

Midori Yama Budokai: *Hanshi's Corner*
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Ichigo, ichi e: One life, one meeting

Tsukuri-Kuzushi/Kake

For the physics minded: *Tsukuri-Kuzushi* and *kake* may be thought of in terms of centripetal (*kyushinryoku*) and centrifugal (*enshinryoku*) forces. *Tsukuri-Kuzushi* draws the opponent in, therefore using centripetal force [centrum + petere; center + tend towards, aim at]. *Tsukuri*, or "fitting-in," begins at the outside of the sphere. *Uke* is drawn towards *tori's* one point (*seika no itten*) to *kuzushi*. *Kake* hurls the opponent away, using centrifugal force [centre + fugere; center + to flee]. This would move *uke* from *tori's* one point toward the "third leg," or void (*ku*); that is, *kake*. *Tori* and *uke* would make contact at the outer circumference of the circle, moving toward the center. When the two make contact, *uke* is spun away from *tori*. A centripetal force is that by which bodies are drawn or impelled (*tsukuri*), or in any way tend, towards a point as to a center (*kuzushi*). A real or "reactive" centrifugal force occurs in reaction to centripetal acceleration acting on a mass (*kake*). This centrifugal force is equal in magnitude to the centripetal force, directed away from the center of rotation, and is exerted by the rotating object upon the object, which imposes the centripetal acceleration in accordance with Newton's Third Law of Motion. *Taiyoku* is a spherical symbol of Chinese derivation, representing completeness and integrative balance. This is movement indicative of *judo's* sister art, *aikido*. However, Mifune Kyusho, *Shihan* used this symbol in his teachings.

The theory reinforces some of the ideas in *In Search of Nine* and the general principle of *Aikido* in using *tori's* motion as an aid to your own motion. Thinking about the action/reaction of *tori* and *uke*, Wilson *Kanchō* wrote that you can't reach level 9 because you will probably not have an *uke* that performs at a level 9 [actually, he wrote that any person could not perform at that level]. There are other forces that could affect *tsukuri* which in turn will affect *kuzushi*. If *tori* loses his or her balance, how does this affect the whole scenario? If you are fighting against a wall, would this change *ku*? Also, if there is a significant difference in the mass of the *tori* and *uke*, and what effect does this have on *kake*?

First, the theory is based on perfect *tsukuri*, perfect *kuzushi* and perfect *kake*. As perfection does not exist in this dimension, there is always the chance of chaos. Even with near perfection, there is no predicting with certainty what *uke* will do, so there is always chance involved. Incidentally, though not as noticeable, the theory works with martial arts other than *Aikido*. Your *hanshi meiyo kyoju* actually had *Judo* in mind, but the theory also will work for *Karate*. With *Karate*, the opponent is outside your sphere. You must lure him or her inside your sphere (correct range, or *ma-ai*) to attack (or defend). The *uke* will be forced outside your sphere of action when you make a defense or attack (or defense/attack).

Loss of balance depends on a number of variables: Did *tori* deliberately lose his/her balance (*sutemi waza*, or sacrifice techniques); can *tori* quickly regain balance (recover); will *uke* be able to capitalize on *tori's* mistake.

The throw, to paraphrase Wilson *Kanchō*, would be as though throwing *uke* through the wall. In actuality, the wall would become a weapon, but s/he would still be falling into the void -- that is his or her level of imbalance.

I could resort to cliché and state that "the bigger they are, the harder they fall," but regardless of what anyone tells you, size does enter into the equation. To a great extent, it would depend on *uke*'s momentum/velocity. If a large person is moving fast, it will be harder for them to recover. Theoretically, it will be easier for you to use that movement to facilitate the technique. It will also depend on the technique you are using. If you weigh 120 pounds with an opponent of 300+ pounds, hip throws are not a good choice. However, foot sweeps would be an excellent choice. If the opponent is moving slowly, or not at all, the theory is invalid, as *tsukuri-kuzushi/kake* presupposes movement. If there is no movement on the part of *uke* (or very little), then *tori* is going to have to be larger or stronger (or at least as strong) to -- literally -- make the technique work. While the *tori* may be too small to "make" the *uke* move, the *tori* could elicit movement from the *uke* with the use of *handō no kuzushi* or reactive off-balancing. This means *tori* causes movement by the use of applying pressure or technique in one direction, and uses *uke*'s reaction to move him or her in the opposite direction.

In reference to the percussive arts (*karate*, *kempō*, taekwondo, etc), the principle still applies. The "cover," or "preparatory movement," is referred to as *tsukuri* – that is, fitting in. As the arms are drawn across the body, one is "winding up," or using centripetal force (*kyushinryoku*) to store power in the *seika tanden* (*shita hara*). In addition, the "cover," is actually the blocking/parrying motion, which draws *uke* toward you. As the technique is performed, centrifugal force (*enshinryoku*) extends the force outward. Done correctly, this has the same effect as cracking a whip. The whip is pulled inward toward your center (centripetal), then snapped outward (centrifugal) for the impact. This type of power is most prevalent in Okinawan *karate*, *kempō* and *jujutsu atemi*.

