

Balance

John Wooden, the famed basketball coach from UCLA once said “the most important thing in life is love; the second most important is balance”ⁱ. But what is balance? When a person thinks of it, there are many notions of balance that come to mind, and balance plays an important role in many parts of life. Circus performers, athletes, and dancers are among a host of professionals that require balance for a successful career. People spend large amounts of both time and money trying to achieve balance in their lives. People often speak of balance in terms of what they eat; a balanced diet. People balance their checkbooks. On the whole, balance is a common theme in accounting, architecture, exercise and many other common threads of society. One of the very foundations of the United States government is equal representation and the equal distribution of justice and this too is epitomized by balance. This is evidenced by the most common image associated with justice; Lady Justice, blindfolded and holding the scales. Balance is truly a prevailing theme in society, but the question still remains; what is balance?



One can define balance as a noun or a verb. According to Merriam Websterⁱⁱ, balance as a noun is:

- an instrument for weighing
- a means of judging or deciding
- a counterbalancing weight, force, or influence
- stability produced by even distribution of weight on each side of the vertical axis: equipoise between contrasting, opposing, or interacting elements: equality between the totals of the two sides of an account
- an aesthetically pleasing integration of elements: the juxtaposition in writing of syntactically parallel constructions containing similar or contrasting ideas
- physical equilibrium: the ability to retain one's balance

Balance as a verb is:

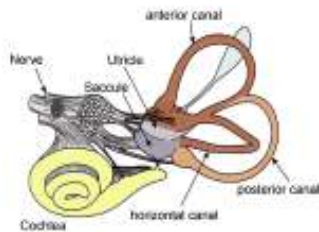
- to compute the difference between the debits and credits of (an account): to pay the amount due on; settle: to arrange so that one set of elements exactly equals another <balance a mathematical equation>: to complete (a chemical equation) so that the same number of atoms and electric charges of each kind appears on each side
- counterbalance, offset: to equal or equalize in weight, number, or proportion
- to weigh in or as if in a balance
- to bring to a state or position of equipoise: to poise in or as if in balance: to bring into harmony or proportion
- to become balanced or established in balance
- to be an equal counterpoise

For the purposes of this essay the discussion will focus on balance and the human body or physical balance (noun - physical equilibrium: the ability to retain one's balance), with a secondary emphasis on philosophical or life-balance (verb - to bring to a state or position of equipoise: to poise in or as if in balance: to bring into harmony or proportion).

Physical Balance

The human sense of balance is provided to the brain by the vestibular apparatus. In terms of evolution, the vestibular system is not only the oldest sensory system it is also the first to develop after birth. While an in depth medical / scientific explanation of the workings of the vestibular system is beyond the scope of this paper, it is important to have some understanding of how it contributes to balance.

“The vestibular system, which contributes to our balance and our sense of spatial orientation, is the sensory system that provides the dominant input about movement and equilibrioception”.ⁱⁱⁱ This system consists of a series of interrelated organs starting with two components located on either side of the head in the inner-ear. The first component



is made up of three semi-circular canals; the horizontal, the anterior and the posterior canals. These canals account for three-dimensional rotational movement of the head. The horizontal canal senses and provides signals to the brain regarding rotation of the head (e.g. turning the head left and right). The anterior and posterior canals, referred to in combination as the vertical canals, sense and provide feedback to the brain when the head is moving forward / backward (e.g. nodding), or moving side to side (e.g. cartwheeling). These canals are able to provide this functionality because they are filled with fluid and work in much the same way as a carpenter's level. The second components found in the inner-ear, known as the otoliths, are responsible for sensing linear acceleration. A person can close their eyes, yet still be aware of the fact that they are going from a stopped state to a state of motion such as riding in a car (horizontal) or in an elevator (vertical). In combination, these components work with the brain to detect, maintain, and regain balance, in addition to providing sense of where the body (and its parts) is positioned in space.

These peripheral components of the vestibular system coordinate with the brain to provide a spatial orientation or “equilibrioception”. This awareness allows the brain to send signals to the eyes (so as to stabilize eye-muscles during head movement), in addition to signals sent to the muscles responsible for keeping the body upright. It is the successful execution of all components of the vestibular system that provides for balance as it pertains to the human body. Within the realm of martial arts, this balance is a very important characteristic of a successful martial artist.

In the west, balance is often times the primary goal of people studying Tai Chi Chuan, and researchers have found that intensive Tai Chi practice can have a positive effect on balance control. Balance is also a pillar in the Japanese art of Karate. Most early kyū ranks focus specifically on stance, balance and coordination, with speed and

power generally stressed later in Karate training. Tae Kwon Do is another of many martial arts in which balance plays a very important role. For many people, physical balance is a goal of practicing Tae Kwon Do, but the idea of balance in martial arts extends well beyond physical balance. In the Chinese art of Tai Chi Chuan there is a common reference to the yin / yang or yang / yin balance. This is a primary goal in both combat and in a broader philosophical sense. Also, to paraphrase a discussion with 7th degree black belt and Master Instructor John Rankin “balance in Tae Kwon Do is tied to balance in life”.

