

REDIRECTION

USING THE OPPONENT'S FORCE
TO WIN THE FIGHT



SENSEI KARL DORNMAYR
NIDAN CANDIDATE
KYUSHIN RYU JUJITSU
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The study of Physics definitely relates to the martial arts. All martial arts styles use the principle of rotational motion in some way or another. Most use it to increase power by way of increasing speed.

Compare the roundhouse kick (mawashi geri) to the front kick (mae geri) for example. Mae geri involves shooting the foot towards the attacker in a linear direction and uses the muscles of the thighs to employ this force. The stronger the muscles, the harder the foot impacts the opponent. Mawashi geri uses a circular motion, increasing the speed of the foot as it travels along the outside of the circle. The faster the rotational spin, the harder the foot impacts the opponent.

Consider for a moment, standing on a rotating platform in a children's playground (fig.1). If you stand in the middle you feel almost no force pulling you outwards, but as you move out towards the edge, you really start to feel the pull. This is because your velocity at the centre is smaller than your velocity as you move out towards the outside of the circle.¹ Using weapons such as the 6-foot bo (staff/stick), nunchaku, katana (sword) and even the humble baseball bat, extend this reach to the outside of the circle further.

Redirection of an opponent involves taking their linear momentum and guiding it onto a rotational path. Deflecting an object takes far less energy than trying to meet it in a head-on collision. The force required to stop a moving object depends on the mass of the body², so the larger the opponent, or the harder they hit, the more energy is required by you to block or stop the attack.

The aims of redirection are: to preserve the force applied by the opponent, to move yourself out of the way and avoid collision, to put yourself in a position of advantage (either to run, or counter-attack) and to apply your own force in the same direction as the rotational path. How do we do all of this so quickly? Let's examine some foundational jujitsu terms and concepts.

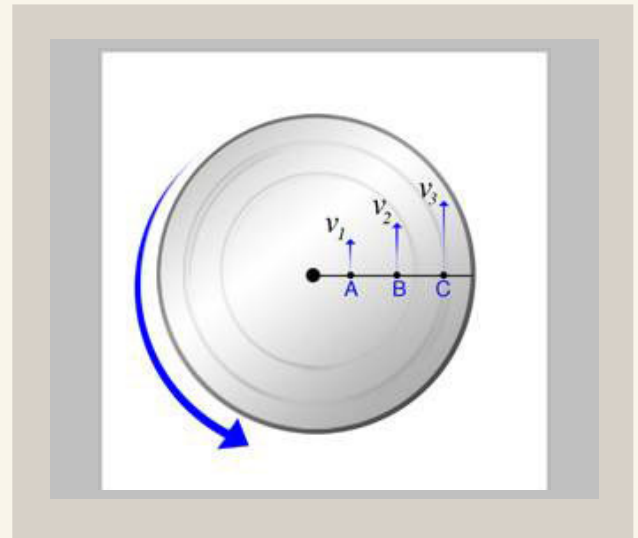


FIG. 1 ROTATIONAL VELOCITY

TAI SABAKI

The most basic impulse when you are attacked should be to move out of the way. Admittedly, some people need more practice at this than others - particularly those who 'freeze' when confronted with an object or person hurtling towards them. Tai sabaki literally means 'body movement' and involves footwork and body stances that guide how you move and more importantly, how *you* move your *opponent*.

Jujitsu is a positional fighting system and contains a comprehensive set of tools that allows you to not only move away from the line of attack, but also use this movement in a more constructive way, putting yourself in a better position to counter-attack where required.

Tai sabaki consists of six (6) main sets of movements, which should be practised repetitively until you are able to do them without thinking. Constant repetition will develop into 'muscle memory' which embeds the movements into your reflexive subconscious.

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NAGASHI (FLOATING / AVOIDING)

Starting with your feet shoulder-width apart, withdraw your right foot and turn your body to the right so that your feet are again shoulder-width apart and you are now facing the right.

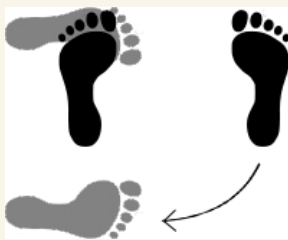


Fig. 2

Of course, this is also practised using the left foot and turning to the left. Imagine someone kicking, punching or lungeing forward (stabbing with a knife for example). If you refer to figure 2, you will see that no matter how hard they strike, you simply turn yourself out of the path of the attack. The more you practise, the better your instincts will tell you to rotate to the left, or to the right in order to best avoid the force of the opponent.

