

Art of War, Wildland Fire.

Sun Tzu's "The Art of War" is a very fascinating read. I have known folks that have tried reading the book only to come to hate it as they claim it makes zero sense. I suppose, for them, that would be true if you (they) are limited in your (their) critical thinking capacity.

The Art of War philosophy is one that can be adapted directly to the warfare of fighting wildland fires. We see by Sun Tzu's examples of how we continuously lose this battle each and every year on major campaigns that last for months only to die out when as Sun Tzu would say that every competitive situation depends upon the unique relative position of the competitor within the larger competitive environment.

The key for us is Environment & In this case, Fire is our competitor.

The only significant difference is that there are no five flaws of a commander to exploit. We only have under Sun Tzu's description of war with such a foe is Tian, Di, Tao, and Fa. Those are The weather or climate (tian) and the Di (earth, ground) which is how Sun Tzu describes where we fight and what we fight over. Then we have the Fa which are the methods. Di, in other words it is the territory in which the battle is taking place. So how many times do we wage battle against a fire in un favorable conditions? How often does this cost us? How often does this slow us down to the point that movement becomes less coordinated for us, more costly, unable to hold less and less ground? In this case, if you understand Sun Tzu, putting those together you have the ability to understand that the time and place can be better chosen by you. Tian Di. Think of Fire Weather as a cycle that changes over time, this is the Tian portion. The Di or earth portion is where you want to see where the battle can be waged in your favor! Tian Di together is now the time and location of the event. (added : Fire must have oxygen to survive as humans, therefor you can kill it).

Carrying this over to wildland fire, you can have a favorable climate, but not favorable ground, you can have favorable ground but not a favorable climate, or you can have favorable ground and climate but not time. Using Sun Tzu's principles the only way to have all three is to understand the competitive environment to which the foe acts and force him to come to you on your terms so that you have all three. It is knowledge that allows perspective and this allows one to Foresee. The ability to foresee allows better movement and leads to better positioning.

The purpose of Sun Tzu's philosophies is that you want to seek positions that are so powerful that no one challenges them. A bit different in fire fighting, however, you could equate this to seeking a position of advantage to where it is exceptionally difficult for the fire to continue its advance, loses in intensity or both.

Sun Tzu also says that fighting opponents openly is usually the failure of strategy. Openly in this case does not mean in open space. It would mean openly engaging in a position that is more of a strategic advantage & benefit to the Fire and not YOU.

Sun Tzu also states, and is probably one of the more important elements, that success does not go to or belong to the strongest or most aggressive; rather to those that best understand their situation and what their alternatives are! As an example of this tao, many times when I teach hydraulics I speak to students of designing a hose lay that does not simply get "some" water to your location, I say to base it off of the tactical objectives. This is a requirement of every action in the IRPG. Yet it is the most often violated and broken rule in the IRPG (#3) when it relates to hydraulics and engine use. Many have miss-understood the teachings of hydraulics when it is said a hydraulic operation, for example, will fail

You (subjectively) have a fire producing 2,700 Btu per square foot, and moving at 1.4 feet per second, this is generating 3,960Btu every second. Your competitive environment is allowing this fire to have a fire line length of 1,500 feet. The Btu being generated is 5,941,350 Btu every second. Since having no knowledge of this because the Tao (fire-fighting philosophy) you have is flawed because the knowledge of hydraulics (in this case) is deemed un-important, you continue to string out 20,000 feet of a hose-lay that is only going to be getting "some" water to your area. Thinking 20,000 feet of hose, with a 1" nozzle at the end of a type 3 producing around 350Psi, you think you have just proven someone wrong and that you can in fact get water. You obtain 19gpm on level ground near the engine. (you have 500 feet of terrain to fight, so your gpm further diminishes over distance, it is now at 7gpm by the time it arrives at the nozzle). However, you do not KNOW this as your pump panel is still showing 350psi. The folks at the nozzle say they have water. That 7gpm is only able to absorb $7 \times 8.34\text{lb/gal} = 58.38\text{lbs}$, $58.38 \times 1,123\text{btu/lb} = 65,560\text{Btu}$ per minute. The fire is producing over 5 million every second! Once you begin to open more nozzles you lose more water, because your secondary Tao on the use of hydraulics is flawed as well. It is again one thing to be able to string hose for miles thinking falsely to yourself you did the impossible regarding the previous hydraulics instruction, It is yet quite another to pump them to the demand required by the competitor! The Tao under Sun Tzu is the foundation to success ONLY if it is based on the knowledge of all factors involved for the battle to which you are about to engage. That is knowledge of yourself, your abilities, the environment, the fuels, the competitor, the tools, the soldiers, etc etc. If you miss anyone of the elements involved in a battle you are making un-informed decisions and un-informed decisions will cost you time and position or possibly lives. We make the same mistakes with aircraft as well.

This would require 634gps. Not 7gpm! However, there is a method to allow for this to be tackled but that is not the purpose of this writing. (see FireBridge).

I personally see a lot of strategy that can be changed and it would be much simpler than going after a real live opponent as well as easier because we are dealing with a completely predictable enemy, we not only know ourselves but we know the enemy, we know what it needs and we know how to starve it.

However, Sun Tzu says that movement demands proper timing and with that, Sun Tzu says to avoid un-necessary conflict. How much of this have we engaged in over the years? There are mental skills and material skills.

