

# Starting Strength

## The Coach's Cue Breaking the OODA Loop

by  
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### Lessons learned from decision making in a conflict environment applied to coaching

“To comprehend and cope with our environment we develop mental patterns or concepts of meaning. The purpose of this paper is to sketch out how we destroy and create these patterns to permit us to both shape and be shaped by a changing environment.”

– Destruction and Creation, John R. Boyd, 1976.

OODA stands for Observe, Orient, Decide, Act. This concept was first coined by military strategist and USAF colonel John Boyd. It has since become a useful model for any decision making process, and most particularly decision making during conflict. Boyd's goal was to “actively shape and adapt to the unfolding world we are a part of...” (*A Discourse on Winning and Losing*). When circumstances shift around us, we need to adapt our mental models to the new circumstances. Boyd drew from Godel's Incompleteness Theorem, Heisenberg's Uncertainty Principle and the Second Law of Thermodynamics to describe the inherent uncertainty and ambiguity of the world we live in, and proposed the OODA Loop as a way to adapt to that uncertainty and ambiguity through the creation and application of new mental models.

Boyd came up with the model of the OODA Loop to describe a tool for faster and more effective interaction with your environment. “Observe,” the first stage of the loop, is the idea of turning a closed system into an open one. Observation is best thought of as situational awareness; instead of assuming you know what is there based upon expectation, you must observe what is actually there. The closed system of using your past experience to interpret a situation becomes an open system when your observation reveals new or unexpected aspects of the situation.

“Orient,” the second stage, has to do with being mentally flexible enough to have multiple models and to use the appropriate model for the situation. We continually move between using a concept to sharpen our observations and our observations to sharpen a concept, between observation and orientation. “The result is a changing and expanding universe of mental concepts matched to a

## *Breaking the OODA Loop*

changing and expanding universe of observed reality.” (John Boyd, *Destruction and Creation*). “Decide,” the next step, describes the hypothesis we make, based upon the mental model the actor thinks best suits the situation. Lastly, we “Act.” We test our hypothesis.

These steps are a useful tool for any decision making process. However, when we add the element of conflict to the execution of the OODA Loop, we must also consider tempo, or the rate of speed at which the actor processes the four steps. The individual or group that can rapidly cycle through several consecutive OODA Loops will have an advantage over a slower opponent. Further, rapid cycling through the OODA Loop can derail the opponent’s OODA Loop, causing the opponent to be stuck in the “observe” portion of the loop, never really able to respond at all. Tempo is also a consideration for coaches, who must deliver cues to a lifter while the lifter executes the lift. A coach needs to be able to communicate a complex concept to a lifter during a lift that could take as little as a fraction of a second.

The OODA Loop is a useful and elegant tool for any decision making process. Let’s look at how it can fail. A breakdown in the OODA Loop during a self-defense situation is commonly referred to as a freeze. The simplest description of the freeze is “not moving under stress.” (Rory Miller, *Mediations on Violence*). This often happens in a conflict situation, but it also applies to any decision-making process done under pressure. The person is not capable of acting at all. Another kind of freeze that is very common is “behavioral looping,” which happens when the actor repeats an action over and over even when it is clear that it is not working. This happens in conflict all the time. It also happens during coaching. When the use of one cue does not result in a change, the coach needs to find another cue. It’s very easy to get stuck just shouting the same cue more loudly during the set, even though you can see the lifter isn’t responding.

There is a finite limit on how fast a person can act, make decisions, or move. As this limit is approached, relying on executing the steps of the OODA Loop faster than your opponent becomes less and less realistic. While the coach and lifter are not opponents, a lift, or even a set, does happen in a very short period of time. During a set, the coach cannot waste time on the two middle parts, Orient and Decide – which, interestingly, also happen to be the place during the OODA Loop where most people freeze in a self-defense situation.

In the response to an attack, the first timewaster occurs in the Orient portion of the OODA Loop. One common reason for the freeze at this point is that the individual is trying to gather too much information. The second timewaster is the Decide portion. As you are deciding how to react, your attacker has already hit you several times, creating new actions that you must Observe and Orient to before you can Decide how to respond. The attacker has gotten inside your OODA Loop, and to prevail, now you must somehow get inside your attacker’s OODA Loop.

The freeze is a very clear example of a failure on the part of the actor to fully use the OODA Loop to adapt to a changing environment. But in some circumstances, events just move too quickly for the actor to have enough time to go through those four disparate stages.