HIRAKI / OKURI (SIDE-STEP / SLIDING)

Starting with your feet shoulder-width apart, slide your left foot to the left, shift your body weight over that foot and then slide your right foot to the left. Try to finish so that you are again standing with your feet shoulder-width apart and your right foot finishes where your left foot used to be.



Fig. 3

Similar to nagashi, you can practise this with frontal linear attacks (fig.3) both left and right.

"The more you practise, the better your instincts will tell you to rotate to the left, or to the right in order to best avoid the force of the opponent."



FIG. 2 IN ACTION
NAGASHI



FIG. 3 IN ACTION
HIRAKI / OKURI

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UCHI IRIMI SENKAI (INSIDE ENTERING TURNING)

Starting with your feet shoulder-width apart, step diagonally to the left with your right foot. Turning on the ball of this foot, swing your whole body around to the left, and move your left foot back into position next to your right foot.

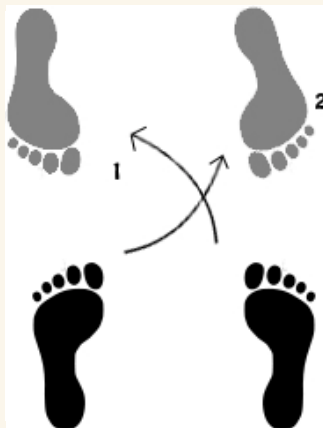


Fig. 4

Done correctly, you should be facing the opposite direction to where you started, with your feet not quite a shoulder-width apart this time. Imagine entering for Ippon Seoinage (one arm shoulder throw) or O goshi (major hip throw).



FIG. 4 IN ACTION
UCHI IRIMI SENKAI

IRIMI (ENTERING)

With your feet shoulder-width apart, step forward with your left foot, then place your weight over this foot. Bring your right foot back in-line with the left foot.

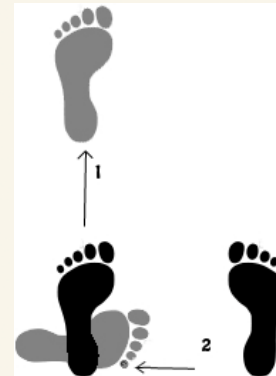


Fig. 5

SOTO IRIMI SENKAI (OUTSIDE ENTERING TURNING)

Starting with your feet shoulder-width apart, take a small step diagonally forward on the left. Turn on the ball of your left foot and bring the right foot around behind. Turn your whole body around to the right in order to face the other direction.

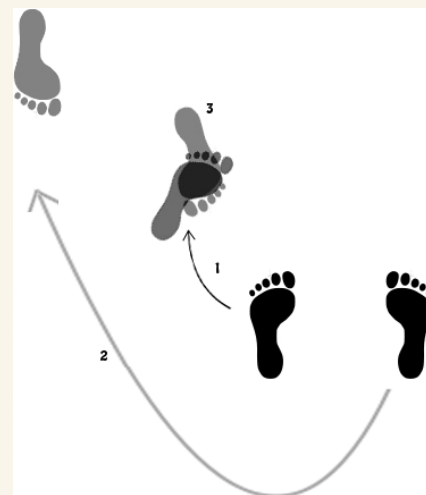


Fig. 6

Finish in a fighting stance, with your left foot forward, facing the opposite direction to your starting position. This movement enables you to move out of the path of the attack, whilst placing you in an optimum position for counter-attack.

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O IRIMI SENKAI (MAJOR ENTERING TURNING)

Starting from irimi, step diagonally forward with the right foot, turning the toes outwards, ready to turn your whole body to the right. Next, step around with your left foot, shift your weight and then withdraw the right foot. All the time, turning to the left. You should finish in irimi, facing the opposite direction from where you started.

