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A look at speed
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There are many concepts that are central to solid kung-fu training. At this stage of my learning, it is vitally important that I come to an understanding of the relationship between speed and power. In the following paper, I will look at the concept of speed and I will ask the following question: "What is the relationship between speed and power, and how do I use my body in the most efficient way possible to demonstrate explosive speed and power?"

I would like to look at speed from two perspectives. The first perspective is moving from a dead stop to full explosion without external resistance. The picture that we most often use for this type of movement is the start of a one hundred-yard dash race. The second perspective is moving in such a way so as to exert power against an object of resistance. A picture for this type of movement could be pushing or sparring against an opponent.

When we look at the first perspective, that of movement without external resistance, we find a group of essential principles that are basic to executing an explosion from a dead stop to full speed. First, the physical structure of the body must be set up in perfect anatomical alignment. The skeleton must be aligned. We could call this the external structure. Second, the muscles and tendons of the body must be set up properly. This we could call the internal structure of the body. Learning how to set up the external structure can be learned relatively quickly. Through proper standing training just about anyone with discipline and the ability to learn can master this requirement. Mastering the second requirement, that of internal muscular and tendon coordination, is harder and takes a deeper level of understanding.

Developing this type of understanding of the internal structure takes more than simple discipline and hard work. It takes the ability to learn on what I call the subtle body level. This is a level of understanding that requires something different than intellectual capacity. In fact, I believe that the only way to access this type of understanding is to possess the ability to relinquish the reliance upon intellectual conceptualization and learn in a completely different way. As we learn about the subtle body movement of muscles and tendons we develop a type of awareness that I believe is a special component of kung-fu training.

It would be misleading to characterize this awareness as spiritual or meditative. I think these descriptions take us right back to the realm of intellectual conceptualization. Perhaps we could refer to subtle body awareness as *athletic awareness*; an awareness of how the internal structure of the body can be most efficiently put to use for maximum speed and power. When you are capable of this type of awareness, your body movement will demonstrate it. In other words, the first off the blocks, and the first over the finish line demonstrates the deepest awareness - which is simply skill, speed and power. In this way we can say that there is no separation between awareness and demonstration. They are one.

When we possess proper skeletal alignment and combine it with deep athletic subtle body awareness we can move with speed and power. There is, however, another area that is crucial to the development of explosive speed. This is the realm of the nervous system. Every runner on the track in our one-hundred yard dash may possess the exact same subtle body awareness of the internal and external domains of the body, but the one that wins will inevitably have the highest level of control over the nervous system.

This individual will be able to literally make his or her nervous system “fire” on command.

The best way to describe this phenomenon is to think of how we would react if suddenly confronted with a lion that had us in his sights for a meal. We would explode into action, and without any intellectual work of any kind, run for our lives. It is our nervous system that is responsible for this type of explosive, non-cognitive movement and it is easy to understand how this type of speed is different from normal speed.

Gaining access to this type of nervous system control is a fundamental goal in the kung-fu training. How we train for this is very difficult to describe, but we can say that for real speed to emerge in our bodies we will need to combine proper skeletal alignment and athletic awareness of the muscular/tendon system with control of the nervous system.

Now that we have looked at the first perspective on speed and power we can begin to look at the second; using speed and force to exert power against an object of resistance. In this area, the principles of skeletal alignment, athletic awareness and nervous system control still apply. They are the foundation. What we must expand upon to understand movement against an object of resistance is this concept of nervous system control and how it applies to the system of nerves throughout our entire body.

The key to this movement is understanding the relationship between exertion and rest. Specifically, we refer to this type of understanding as mastering the efficient interchange between muscle groups from a place of rest to full exertion to rest, to exertion and so on. Part of this brings us back to our subtle understanding of the internal workings of the body from an athletic point of view and of course to exploding the nervous system. But when an object of resistance is included we need to think about more.

The critical piece here is learning to maintain nerve sensation when exerting force. This is much more difficult than it may seem at first glance. Instinctively, we use tension to exert force. I tighten up my arm and fist to hit you, or I tighten up my legs and chest to push you over. While this represents a type of power, namely my pure force pushing over your pure force, it does not represent speed and the *efficient* use of power. For speed and efficiency I must feel your tension and your relaxing at the same moment that I move against you.

If we are actually touching, like when pushing in push-hands, and I want to demonstrate real speed and efficient use of power, I will at all times be aware of your body. This awareness will not be in my “head” in an intellectual way. The nerves in my arms will be sending signals through my nervous system telling me which muscles to exert and relax and how to work the angles of joints and direction throughout my body. The quicker and more instinctual the signaling, the faster I will be able to respond to your body. This movement of nervous system signaling and body response creates speed and power.

As my response time improves, I will be able to move with more speed and exert more power. My goal is to make you helpless, not by crushing you with brute force because my arms may be stronger, but because my response time to your movement is faster. In every moment, I will have your body in a place of weakness and mine in a place of power. Or we could say that in every moment I am at least one step ahead of you.

In conclusion, I want to stress a few key ideas that have emerged in our look into speed and power. First, the intellect will never bring us to the deeper levels of the training. When we speak of subtle body awareness and nervous system control, we are not referring to a type of intellectual understanding. We are pointing to the capacity to access the internal system of muscles, tendons and nerves in the body with a thought

that in turn can be demonstrated in activity. This means that at this level, thought and action can not be separated. In other words, whatever level of awareness I possess I will be able to demonstrate. If I can not do it, I lack the awareness.

Second, I like to refer to this specific type of awareness as athletic awareness. Great athletes in any sport master a type of athletic awareness that fits their sport. Elite surfers, for example, have developed a high level of subtle body awareness and nervous system control. This awareness is what allows them to generate incredible levels of speed and power with elegance and efficiency. This is possible because, when they are on the wave, there is no separation between their minds, their nervous system and their muscular/tendon system. This state of athletic awareness is what makes it possible for them to master giant, powerful and dangerous waves. They are not *thinking* about how to generate speed and power; they are simply creating it through a type of mastery with their bodies.

In the kung-fu training, we are also seeking this type of mastery. Our work is designed to unify our minds and our nervous system with our internal system of muscles and tendons. As this unification grows, it increases our speed and capacity to demonstrate power. This is what makes the awareness or unification so concrete. Nobody can really talk to you about how much they know about speed and power. They can only demonstrate what they know, straight and simple.