Fa, in Sun Tzu's philosophy is the laws or methods. They are the rules, organization and systems that define an organization and its techniques for operation. If we are so rigid in a system and law that never allows for change or adaptability to meet an opponent, then we can never truly be expected to win. Methods are the result of a leader's decision, which, are based on their Tao, which is from their knowledge of something FIRST. Allowing one self to become concerned with only one element of a competitor (Fire) to which they are about to engage in battle with will cost them dearly if they do not know how to engage all elements of them. If you regard an element as being un-important and fail to educate yourself of such, then you do not regard it, when you do not regard it, your tactical decisions do not account for this and then only partial information is being used to formulate and base your decisions on. History in fire has proven this will cost you.

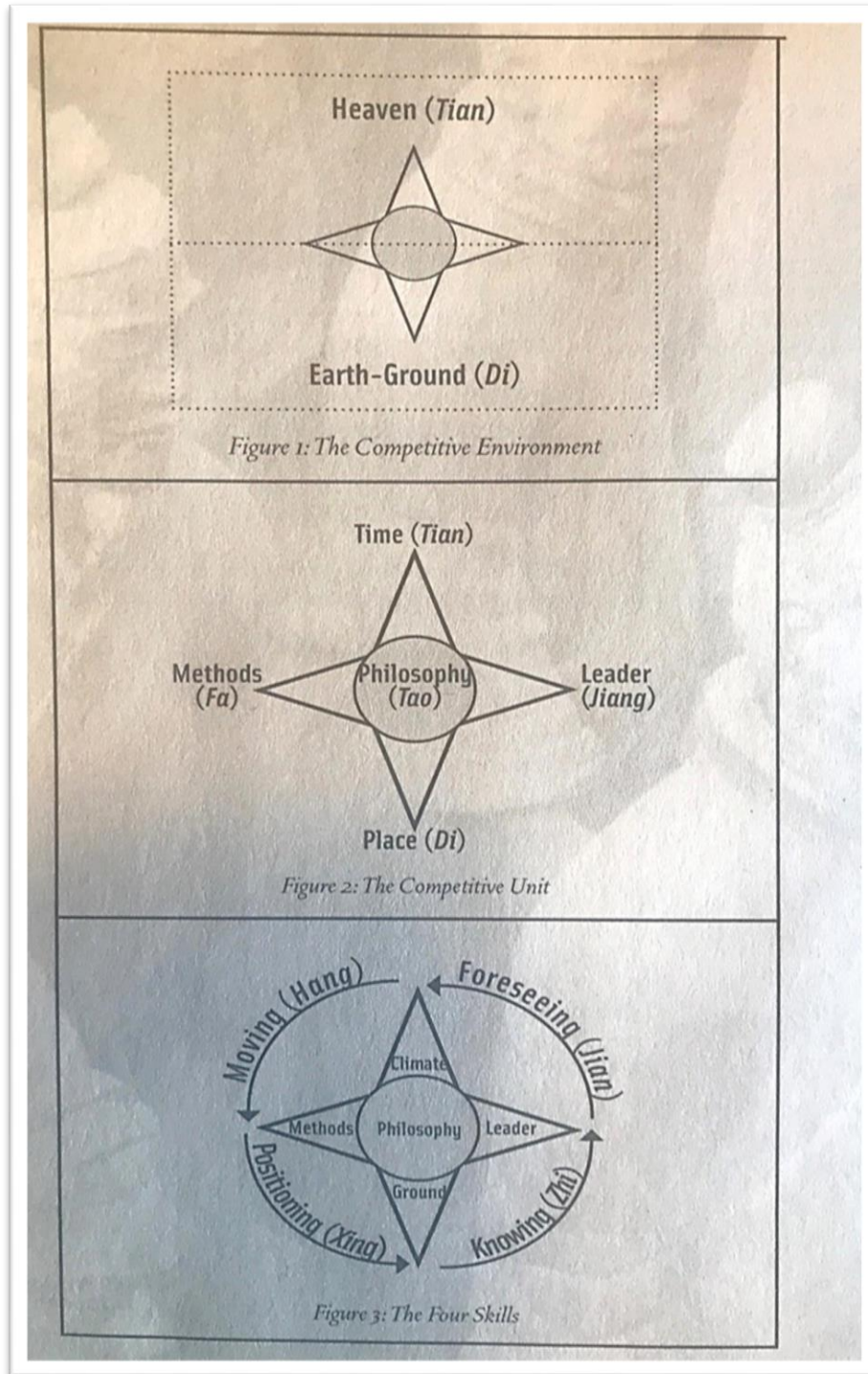
Tao, or philosophy, is the idea around which a specific strategic position is organized. The philosophy also provides the focus, or completeness. Hence, this philosophy holds the organization together.

Knowledge is the most important skill under Sun Tzu's philosophy, from it, all other skills are developed and the most critical. If your knowledge is incomplete, either by choice or circumstance, then you will have a flawed Tao(philosophy or ideal), and therefore your Fa, (methods) will be flawed, forcing you to have or seek unfavorable Di (positions, territory), that leads ultimately to your failure on the battle field.

History has proven that all who engage in battle and do not take heed to Sun Tzu's principles...FAIL.

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From the Art of War,