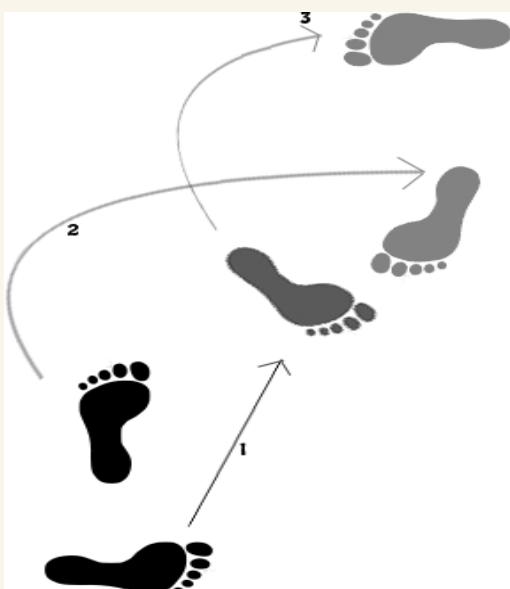


Fig. 7

It might not be apparent to some, but a classic application of O irimi senkai in Kyushin Ryu Jujitsu is the rear collar takedown (fig.7). As uke attacks, tori mobilises briefly into irimi and then immediately into O irimi senkai to avoid the attack and place themselves behind the attacker's shoulder. This 'safe zone' is common in many of the throwing arts (Aikido, Hapkido, Judo). Tori has a positional advantage whilst uke has committed their momentum in a forward direction. Tori grabs the lapel at the back of uke's neck and, applying a foot to the back of the knee, pulls uke backwards to the ground.

"Tori has a positional advantage whilst uke has committed their momentum in a forward direction."



FIG. 7 IN ACTION
O IRIMI SENKAI



FIG. 7 IN ACTION
O IRIMI SENKAI

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FIG. 8 ATEMI WAZA

THE COUNTER-ATTACK

Taking yourself out of the path of the attack is only the first step. If the situation allows, tai sabaki might be the only step required. A quick and safe retreat could well be the best option in a confrontation. Often though, this is not the case and the steps you have taken to avoid the force of impact now become part of the overall solution to your victory.

In jujitsu, counter-attacks can take the form of punches, kicks, strangles, restraint holds involving joint-locks, takedowns, throws and quite probably, any combination of the above.

Atemi waza – striking techniques

Kansetsu waza – joint locking techniques

Katame waza – immobilising techniques

Shime waza – strangling techniques

Ne waza – grappling techniques

Nage waza – throwing techniques

Let's look at a couple of these from a 'redirection' standpoint.

ATEMI WAZA (STRIKING TECHNIQUES)

While striking an opponent (fig.8) utilises an opposing force for greater impact and effect, tai sabaki places you in a better position to apply this force. For example, using irimi involves stepping towards your attacker at the same time as positioning your body away from their strike. Your forward momentum will add to your punch or kick giving it greater effectiveness.

Looking at atemi waza from the attacker's perspective, as they attempt to strike you (and ultimately miss), the energy they applied in the attacking direction will want to continue on that path. They will have to use opposing energy to recoil their attack and maintain their balance. If you have effectively employed tai sabaki, you are now in a position to capitalise on their unstable and unbalanced situation.

NAGE WAZA (THROWING TECHNIQUES)

Redirection and rotational momentum is best demonstrated during throws and takedowns. In fact, tai sabaki is taught as part of an entire throwing technique so the student can practise until the whole movement is reflex. The goal is to catch your opponent off-balance (or do something to force their instability) as you utilise the force they applied in the initial attack. Timing and direction is very important.

Nage waza is broken down into three (3) main steps:

Kuzushi – the unbalancing of the opponent

Tsukuri – the entry movement of the throw

Kake – the execution (or throwing movement)

When kuzushi, tsukuri and kake are done in harmony, the execution of the throw is almost effortless.

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KUZUSHI (UNBALANCING)

In Japanese, kuzushi comes from the verb *kuzusu*, meaning to level or demolish something. It doesn't simply refer to the act of unbalancing your opponent. Kuzushi is the process required to get them into a position where their stability (both mental and physical) is compromised, and their ability to regain this stability is destroyed, demolished.

Unbalancing the opponent will happen in one of three ways; something *you* do to put them off balance, something *they* did, or as is often the case, a combination of *both*.

As mentioned previously in atemi waza, when the opponent attacks, they commit a large amount of energy and momentum in your direction. Their intention of course, is to meet your body with a destructive level of force, but when you move out of the way, they are temporarily put off-balance.

To practise this concept in the dojo, have your opponent try to strike you on top of the head with a baton (fig.9). Less experienced jujitsu-ka should use a rolled-up magazine or newspaper, to avoid injury. The harder they swing the baton in a downward, hammerfist-like motion, the higher they will raise their centre of gravity in order to get more downward force. Use nagashi or hiraki to side-step their strike and watch what happens next. As they swing through (fig.10) with all their force and miss, their baton continues through the full arc and their weight is transitioned over their leading foot. This is especially the case if they don't take an extra step to regain their balance.

