

# The Science of Footwork

The JKD key to defeating any attack.  
by Ted Wong

"The essence of fighting is the art of moving."- Bruce Lee

Before I begin this article on the significance and proper bio-mechanics of footwork, let me state that this is by no means a thorough exposition of all of the various types of footwork available to the students of JFJKD. There simply isn't sufficient space in an article to cover all aspects of footwork, and so this will serve, hopefully, as a primer on footwork. Hopefully, it will cause you to research this too-often-neglected aspect of combat.

## Introduction

Of the many things my late Sifu Bruce Lee impressed upon me, the most important was the need to be fluidly mobile. Probably the most important component in JFJKD is footwork. Ironically, most of the martial artists I see practicing today- and this is by no means addressed only to amateurs or beginners- are neglecting their footwork which is unfortunate, owing to the fact that footwork is, quite simply, the science of motion. To me, the more I learn about JFJKD, the more I see the scope of just how important footwork truly is. Please don't think I'm overstating things when I say that footwork is, in a word, "everything" in JFJKD.

Take another look at the quote of Bruce Lee's that I opened this article with - I mean really think about it. "The essence of fighting is the art of moving," and moving is footwork. The principles of movement form the very heart of combat. Footwork means mobility, and being mobile is strongly emphasized in Bruce Lee's art. The two chief things that proper footwork provides for the martial artist is a means of finding a target and a means to avoid being a target. It will beat any punch or kick and get you to where you want to go; whether in for a strike or the hell out of harm's way.

Bruce Lee once said that the four components of footwork consisted of:

1. The sensitivity of your opponent's aura,
2. Aliveness and naturalness,
3. Instinctive pacing (distance),
4. A balanced position at the start and finish.

It should be obvious that you cannot use your hands or legs effectively until your feet have put you into position in which you can do so- if you are slow on your feet, you will be slow with your punches and kicks. Good footwork allows you to hit from any angle and also to follow up your initial attack with more powerful finishing blows. Footwork, in short, "gets you there and gets you out." Another important tool in JFJKD is learning how to correctly judge distance, which Bruce Lee referred to as "the fighting measure," which is simply another way of saying, "distance." It's very important to know to judge distance because distance is the relationship between you and your opponent. It all depends on the length on the distance you need to bridge or close between you and your opponent and also your opponent's reaction speed.

Bruce's main emphasis was always footwork. He told me that "Good footwork can beat any attack." And he used to have me drill constantly on footwork, in an effort to get me to improve my balance. He wanted me to be able to glide in and out, throwing techniques from all angles after coming into various ranges through footwork. And, of course, he emphasized the avoiding of attacks through footwork. Without footwork, you cannot complete the task of fighting with any degree of efficiency.

## Footwork is Purposeful Movement

Many people think of footwork as some sort of bouncing movement, but the one thing Bruce Lee stressed to all of his students was never to move for the sake of moving, and not to bounce simply for the sake of bouncing. Bruce didn't bounce around much when he was sparring; he was very controlled and motionless- until he saw an opening. And by then you were flat on your back. Every move you make should be purposeful; it should be done to either deliver a hit, to move into position to deliver a hit, or to move out of the range of being on the receiving end of your opponent's hit.

The key to success in footwork is to keep it simple. If you aim toward simplification, rather than complex or intricate foot patterns - which more resemble dance patterns than efficiency- your footwork will be smooth, direct and efficient. If you use economy of motion, you will always be relaxed- which is crucial to your reaction time and to the speed of your attacks, defenses and counter-attacks.

Another great benefit to proper JFJKD footwork is the fact that it provides you with a means by which you can employ the force of inertia, which - properly applied - can tremendously boost your punching/kicking power. These are some of the reasons that footwork seems to me so important. Footwork also serves to enhance your body alignment, which makes your leverage more favorable and your strikes more devastating.

Another aspect of combat that is enhanced by proper footwork is speed. I mean footwork is what gets you there to deliver your technique- and out of there - before your opponent can deliver his. Footwork is not only used to deliver techniques or avoid techniques, but also to set up techniques. It's part of strategy- a form of P.I.A. (Progressive Indirect Attack). It can lure your opponent in to a trap, allow you to gain the proper fighting measure and also bridge the gap to your opponent. Good footwork accomplishes all of these things.

