, he will not topple over.

FURUYA: If you lean slightly forward when you are sitting down, you become like a brace. When the student pushes you backwards, he is essentially pushing you into the floor. If you ask the teacher demonstrating this if you may push him from behind, he will probably say no.



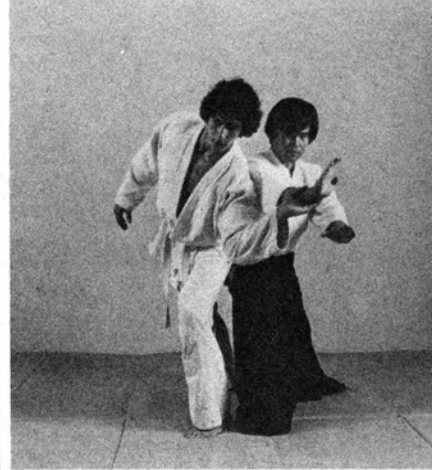
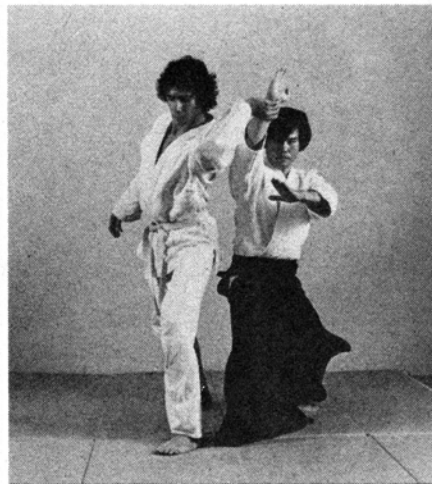
When the student lifts Furuya under his shoulders, he appears to be immovable (top). But Furuya is easily lifted at his hips, the body's center of gravity (above).



It is almost impossible to lift a chair by one of its legs (top), but easy to lift it by the seat, the chair's center of gravity (above).



In this technique, Furuya's body mass is too far away from the opponent's center of mass to throw him effectively.



By bringing his body mass behind his opponent and pushing forward, Furuya can now throw him easily.

"People will say, 'By becoming too analytical don't you lose the flavor of aikido?' This is not true. Rather, we bring the art to a higher level by intensifying the training."

student begins to understand the basic principles of each technique, he can see the relationship between all techniques. For example, a child can memorize two plus two equals four, but his understanding is increased if he knows *why*. Understanding principles instead of memorizing isolated circumstances helps the student's growth and gives him a clearer understanding.

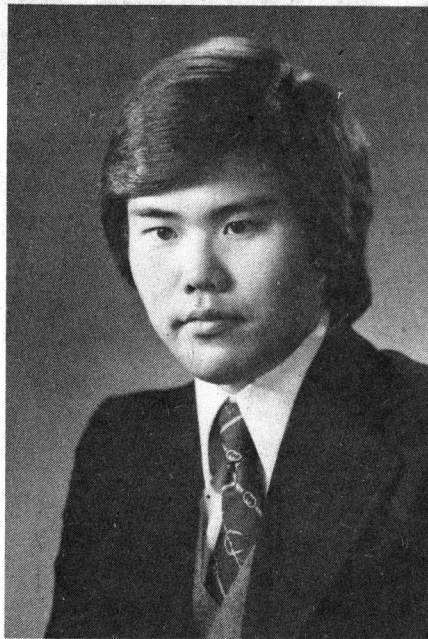
To make it clear that he is merely refining and developing traditional methods, and not offering an alternative training routine, Furuya has his students train even more rigorously than is usual in an American aikido school. "My students do not train at a slow and static rate, but at a very fast pace which requires more energy and effort," he says. "The attack is more realistic, direct, and strong, so that the student must be on his toes and make every movement count. People believe that aikido is easy for old men, children, and women. That is not true. Aikido is rigorous. It hurts."

Furuya began testing his new approach when he opened the Hollywood Aikido Club in 1975. "In the process of teaching, I tested and revised my methods," he says. "I went very slowly, very painstakingly, making sure that things made sense both to myself and to my students."

The results have been extremely good, according to Furuya. "The rate of learning by using this method has doubled, and the students retain what they learn. I had one student that trained for four months, and then left for ten years. When he came back, he didn't have the conditioning, but he still knew the techniques because he knew the basics of making the art work."

