

BOYD'S O-O-D-A LOOP

AND THE

INFANTRY COMPANY COMMANDER

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Many company grade infantry officers have probably never heard of Retired Air Force Colonel John Boyd, his way of thinking, or his contribution to the art of warfare. COL Boyd was a fighter pilot who fought in World War II, Korea, and Vietnam and was instrumental in developing the F-16. Today's battlefield is constantly changing, based more in urban terrain than

ever before, and requires a canny ability to deal with civilian populace, command and control decentralized Soldiers, and fight a tough enemy at the same time. Faced with new tactical problems set in the environment of Army transformation, what would an old fighter pilot have to teach us? Simply put, what John Boyd can teach you is how the enemy thinks, how you and your Soldiers think, how to train more effectively, and how to control your tactical environment.

The first time I heard about an O-O-D-A loop was during a war-game, when a major talked about, "getting inside the enemy's O-O-D-A loop." My interest was peaked, and I asked the S-2 and a couple of fellow commanders what he was talking about. No one had a clue. With a little research, I found articles on how John Boyd was the next Sun-Tzu, how many businesses have adapted the O-O-D-A loop to marketing and dealing with competition, and how it has revolutionized Marine Corps tactics. So what was this great idea that had done so much, and how did it apply to me as a company commander? This is what

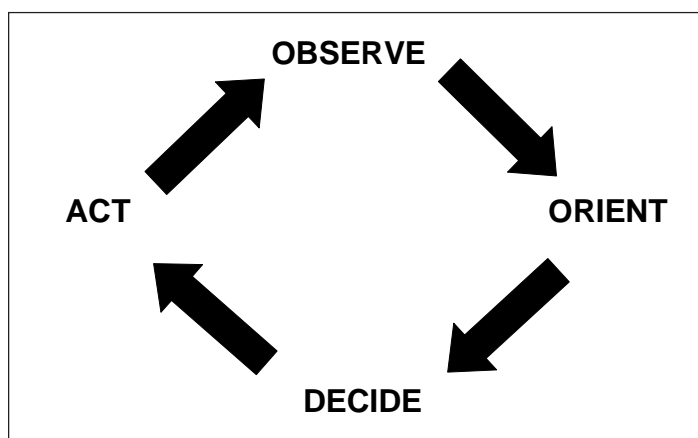


Figure 1

I found: The O-O-D-A loop is the constant revolving decision cycle that the mind goes through every second of every day in dealing with all tasks from mundane to the most complicated. The cycle follows the pattern of Observe-Orient-Decide-Act (Figure 1). This cycle applies to friendly forces, enemy forces, and noncombatants alike. It is how the mind deals with its outside environment and translates what it sees to action.

Let us use one infantry Soldier in Iraq as an example. This Soldier is the number three man of a fire team that is lining up in a four-man stack to clear a room. He is observing his team leader, he checks to see if his weapon is on safe and that his thumb is poised on the selector switch and his tactical flashlight on his weapon is on. On the signal the first two men enter the dark room with our Soldier on their heels. Shots are fired as the first two men enter. As the Soldier enters the doorway, it is dark and he can only see what his flashlight illuminates. As he enters, he sees a person in his sector with a weapon in his hand. This Soldier is now in the first phase of an

O-O-D-A loop. He is making observations of his environment, and his mind is looking at the tactical situation unfolding before him. Guidance and control has been placed on his observation though his sector and his movement into the room. Since he is a well-trained Soldier, his mind takes less than a split second to enter the next phase.

As the Soldier orients to eliminate the threat, his mind is affected by many factors. Most

importantly, his mind analyzes and synthesizes the information that he is presented. Some of the questions that may be going through his head include:

- "Is that the number one man shot on the ground in front of me?"
- "Is that a friendly noncombatant?"
- "Did my team leader move to the wrong position and is he in front of me?"
- "Am I standing in the fatal funnel?"