You can further destroy their stability by giving a little push (or pull, depending on your position and the technique of choice) in that same direction. With good timing, you will use less of your own energy, and more of the opponent's in any throw.

"Unbalancing the opponent will happen in one of three ways; something you do to put them off balance, something they did, or as is often the case, a combination of both."



FIG. 9 ON-BALANCE



FIG. 10 OFF-BALANCE

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FIG. 11 TSUKURI FOR
TAI OTOSHI

TSUKURI (ENTERING / POSITIONING)

Stepping into position in order to perform a throw or takedown is called tsukuri. Experienced Judo exponents will say that the unbalancing of the opponent (kuzushi) is *created* by tsukuri. In the sport of Judo this might well be the case, as they usually commence with both players holding onto each other, and trying to throw. In a combat situation however, punches, kicks and weapon attacks start with the offender putting all of their energy into the initial strike.

The various tai sabaki mentioned earlier, become an important part of each throwing technique because you are simultaneously trying to move your body out of danger, whilst positioning yourself ready to apply the throw (fig.11). From kuzushi to tsukuri, the turning motion of your hips, builds rotational momentum and utilises centrifugal force. Remember the spinning platform at the playground? The quicker the turn in the action of the throw, the quicker the aggressor will be thrown to the ground.³

"From kuzushi to tsukuri, the turning motion of your hips, builds rotational momentum and utilises centrifugal force."

KAKE (MOVEMENT / EXECUTION)

Finally, when everything is in place, we have the actual execution of the throw or takedown. The movement from tsukuri to kake should be swift, smooth and subtle. If done properly, a minimal amount of exertion should be required on your part. Applying your rotational energy to the attacker's momentum, while they are caught off balance, will result in their being toppled over quite easily.

Here's another example to demonstrate my point:

Have someone put out their right hand as if to push your left shoulder back, and walk quickly towards you.

As they approach, lightly grab their outstretched wrist with your right hand and step around them using soto irimi senkai (fig.12).

Bend your knees and lower your centre of gravity as you draw their arm around with you.



FIG. 12 ARM-LOCK TAKEDOWN

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Turn quickly and place your left hand on their tricep tendon. Be gentle, you can easily damage their elbow if you're too rough. Gently push on this tendon as you turn and bring them around and all the way down to the ground. Keep their arm straight at all times.

Their linear momentum will combine with your rotational movement to pull/push them off balance. All the time you have used the least amount of energy possible, controlling your opponent with a painful arm-lock.

SUMMARY

A body that is moving has a great deal of inertia. Once in motion, it is difficult to stop. If you add your opponent's momentum to your own, you will conserve energy and assist in increasing the speed and effectiveness of your own technique.

The *ju* in jujitsu means 'pliability', 'flexibility' or 'to give way'. *Jitsu* means a fighting form or practice. Jujitsu then, means 'the martial art of giving way' or, more broadly, 'the practice of giving way without giving up or giving in'.⁴

The essence of jujitsu is that you utilise your opponent's force against him, and many jujitsu-ka tend to forget this on their journey. Rigorous, repetitive training regimes and competitions against players normally as knowledgeable as yourself in the art, can take your mind away from the fundamentals of technique. While strength and stamina play an important role in the martial arts, study and reflection on the finer points of your methods are equally important.

Often we hear stories about the weak overcoming the strong, the phrase 'the bigger they are the harder they fall', or a woman fending-off her larger, much stronger attacker (fig.13). Good technique, precise timing, subtleness and swiftness of movement are key tools in the arsenal that is jujitsu and it is paramount that these points be refined with practice, and even more practice.

"Good technique, precise timing, subtleness and swiftness of movement are key tools in the arsenal that is jujitsu..."



FIG. 13 SELF-DEFENCE



FIG. 14 TRADITIONAL JUJITSU

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ABOUT THE AUTHOR

www.kyushinryujujitsu.com



Sensei Karl Dornmayr **Nidan Candidate** **Kyushin Ryu Jujitsu**

Sensei Karl joined Kyushin Ryu Jujitsu at the newly opened Zillmere Police-Citizens Youth Club in 2001. Training regularly at the Zillmere, Sandgate and Pine Rivers PCYCs, he progressed through the senior ranks to attain black belt in 2008 at Sandgate PCYC.

Over the years, Sensei Karl has also trained in karate, tae kwon do and aikido but finds jujitsu holds the most appeal, especially with regard to the wide-ranging self-defense applications.