

UNDERSTANDING THE THEORY OF POWER

Written by Grand Master Raymond O'Neill IX Dan

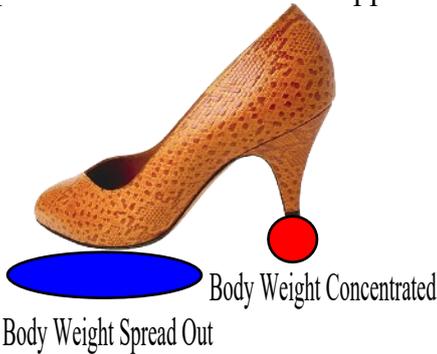
It is true that for anyone who studies Taekwon-Do, in order for them to utilize, apply and perform the Techniques with effectiveness students must be prepared to study and understand the Theory of Power or the C.R.E.M.B.S of Taekwon-Do.

The Theory of power is broken down into SIX elements, each one harmonises the other, understanding them all will ensure the body performs Taekwon-Do in a natural effortless way that will achieve maximum results.

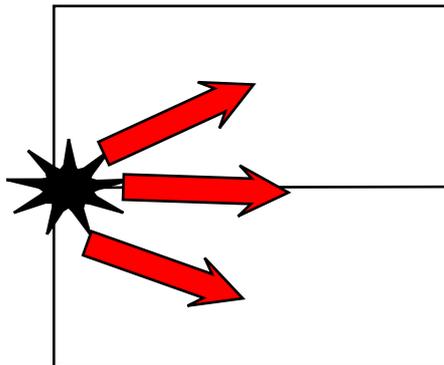
CONCENTRATION - (Yip Joong)

Concentration is broken down into TWO main elements.

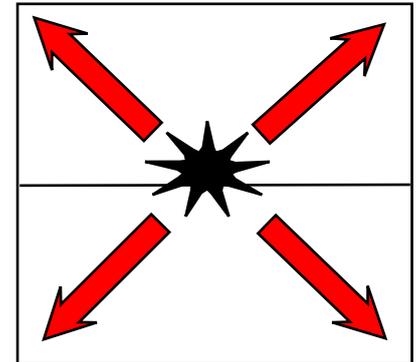
Firstly being able to understand the benefit of concentrating the huge force that is produced through movement into the smallest output source. Thus when the body moves forward with a simple Punch, the entire forward force of the body, plus that of the actual punch is concentrated into the smallest output ie: the first two knuckles. The result of which is amazing force with a truly destructive result. The following diagrams show how concentrating force will produce more power. More so when we use that smallest output against a small vital spot on the opponent maximum effect is applied



We can see by this diagram that the force created by the human weight is greatly increased by simply concentrating the weight, If we punch or kick and do not use the appropriate part of the foot or hand or hit the opponent on a large surface it will have the effect of the front of the foot, yet when applying correctly it will be like using the heel. A small person standing on your toe will be no concern if used the front of the shoe, use the heel and you have a different story.



'A' correct



'B' incorrect

This diagrams and photos show the effective way Students can break boards with little effort. Example 'A' shows the correct way to hit a board concentrating into the smallest area of the board thus causing a splitting motion, as opposed to 'B' which will be harder due to the impact force being spread out over the entire board.

'A' Correct
Force
Concentrated



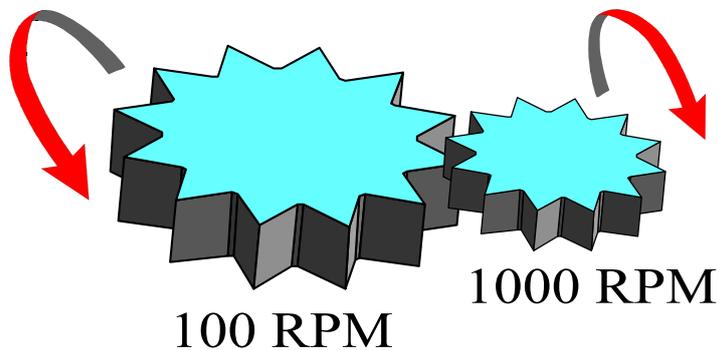
'B' Incorrect
Force
Spread out



UNDERSTANDING THE THEORY OF POWER

Written by Senior Master Raymond O'Neill VIII Dan

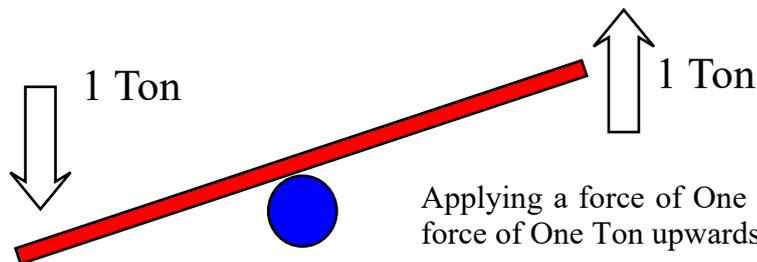
Secondly understanding the benefit of concentrating every muscle in the body, especially the larger ones around the lower abdomen & hips into generating force into the smallest part of the attacking tool. The diagram shows a simple analogy of how a large muscle can increase the power output of a smaller attacking tool surface area