I liken good footwork to operating a four-wheel drive. Most people only utilize a two-wheel drive; that is, they're limited as to what techniques they can throw because they're really only comfortable in their two-wheel drive mode. However, once you learn on the options that avail themselves to you with increased mobility, you realize that footwork is an option provider.

While some people mistakenly consider to be merely bouncing around like Muhammad Ali or Sugar Ray Leonard, others - equally as mistaken - think of footwork as simply something that moves you in to hit your opponent, without realizing that it's just as important in preventing your opponent from hitting you. In Thai Boxing, for example, you see a lot of "give and take" - wherein one fighter will whack his opponent and then stay there and get hit back by his opponent. Such back-and-forth exchanges are common place, and quite often the winner is the one with the highest pain threshold. In JFJKD, however, the bottom line is to hit your opponent- and not get hit back. JFJKD teaches one how to be a thinking fighter. A smart fighter. Nobody should opt to get hit particularly when you can substantially reduce the chances of that happening by employing proper footwork.

## **The Four Basic Types of Footwork**

Basically there are only four types of footwork- the rests being simply variations on these four. The four basic types of footwork are advancing, retreating, circle left and circle right. Incidentally, "circling," as I use the term here, means, "sidestepping."

## **First Things First - Stance**

All footwork is initiated from the On-Guard Position which is also known as the "Ready Position." The On-Guard is the most versatile of stances because it allows you to be ready for all things- attack or defense- instantly. It's a geared position that is geared for mobility. You have to feel very comfortable in the On-Guard. If you're not comfortable in the On-Guard Position then there is something wrong. You have to feel comfortable at all times so that you are able to react instantly. If you are tense- that is, not comfortable - you're not able to react quickly. You need to so relaxed that whatever happens, you respond to it instantaneously-

whether it be the need to immediately advance, retreat or side step an attack. That's why the On-Guard Position has been called the "Anchor of JFJKD"- for all techniques flow from it. The On-Guard is the best way to move straight back, forward or to the side. You're not over-committed one way or the other. The On-Guard places your strongest side forward, which, in JFJKD is typically your right side, with your strongest hand lifted up so that your fist is in line with your shoulder. Your chin and shoulder should meet about halfway, with the right shoulder raised an inch or two and the chin dropped about the same distance. The right side of your chin should be tucked into your lead shoulder. Your left hand is also in close, to protect your midsection. Your right hand is your attack weapon so it should cocked and ready to fire. The right shoulder is slightly raised and your chin slightly lowered in order to protect your chin and jaw from strikes. The right knee is turned slightly to defend your groin area and your right foot should be rotated in roughly 25 degrees so that, if necessary, you can employ it as a kicking weapon. Your left foot should be angled at approximately 45 degrees. The heel is raised because it is your sparkplug- ready to ignite you forward, backward or sideways- and depending whatever besets you. Your stance should be like a car with its engine idling; you're ready to go- with as much power as you need- as soon as you engage the transmission, which in this case, is your legs and hips. Now that you're ready to move, let's look at some of your options.

## **Advancing**

### **Step & Slide**

The Step & Slide is used primarily as a gap-bridger. It is not utilized typically to execute an offensive technique. However, it is very effective in gauging and obtaining correct distance from which to launch a strike. You take a step forward and your rear foot (left) slides up to where the right foot was. Typically your step forward does not exceed six inches, which means that your rear foot travels a maximum of six inches as well. The weight distribution in the start and finish position is 50-50, with 50% being on your right or lead foot and 50% on your left or rear foot. However, during the movement, all your bodyweight is moving forward on your right foot initially and then 50% of it settle on the rear leg when the movement is completed. If you push off harder, you will notice that it to the front leg quickly- but this is only momentary. You should be able to control the weight distribution and be in perfect balance at all times.

### **Push Step**

The Push Step is used primarily for bridging the gap to the opponent. The Push Step is very effective when employed with PIA (Progressive Indirect Attack). You can fake with the hand, for example, and then move right in instantly when the opening presents itself. The Push Step is really the only type of footwork that works well for efficient punching. A Step & Slide, for example, would prove to be inefficient for delivering a punch because, by the time you step - and slide - it would be too late. Punching in JFJKD occurs in one fluid motion. Footwork always comes after the punch is initiated - the hand moves first and then the feet. Even in evading a blow, the body should move before the feet. If someone were, for example, coming to deliver a punch to my face, I would avoid the blow with my body and then employ footwork to position me either further out of harm's way, or to deliver a counter strike.