As previously mentioned, the concept of physical balance is extremely important to any successful martial artist. Based on experience, this paper will primarily focus on Tae Kwon Do and there are multiple examples of where balance is required. As in life, balance in Tae Kwon Do is multi-faceted and encompasses many different approaches to the utilization of balance. One of these revolves around the concept of balance and the center of gravity as relevant to technique.

Physical Balance and Tae Kwon Do Techniques

Balance in Tae Kwon Do technique can take several shapes. Stances are a fundamental aspect of this art, and a good Tae Kwon Do student will strive to ensure that balance is a goal by practicing good stances. A good front stance should be both wide and deep and ensure a good center of gravity. Additionally, shoulders and hips are square to the target. This will allow for a stronger base, thus making it more difficult to knock off balance both side to side due to the width, and front to back due to the depth. Balance is also a key factor in the straddle (horse) stance. This stance should entail wide placement of the feet (providing better balance), and the center of gravity is based on equal weight distribution between the legs. While all stances require recognition of the value of balance and the center of gravity, not all stances require equal weight distribution. This is often determined by the purpose of the stance. An example of this is the back stance or fighting stance which should still be wide at the feet, but generally speaking the weight distribution should be placed more heavily on the back leg. This stance allows for a quicker ability to defend against kicks and strikes, but balance is still a very important consideration.



In association with a good stance, the notion of balance is also extremely valuable with regard for both striking and kicking. The art of Tae Kwon Do originally was, and in many schools still is oriented around kicking based on the premise that the legs are both stronger and longer than the arms and serve as a very effective weapon. Some of the more common kicks in Tae Kwon Do include the front-kick, the round-kick and the side kick. When practicing each of these techniques, a good Tae Kwon Do student should always do so with an eye on balance and center of gravity. The front-kick is performed by raising the leg / knee and snapping the foot straight out toward the target. The round-kick encompasses a similar approach in that the leg is raised but the body and leg “turn over” and the foot is snapped out such that the kick attacks the target from the side. Lastly the side-kick uses a similar “turned” body position to the round-kick, but the foot

extends straight out in a stomping fashion. For each of these kicks balance is critically important. The student must consider that when the kicking leg comes off the ground, the center of gravity must shift to the “pedestal” leg that is still on the ground. As the kicking foot extends toward the target, the weight and momentum of the kicking motion will automatically impact the center of gravity that is currently resting on the pedestal foot / leg, and as such the student must practice a counter-balance technique by shifting the center of gravity slightly away from the target to account for weight shift of the kicking leg. For the more advanced student, these premises also hold true for spinning kicks and jump kicks. Effective execution of all kicks must include consideration for balance and center of gravity.



The same ideas of balance and center of gravity that are applicable to kicking also hold true for hand striking and for blocks. Again in combination with good stances, a good hand striking technique will always employ attention to balance. Balance in hand striking is again achieved by ensuring that the strike is not over-extended. When any strike results in an extreme reaching motion, the student will invariably be off balance to some extent, and this opens one up to a counter-attack based on taking advantage of momentum or a lack of balance. The most effective method for preventing an over extension of many hand strikes involves a good stance combined with taking care that the center of gravity is over the feet. Utilization of this method helps to ensure that the strike is not over-reaching, which results in a lack of balance. When performing any blocking technique, the best approach to ensuring balance is also strongly tied to the stance. A wide stance and good center of gravity are going to contribute to an effective block. Additionally, maintaining balance in this way allows for the readiness needed for a strong counter attack. Lastly, in Tae Kwon Do, forms are a recognized and practiced sequence of blocks, strikes and kicks and the application of well balanced techniques for each will invariably result in a better overall form.

Balance in Utilization of Tae Kwon Do Techniques

Moving away from the topic of employing physical balance in actual kicking, striking and blocking techniques, there are several other examples of balance in Tae Kwon Do. Modern Tae Kwon Do teaches a balance between the use of both feet and hands. This was not always the case. As previously mentioned in this essay, early Tae Kwon Do techniques were often heavily biased toward kicks over hand techniques, based on the belief that the strength and reach of the legs made them more suitable as weapons. It is a common belief that this is tied to the notion that Koreans adapted physically to the mountainous terrain of Korea. The introduction of hand techniques is often attributed to the influence of Tang Soo Do. Approximately 2000 years ago, early forms of Tae Kwon Do included Soo Bahk, Tae Kyun and Kwon Bop. As this excerpt from a paper on the history of Tang Soo Do demonstrates, modern Tae Kwon Do evolved from several influences. “During the time of the Hwa Rang Dan, the original primitive art of self defence called Soo Bahk Ki (foot and body fighting) was popular among the people as well as the military. The people had a high regard for Soo Bahk and through the inspiration of the Hwa Rang Dan, warriors began to train themselves and develop their