Furuya uses his rational approach even in teaching his students about ki, considered the mystical center of aikido. He says, "When you talk of universal ki, and extending this mystic power, you're taking something basically natural and good, and exaggerating it to the point of distortion. There's nothing mystical about ki. I like to explain it to my students taking out the mystery."

When most teachers of aikido talk of harmonizing ki with the opponent to lead him off balance, Furuya explains how to guide the body weight of opponents off their base area. "When a person's mass is off center, he will go down," he says. "It is very natural." And when other teachers discuss how to extend ki to make yourself immovable, Furuya explains the physical



principles behind the phenomenon (see sidebar). "For example, you stand with your arms in front of you and the opponent pushes you. You hear, 'Keep one point and extend ki towards the opponent, and you will be immovable,'" Furuya explains. "But if your rear leg is straight, in a line with your torso, it makes your body like a brace. Imagine the back of a chair pressed at an angle against a door to keep it shut, or a pole slanted against a wall to support it. By straightening your leg you make your body one diagonal line like the pole, and you can resist the push without using any force of your own. The power of this stance is not isolated in the arms alone, but is generated by the dynamics of balance and support in your entire body."

Furuya does believe that ki is the essence of aikido and a vital part of a person's life. However, his explanation of its nature is unique. "Scientific training is for understanding the world with clarity; spiritual training, developing ki, is the same thing, another way of understanding the real world with clarity," he says.

"I ask my students, 'If a punch is coming, do you see the punch, or do you see your image of it? Do you see the punch, or do you see your own fear? Do you say, 'I'm going to be hurt, I'm going to be humiliated, I'm too weak'? We all tend to react to our image and coloration of an event, not to the event itself."

Furuya impresses this point on his students with a vivid demonstration. "I give my student a plastic baseball bat or a stick and tell him to bring it down on my head as fast and as hard as possible. When he begins to strike, I step out of the way with an aikido entering technique. Then I tell my student, 'I'm going to strike you. To avoid the strike, simply step out of the way.' Without fail, the student is unable to step away. He'll say, 'I'm too slow.' or 'You hit too fast,' or 'I didn't see the move, show me again.' These students see the threat, not the actual movement of the attack."

The student must learn to discard his fears, hopes, and images of the past and future in order to see things as they are. According to Furuya, one of the pathways to attaining this clarity is to become more open and sensitive to the world. "If you like something, you have an affinity with it, and you become more aware of it," Furuya says. "As you become more intimate with something, you remove all of your barriers. Your compassion and affinity give you great awareness and clarity. In aikido, you face your opponent with compassion so that you will be open to the reality of the situation, and see him and his movements with absolute clarity. In that absolute clarity, the aikido technique is evolved."

The process of becoming open to reality, which also means having great involvement, sensitivity, and compassion towards the world, requires an extreme amount of mental energy. In Furuya's theory, this energy and this mental state of total involvement is what is truly meant by ki.

"Ki isn't a cosmic force you use to zap someone like in *Star Wars*," Furuya adds. "It's very simple and everyday. We say in Japan that your mind should be like a bright mirror or calm water, which reflects exactly what is there. The Japanese word is *mushin*, which means 'no-mindedness.' This is the goal in Zen and in the martial arts."

Furuya believes that the attempt to objectify ki into a force which can be sent here or there detracts from an understanding of its true nature. "It is like water flowing out of a hose. You can't concentrate and force more water to come out of the hose, but you can take out the kinks and knots. In the same way, by attempting to achieve clarity, you put yourself in a condition where more ki will flow out of you."

It is apparent that the clarity and openness toward reality which Furuya considers so vital illuminates all of his techniques to his remarkably unambiguous explanation of ki, that state of simplicity which is so difficult to attain. By using the rational, unmythical approach, Furuya hopes to give his students the direction they need to benefit most rapidly from the study of aikido. He explains, "If you are following a road you never have been on before, and you are confident you know the directions, you can walk without hesitation. If you are not confident of the way, you must go slowly. In olden times, a student who entered a martial arts school would have the rest of his life to devote to the art. Now everything is 'high tech' and 'instant ramen,' and we have to find a way to make the art as clear as possible to the student in the limited time available for instruction.

"But we must always remember that a rational analysis of aikido is only a way to enhance training, and must never be thought of as an alternative to training. If there is training without analysis, the art becomes coarse; if there is analysis without training, the art becomes ineffective." 