### **Shuffle Step**

The Shuffle Step is more like a pulling movement, than a stepping movement. Regardless, it's a quick movement. It's one motion, whereas the Step & Slide is a two-part motion. All of the torque comes from the toes and the balls of the feet. While the front foot looks as though it's flat on the floor, it isn't. Most of the weight is on the ball of the foot and the toes. It's less a push than a pulling movement, as you push with the rear leg while pulling simultaneously with your lead leg. It's almost like you're trying to grab a clump of earth and throw it back to your rear leg - that's the type of tension that should be in your feet and the correct motion your lead leg needs to assume to perform this movement correctly. At the beginning of the movement it's very subtle and it's hard for the untrained eye to see it. However, while it may be a delicate, deceptive motion, it's tremendously powerful and efficient, allowing you to throw your bodyweight - instantly - behind a technique. Even though I'm moving, it appears as though there has been no bodyweight shift at all. I'm not moving - and yet I'm moving. Or, as Bruce Lee once said:

"The stillness in stillness is not the real stillness. Only when there is stillness in motion, does the universal rhythm manifest." - Bruce Lee

### **The Burst**

The Burst is also a push-pull movement. It is used for a quick advance, for kicking and for punching. The Burst is used primarily to deliver a devastating kick such as a side-kick, or to counter an opponent's attack. That's why footwork is not just for "transition" between techniques - but also the delivery system that allows you to execute your techniques properly. Any Properly executed kick or punch comes off the footwork.

### **Retreating**

There are many forms of retreating as there are advances, techniques such as the Shuffle or Step & Slide, can also be used as retreating tactics. However, I'll focus on one retreating technique that differs from the others in as much as it's not simply the reverse of the advancing techniques as outlined above.

### **The Pendulum Step**

The Pendulum Step is used primarily to avoid an attack. From the On-Guard position, the lead leg is quickly drawn back to where your rear leg is, while simultaneously withdrawing your rear leg backwards. The entire weight of your body should be resting on the lead leg at this point, with the rear foot barely touching the ground for counter-balance purposes. As soon as this happens, you have an option- to either maintain the On-Guard from this new vantage point, safely out of harm's way - or to immediately reverse the movement, with the rear foot moving back to its former position and the lead leg becoming an offensive weapon of attack by returning fire. If you watch the first movement that Bruce Lee does in Enter the Dragon, it's a pendulum step backward out of the way of Samo Hung's attempted shin kick. If you watch Bruce fight against Bob Baker in The Chinese Connection, you will see the pendulum step employed as a means of avoiding an attack and launching a counter kicking attack.

### **Sidestepping**

"Sidestepping," Bruce Lee once said, "is shifting the weight and changing the feet without disturbing balance." Sidestepping serves many purposes.

1. It can be used to frustrate an attack simply by moving every time an opponent gets "set" to attack.
2. It may be used as a method of avoiding blows or kicks.
3. It may be used to create openings for a counter attack.

In sidestepping, the rule of thumb is that if you're going to move to the left, your left foot should move first which, if you're in the On-Guard position with your right side forward, would be your rear leg. Then, once your rear leg has moved into position - anywhere from 6 to 18 inches of travel - then your right or lead leg moves over 6 to 18 inches as well. The same sequence applies when sidestepping right, only the right or lead leg moves first, with the rear leg following in a lateral motion. The key is to maintain perfect balance at all times.

#### **Sidestep Left**

From the On-Guard position, move your left rear foot to the left roughly 18 inches. Then slide the lead foot (right foot) an equal distance to the left, all the while maintaining the On-Guard position.

#### **Sidestep right**

From the On-Guard position, move your right lead foot to the right roughly 18 inches. Then slide the rear foot (left foot) an equal distance to the right, all the while maintaining the On-Guard position.