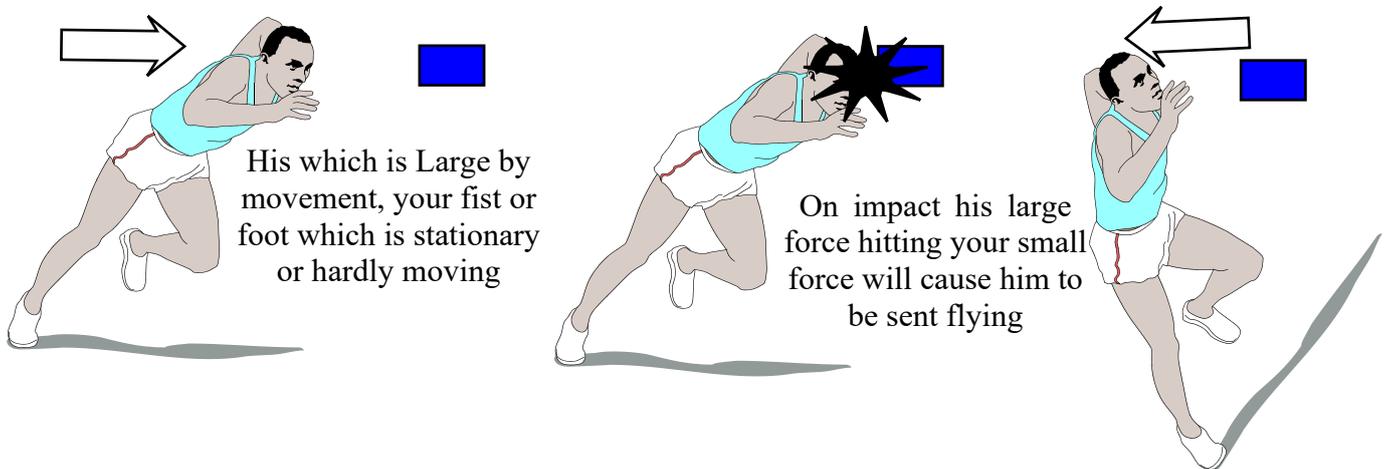
REACTION FORCE - (Bang Dong Ryok)

Reaction force can also be broken into two elements.

Firstly -YOUR OWN is the understanding that every action has an equal and opposite reaction, thus the pulling back of one hand actually aids the forward movement of the other hand. In Taekwon-Do it is vital that reaction force is applied in order to enhance correct power output. The following simple diagram shows how this force is applied.



Secondly - YOUR OPPONENTS in understanding that his own onslaught which is large and yours which is small can cause a massive Reaction on the point of impact, this is particularly beneficial when students are sparring, understand this element will enable the student to beat an opponent by using the opponent against themselves. If the opponent is traveling into you at speed, a simple move to the side with a well placed strike will have a huge effect on him, as his own force which has large movement hitting yours that is hardly moving and small will in turn make the point of contact exceptionally destructive.



In conclusion, when sparring or performing techniques, when power breaking etc, your own reaction force will dramatically improve your total power output, whilst using your opponents reaction force will enable you to utilise minimum force with maximum effect on your opponent.

UNDERSTANDING THE THEORY OF POWER

Written by Senior Master Raymond O'Neill VIII Dan

BREATH CONTROL - Hohup Joojool

Breath control in Taekwon-Do is vital when applying any Taekwon-Do Technique, many students believe that breath control is only used when performing patterns, however it is fundamentally critical whilst sparring also. The correct use of breath control will stifle a blow when sparring, and thus will allow the student to continue sparring without stopping through being hit.

Breath control is applied through the tightening of the abdominal muscles at the point of impact, it is done by stopping the breath in a quick sudden instant, thus tightening all muscles, at the point when attacking an opponent it is vital to apply this correctly and at the instant of attack, thus making the body hard and able to withstand an immediate counter attack.

SPEED - Sokdo

Speed is the most important aspect of breaking and or attacking, basically power must be produced and to put it into simple terms $Power = Mass \times Acceleration$. The faster you accelerate your attacking tool, the more power is produced. A ball may bounce off a glass window, yet if the ball ie it's Mass is then kicked or accelerated, the same ball has increased it's weight through movement or acceleration, thus having a far greater contact force, thus breaking the glass.

When students are power testing, it is vital for the student to remember to increase their mass's speed, in doing so the target or wood/brick etc, will be struck with huge amounts of force.

The Hand or Foot within itself will cause no harm to anyone, simply accelerate it and it will have a devastating effect on anything it makes contact with, the faster it is accelerated the more power it produces.

In summary, if all aspects of C.R.E.M.B.S. are applied when ever the student performs Taekwon-Do, students will have a better understanding of how to get the best out of each technique, and will become more confident in their actual use and application, too often students neglect to learn the Theory of Power and often feel frustrated at the lack of performance of their techniques. Understanding the Theory of Power will certainly rectify their doubts.