In this phase, the Soldier's previous experience and training shapes how he orients. How many times has he faced this situation in training and in theater may shape what he does next. At this critical point everything that makes up the Soldier is tested. Every experience he has had from his upbringing, school, basic training, and pre-deployment training, and previous combat experience is tested. The quicker the Soldier can make a sound decision and get through this phase the more likely he is to survive. This is the phase where indecision, timidity, and doubt can cause him to make a fatal error. In this split second he has eliminated his doubt, gone through

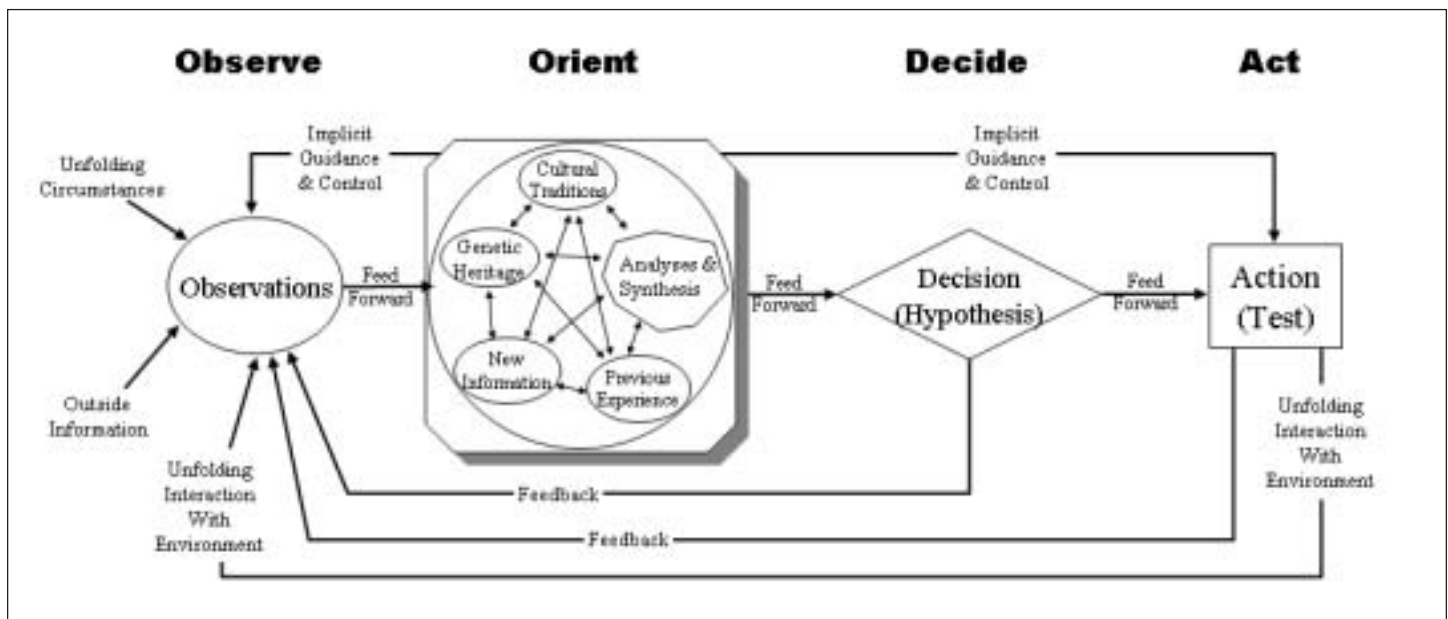


Figure 2

analysis in his head, decides to rotate the selector lever and fire a controlled pair at the insurgent.

This decision he is made is a hypothesis his mind has determined to be the best course of action to survive the situation. As he goes into action, the hypothesis will be tested. Since he is well trained, the Soldier acts almost effortlessly as muscle memory takes control. The Soldier brings the weapon up, fires his controlled pair and puts the weapon back on safe. As he watches the enemy, it looks like he is moving in slow motion. His hypothesis is successful. He moves to his point of domination in the room and starts the process of observation all over again. Whether he knows it or not, the Soldier just experienced a complete O-O-D-A loop (Figure 2) and has come out alive because he did so quicker than his enemy.

If the enemy had observed the fire team outside, oriented his weapon at the doorway, decided to fire a magazine on full automatic and acted on it as soon as he saw our Soldier come in, our Soldier would have met a different fate. The things that made the difference for our Soldier was that he was able to complete the loop quicker and more efficiently than the enemy. Even though the enemy has not received the training our Soldier did and does not have the equipment he has, if he went through the loop quicker or with more information he would have easily won. The cycle that COL Boyd went through in his fighter plane in Korea is the same that our Soldier went through in Iraq, and the same that a platoon leader or company commander goes through in every tactical situation.