People should practice the sidestepping motion on their own in order to master it. In fact, practice is the "secret," if you'd care to call it that, of success - not only in JFJKD, but also in any other martial art. I remember coming to Bruce Lee's house and seeing him practice. He

was constantly practicing. He would practice for hours on end. He would practice moving and striking with his hands, and then moving and striking with his feet and then just moving so that he became more and more comfortable and familiar with what he could do and how he could maneuver at different angles and at varying speeds and distances.

I personally have been practicing - as best I can - what Bruce taught me since 1967, which means that I'm fast coming up on 30 years of training in JFJKD. Some things I've become quite good at, while others I still need more work on. However, I will say that I am a much better martial artist now than I was back when Bruce was teaching me, simply because I've had so many more years of practice. Like Bruce said,

"Like boxing or fencing, JKD is a step by step process in which each maneuver must be repeated many times."

Another important aspect of training that Bruce Lee emphasized to me was: "*quality - not quantity.*" He said:

"It's better to know how to throw 5 really good punches, than 20 LOUSY ones. So every time you throw a punch, put 100 percent into it."

Bruce always stressed emotional content or intensity in the execution of one's techniques. Learn to react - not plan. Let it flow from within. Personally, I had a real problem with this in my early years of training with Bruce. Often he would look at me and say "Ted, you lack a killer instinct," meaning that I wasn't able to summon enough pure anger or violent energy from within when I performed my techniques. I've learned however that "killer instinct" is hard to switch on or off like a light switch - it is largely a situational reaction to your circumstances. Based on the degree of self-knowledge I've obtained - thanks to Bruce Lee's teachings - I know now that I do possess "killer instinct" - in abundance. And that should I ever need it, it's there. The key is to maintain a clear mind that is unobstructed by thoughts or concerns. Your reaction must be pure and honest and, if the intent is expressed honestly, your opponent will be in serious trouble.

Since I've been able to make my footwork more efficient through constant practice, I've found to my delight that I'm able to move just as quick as I could when I was younger, and probably hit a little bit harder.

I'll be the first to admit that footwork is not an exciting thing to practice but what it enables you to do once you've mastered it is very exciting indeed. It's like exercise for the body - nobody really enjoys taxing themselves physically - but we know that it's necessary in order to enjoy the benefits that good health provides. If you want options, i.e., different angles and possible combinations, then you need balance and skill in movement- and that is footwork.

## **Practicing Footwork**

One of the best exercises I've found that you can do to enhance your footwork is shadowboxing. Shadowboxing teaches you how to relax when you move, how to explode when you move, how to throw techniques while in motion. It alerts you as to which techniques are assets and which are liabilities. You can bob and weave, move, kick, punch, kick/punch/kick and you can also cultivate the coordination necessary to successfully execute all of the above. It also teaches you how to regain your balance after throwing a technique or combination - and just how important balance is. Other activities such as skipping rope or running, will also train your neuromuscular pathways to handle your bodyweight better and enhance your balance, but shadow-boxing seems to be the purest exercise for enhancing your footwork skills.

## **Bruce is the Standard**

When I hear people say, "You shouldn't bother to train like Bruce Lee did, or to follow his teachings, because you don't possess his attributes," I realize that they've missed the point as to what Bruce Lee was all about. He would frequently tell us that he wasn't anything "special,"

but rather that he was a very dedicated trainer. Bruce was so good, because he made himself so good. He practiced all the time and then looked for ways to make his practicing even more efficient. If you only work out 20 minutes a day, or three days a week- I mean if that's all you're willing to commit to your martial arts training - then, yes, it would be impossible for you to obtain attributes similar to Bruce's because he practiced long and hard for every inch of progress he made.

"Don't expect Bruce Lee like results, unless you're willing to put in Bruce Lee like hours to obtain them." Ted Wong

I know that the more I practice what he taught me, the better I become at it - and the same is true for anybody reading this article. I always looked up to Bruce Lee for his work ethic. And even now, if I find myself sitting around not wanting to train - I think of Bruce Lee, and how hard he worked - and I feel guilty. I know that I'm capable of better effort.

Bio-mechanics or body leverage and balance, distance and timing are the keys to success in combat, and all of them are the direct result of getting in tune with yourself, knowing what you can do - and at what angle and with what degree of efficiency you can do them at - and this, folks, all comes down to a simple matter of footwork.

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