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From: *An Encyclopedia of Judo (Jujutsu)* by Ron Rogers

- 1.1 **Tairyoku** or body power. This involves *jukuren* or skill as opposed to *wanryoku* or brute strength.
 - 1.1.1 **Ryoku**, *chikara* or *riki*; i.e. strength. Again, this is *jukuren* as opposed to *wanryoku*. This is the ability to be strong (*tsuyoi*) or move strongly (*tsuyoku*). With the advent of an European champion (Antonius Johannes Geesink) came the idea of *shin shin no chikara* or a new way of thinking about the **proper** place for strength in *judo*.
 - 1.1.2 **Hayai** or speed. Included in this (as well as in *ryoku*) is the idea of *ikioi* or impetus. This impels a stationary body **to** movement, and is followed by momentum or *hazumi*, which **keeps** the body moving. The first (*ikioi*) is begun by the **proper** use of strength. The second (*hazumi*) involves skill (*jukuren*) to **continue** the impetus (*ikioi*) through the proper use of movement (*undo*).
 - 1.1.3 **Danryoku** or flexibility. A synonym would be *jujin*. Flexibility is achieved through (*junan*) *taisō* or calisthenics. *Taisō*, or *junan taisō*, is comprised of:
 - *Junbi undo* or warming up exercises.
 - *Shumatsu undo* or cooling off exercises.
 - *Hojo undo* or supplemental exercises. These are usually done with equipment. Further development would be from *randori* or free play.

Randori was originally known as *ran o toru*. An excellent means to develop flexibility are the *kata*.

1.1.4 ***Kakari*** or endurance. This primarily developed through *keiko* or training.

1.1.5 ***Jishin*** or confidence. As stated, this is not to be confused with conceit! *Jishin* is based on the principles of *senjutsu* or strategy. *Tori* always begins with *zenshin* or preparation with intense concentration. *Tori* continues with *tsushin* or the same state of mental concentration throughout and ends with *zanshin* or alertness. Such mental attitudes are obtained through the principles of:

- *Shin* or winning before the opponent can attack. This is constantly offensive.
- *Gyo* or winning by counter-attacks. This is defensive, waiting for the opponent to make a mistake.
- *So* or adapting one's attitude to that of the opponent. This uses the offensive to counter the defensive with technique or uses the defensive so the soft counters the hard. *So* is a combination of *shin* and *gyo*. By these means, *kiitsu* or unity (of the mind and soul with body) is achieved.

***Junbi Undo* or “Warm-up Exercises”**

When warming up, there are basically two methods. The first is Isotonic, or dynamic. In general, this refers to any type of movement such as “jumping jacks,” push-ups, toe-touches and stretching. However, these should never be done ballistically (bouncing), as this may overstretch the muscle and cause damage. This is because the human body has an automatic protection system. The nervous system attempts to stop this type of movement when the muscle is stimulated (stretched). This reaction is larger, the more suddenly the movement is made. The second type of warm-up is Isometric, or static. In this method, one contracts the muscles and holds them; there is no movement when the position is attained. Generally, it takes a minimum of fifteen minutes for the blood to circulate smoothly throughout the body and for the heart rate to function well at work out level. Isotonic exercise moves the muscles and helps better blood circulation. Isometric exercise contracts the muscles without movement; consequently, the blood does not circulate as freely. Regardless of the exercise, they should ultimately cause both joints and muscles to become supple. This is why Isotonic exercises should always follow Isometric. Energy used in Isotonic exercises are supplied by existing resources already in the muscles. A few seconds will tire one. Isometric exercises supply free circulation of blood to the muscles, preventing them from becoming “tight.” The joints' elasticity depends upon free movement. If one does not stretch for long periods of time, the articular cartilage becomes thinner, and the articular capsule and capsular ligament loses that elasticity. This is because the articular capsule becomes narrower and causes the joint to stiffen up. Muscles are formed from various protein chains called high-polymer compounds. Warm-ups designed to warm the chains by the increased circulation of the blood are referred to as “softening” exercises. These are done slowly when the muscles have been warmed with the Isotonic exercises. These exercises may be active, such as lifting the leg slowly, or passive in which one uses the hand or a partner to help lift the leg and hold it.

For more information, read *Introduction to Karate [Wado-ryu]* by Ohgami Shingo.

***Shin Shin Toitsu Aikido* or Unification of Mind and Body Way of Blending Harmony**

This style of *Aikido* was founded by Tohei Koichi on May 1, 1974. Tohei is the only *Aikidoka* who was awarded 10th *dan* by Ueshiba Morihei. Tohei *Sensei*'s system is based on Four Basic Principles:

- Keep One Point (*Seika no Itten*): When this is done, the mind automatically concentrates on the third eye (*tentei*), which is the one point in the center of the forehead.
- Relax Completely: This does not mean total collapse, but a condition of keeping the muscles in stasis. This may more easily be done when keeping the one point. In essence, the first and second principles are the same.
- Keep Weight Underside: This relates to *orenaite*, or “unbendable arm.” Again, the muscles are in stasis, neither pulling nor pushing. It is as though all weight has sunken to the lower part of the arm. The second and third principles are the same.
- Extend *Ki* (*Ki wo Dashi*): This is the final of the four basic principles. When *ki* is extended it is as though water rushing through a hose. When there is no flow of water (*ki*), the hose (arm) is weak, but when the water (*ki*) flows (is extended) through the hose (arm), it becomes strong.

The first and fourth principles are those of the mind. The second and third are of the body. However, since mind and body are one (unified), they are the same. In Tohei *Sensei*'s system of *Aikido*, these four principles must be met before any progress in rank is made.

***Hana-nage* or Nose Throw**

To the western mind, this may seem to be a form of a joke. However, it refers to a particularly effective technique which, when done forcefully can literally bring tears to the eyes. It is usually done from a side headlock (*yoko dakikubi*), but may be done against a front “bear hug” with the hands free (*mae kumitsuki*). *Tori* reaches between his or her right shoulder (against a left headlock) and *uke*'s left side neck. The first finger or first two fingers are placed below *uke*'s nose and pressed upward and backward at a 45o angle. One should have the feeling of pressing toward the top of the ear. One does not press the upper lip against the teeth, nor lift up on the bottom of the nose. The pressure should be against the juncture of the nose and lip, toward the top of *uke*'s ear. Law enforcement uses a variation as a “come-along” (*renketsu waza*) to remove a person from a chair or the floor.

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