Most of the vehicles for the commander to train to maximize his Soldiers O-O-D-A loops are already integrated in the Army's training architecture. Battle drills conducted in realistic and varying conditions reduce time needed to go through the decision cycle. Timed events from the Expert Infantryman's Badge testing to weapons qualification work to minimize the time it takes a Soldier to reach a decision that will get them out of a situation alive. The Soldier in our example spent hours on the reflexive fire range and was able to engage quickly from muscle memory. Timeliness and

speed of action is key.

When the enemy decision cycles are overlapped with friendly decision cycles in combat contesting will translate to bullets going in both directions. In this dynamic environment, the room that our Soldier was sent to clear may have been the right room five minutes ago but would be fatal mistake now. This fact may not become apparent until the team arrives at the doorway. Leaders need to make decisions quickly, but flexibility must be maintained to adjust to an ever-changing environment. They also must have the ability to exercise initiative within the commander's intent to capitalize on success. Constant observation and situational awareness must be trained in leaders to form correct orientation, decisions, and actions. Again, the quicker the leader can go through his O-O-D-A loop with the units situation in mind and come up with appropriate actions, the more tactical success he will have. When operating inside an opponents O-O-D-A loop, Boyd stated, "It seems that the enemy is moving in slow motion." This perceived time-lapse creates a situation where leaders may need to use tactical patience to wait for a more appropriate time to act. If the enemy is expecting an attack and the attack never comes or occurs somewhere else, the commander has successfully interrupted his cycle. Through flexibility, a leader must be able to temper tactical patience with initiative to create an unrecognizable tactical tempo to the enemy and constantly operate within his O-O-D-A loop.

A commander can maximize his unit's effectiveness by looking at his O-O-D-A loop and more importantly the O-O-D-A loop of his enemy. The commander is given a take on the enemy from the S-2 brief and paragraph two of the battalion operations order. The commander develops his plan based on this and his personal experience on what the enemy will do. The enemy almost never acts exactly as he expects. Even if it is only in his mind, the commander needs to develop contingency plans, branches, or sequels to deal with the changing environment and minimize the enemy's effect on his O-O-D-A loop. To develop an effective plan or execute an effective plan, the commander should constantly

analyze the enemy's O-O-D-A loop.

The first question to ask is: What will the enemy observe, or what is he observing now? Ideally, the enemy never observes the action you take and is taken completely by surprise. Mitigating the enemy's observation of your forces can be accomplished by attacking at night instead of the day. It can be accomplished by attacking from the rear, flank, or the least expected direction. It could be accomplished by attacking behind the concealment of smoke. Often the observation of the friendly forces may be inevitable. In these cases, feints and demonstrations are key to denying the enemy accurate observation. The commander should not create an identifiable pattern that the enemy can use. This also applies to the enemy's Intelligence Preparation of the Battlefield (IPB). Without solid intelligence, the enemy will have difficulty developing a plan. Denying the enemy the ability to observe, or causing the enemy to be unsure of what he is observing gets inside his O-O-D-A loop and increases the effectiveness of the commander's plan. If the commander denies the enemy the ability to accurately perceive the situation, the enemy's O-O-

D-A loop will have no where to go. His orientation, decisions, and actions will always be erroneous.

The next question: How will the enemy orient, or how is he oriented right now? Boyd's definition of the orient phase encompasses how the enemy is deciphering what he observes in the terms of his cultural traditions, analysis and synthesis, previous experience, new information, and genetic heritage. This is internal to subject going through the O-O-D-A loop. The commander analyzing the enemy should strive to understand the factors that the enemy will use to make his decisions to predict his actions.

What will the enemy decide to do or what has he decided? What has the enemy done in the past that has worked and why? Will he do it again? The commander must look at what options he has left his enemy — will he fight or flee? What is the enemy trying to accomplish and how has he done so in the

past? Once the action has occurred and the tactical environment has changed, the commander must be able to quickly observe and go through his decision cycle based on the new changes.

The Boyd decision cycle is a way of looking at how people act in their environment. If a commander can train his Soldiers to minimize their reaction time to tactical problems, train leaders to make sound and timely decisions, and understand and interrupt the enemy's decisions cycle, he gains the advantage. If a commander is experiencing uncertainty or confusion and does not act, he gives the enemy who is willing to observe and act the advantage.

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