Now, what if there were a way to cut through the OODA Loop entirely? What if we could cut through the cycle by creating a single concept that stands for a number of different actions? Could we eliminate “Orient” and “Decide,” skipping right from “Observe” to “Act?” Rory Miller, author of “Meditations on Violence” writes that the people he knows “who consistently do well in ambushes or have often beaten the maxim that action is faster than reaction have one thing in common: they have a group of techniques that form the core of their strategy that they do not see as separate techniques.” They have all developed strategies that rely on one concept standing for many different techniques. For example, there’s a concept in Filipino martial arts called “defanging the snake,” which refers to

## *Breaking the OODA Loop*

attacking the weapon arm. The practitioner who relies on defanging the snake will do it hundreds of different ways, but in his mind he's just doing a single thing every time.

This is exactly what we do with the coach's cue.

The cue is a powerful way to help the lifter attain a closer approximation to a physical model. It happens during the execution of the lift. The cue improves positional awareness and the ability to sense the speed and relative acceleration of the movement. Cues are one or two words that are shorthand for a more complex concept, used to help the lifter change something about the movement pattern. The coach will have discussed the aspect of the lift that needs to be changed with the lifter prior to using the cue in real time.

Because the lifter is under the bar, there is a unique and powerful combination of the feedback of the barbell itself in relation to gravity and the structure of the body, and the distillation of the teaching that has happened prior to the set. Delivering the right cue at the right moment can have a profound effect on the lifter's ability to produce force efficiently.

While teaching happens both before and after the set, the use of the coach's cue occurs during the set. This means that there is a very short time during which the coach must first see any issue with the movement pattern, and then relate that issue to the lifter. This must all occur within a short enough time frame that the lifter can make an adjustment in the middle of a set, or even in the middle of a rep. The coach will have already communicated to the lifter the complex concept the cue stands for, before the cue is given in real time. During the set, the cue must happen at the right time to enable the lifter to make the adjustment during the rep.

The cue is a one or two word phrase that communicates corrections for several movement ideas at the same time. The concept of hip drive is one such phrase, and it can even be shortened to "Hips," or "Drive." The phrase might be very specific to the lifter and not make any sense to anyone else. It could just be a command "Now!" The important elements of the coach's cue are that it is short, easily deliverable, and corrects a complex problem.

A good physical model makes sense. It obeys principles of physics, mechanics and biology. The coach must understand the model, so as to be able to create a framework for the lifter's understanding. For each lift, the coach starts by communicating the physical model of the lift to the trainee. This model does not change over time. Instead, over time, the coach helps the trainee refine his sense of the model, helping him continue to reproduce it faithfully as the load increases.

The coach relies both on teaching, which is done between sets, and coaching, which is done during the trainee's execution of the set. The teaching that happens in between sets is not unlike teaching any other physical skill. There is time to communicate complex concepts and make multiple corrections. During the teaching process, the coach, together with the lifter, will develop multiple mental models, which are distilled into cues, which correspond to the various aspects of the lift that all need to be present for the entire physical model of the lift to be correct.

Now, during the set, any communication that happens must occupy an extremely short period of time. Single word cues are simple, direct and efficient. These cues stand for the complex concepts, or mental models, developed during the teaching process that occurs between sets. During this teaching process, the coach not only develops cues, but also simultaneously develops better perception of the movement being coached, so that instead of seeing a number of separate problems with the lift, several problems can be understood as one.

For example, the lifter might not be deep enough, and also might be leading with the chest. The coach will see this as a whole pattern of movement, and will, together with the lifter, find the cue

## *Breaking the OODA Loop*

that corrects that whole pattern, instead of trying to first correct one issue and then the other. This skill helps us with the issue of the freeze that can occur in the “Orient” portion of the OODA Loop, which happens when the actor is trying to gather too much information. Instead of seeing a bunch of disparate mistakes, the coach that can see the movement as a pattern or as a whole can find the right cue to fix the whole thing, skipping from “Observe” to “Act.”

With a little experience, a coach will also develop few different cues to use for the same idea so that when something isn't working, a slightly different perspective of that idea can be revealed to the trainee. (This relates to Boyd's concept of multiple mental models.) We can go straight from “Observe” to “Act” with an arsenal of cues that each serve as a different way of communicating the same complex concept, and do so in one or two words. We avoid behavioral looping this way; when one cue isn't having a visible effect, we can use another. We will have developed these cues while working with the lifter during the teaching that we do in between sets, so that they will be meaningful to the lifter.

Communicating a complex concept with one or two words, and being able to have multiple ways to communicate the same concept, are together both powerful tools to cut right through the OODA Loop.

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