art. Soo Bahk was combined with the Hwa Rang Dan principles to become Soo Bahk Do and formed the traditional martial art of Korea. During this Silla dynasty, Soo Bahk Do became combined with different self defence techniques and fused and developed into Tae Dyun in the next kingdom. After World War II, these were the techniques that the art of Tang Soo Do could borrow”.^{iv} Hand techniques combined with foot techniques over time creating an effective balance with regard for using both feet and hands in modern Tae Kwon Do. In name Tae means to kick or strike with the feet, Kwon refers to punching with the hands or fists and Do equates to a method of life or philosophy.

Another illustration of balance evolves from the notion of an equilibrium between multiple key aspects of Tae Kwon Do; speed, fluidity, focus, and power. It is a commonly held belief that power is generated exclusively by strength and muscle. A taut, flexed muscle is thought to be the epitome of strength and power but this is not necessarily the case. In Tae Kwon Do, power is generated by other means as well. Much of the power in Tae Kwon Do comes from a combination of momentum and speed resulting from fluidity, and focus. Well executed upper body techniques (strikes and blocks) often generate a great deal of power through the use of a sort of wind-up whereby the counter action of the wind-up unleashes a great deal of speed and power. In order to take advantage of the speed, fluidity of motion is required. When the wind-up results in speed, and fluidity of motion, taking advantage of that speed, combine with a focused strike, remarkable power is the result. Lower body strikes do generate a great amount of power based solely on the muscles in the legs, but this power is enhanced by practicing and employing fluidity of motion and focus. This is not to say that Tae Kwon do students would not benefit from strength and endurance training, but a good Tae Kwon Do practitioner understands that power is not solely a function of brute strength, but also a function of speed, fluidity and focus.

Life Balance

Tae Kwon Do offers an additional type of balance to those who practice the art; life balance. Tae Kwon Do teaches a balance that comes from both a philosophical as well as a physical approach. The physical benefits are numerous and include improved strength and endurance. Flexibility and a better sense of physical balance are also by products of this practice. Additionally, one can also expect better coordination. From a philosophical perspective, Tae Kwon Do teaches respect and honor. Tae Kwon Do contributes to self-confidence, and self-confidence is definitely a sign of someone enjoying balance in their life. A good student will also learn and benefit from employment of discipline in practicing Tae Kwon do.



The question of what is balance can be answered in many ways. Balance is both a physical equilibrium, and a state of equipoise. The answer to what is balance truly depends on who is asked to define it. For this author, Tae Kwon do has been a consistent break from the stresses and strains of everyday life. Over the last several years, Tae Kwon Do has provided a sense of achievement and been a source of pride. Tae Kwon Do has allowed for focus on better execution of technique rather than the regular crises of the

office environment. On a personal level, the practice of Tae Kwon Do has contributed to a healthier lifestyle through regular exercise and stretching. The results over the last few years have been better weight maintenance, greater flexibility, and fewer issues with lower back pain and rolled ankles. Balance is all of these and balance is many other things, but what is of primary consequence is the simple recognition of the importance and value of balance in all things.

Practicing Balance

There are several methods that one can use to improve their physical balance including the use of a balance board, BOSU, balance ball, slacklining and of course the practice of martial arts. The following sites provide additional information on techniques that can be used to improve balance:

<http://www.chicagonow.com/blogs/pow-mixed-martial-arts/2009/09/the-science-of-balance-taking-your-martial-arts-training-to-a-higher-level.html#more>

<http://www.martialdevelopment.com/blog/increase-your-stability-by-50-percent/>

<http://en.allexperts.com/q/Martial-Arts-3210/Question-regarding-balance-improve.htm>

<http://www.tampabay.com/features/fitness/indo-board-helps-users-achieve-balance/1053095>

http://www.ehow.com/how_2288412_improve-balance-martial-arts.html

http://www.turtlepress.com/articles/kicking_balance_home_training.aspx

<http://www.elite-fighters.com/training/praetorium/balance.htm>

<http://www.mayoclinic.com/health/balance-exercises/SM00049>

ⁱ ESPN SportsCenter interview with John Wooden, November 2009

ⁱⁱ <http://www.merriam-webster.com/dictionary/balance>

ⁱⁱⁱ http://en.wikipedia.org/wiki/Vestibular_system

^{iv} <http://www.tang-soo-do.org.uk/history.html>