



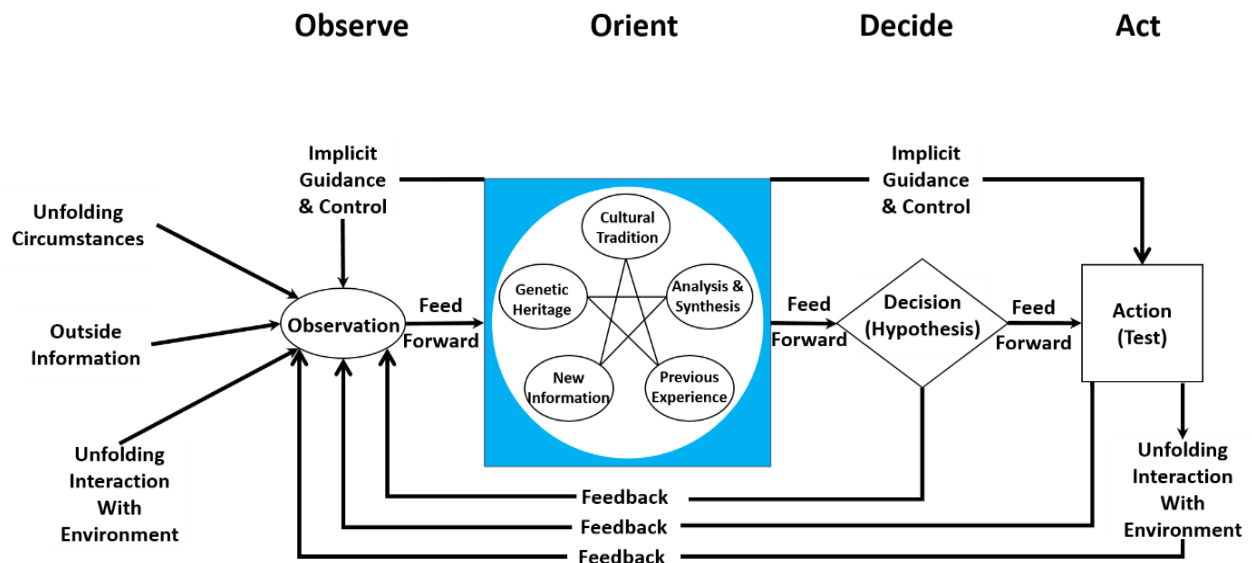
How to Speed Up Your OODA Loop?

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The OODA Loop?

Acknowledging that even an acronym like DOTMLPFI is not well understood in our HQ, I would not be surprised if only a few people have ever heard of the OODA Loop, even though it is considered one of the latest revolutionary concepts in the art of war. And to be honest, it is not even a loop. It is an almost chaotic network of interactions representing the decision-making process, but we humans like to keep it simple, so we call it a loop.

According to the inventor Col (USAF) John Boyd, decision-making occurs in a recurring cycle of Observe-Orient-Decide-Act, the OODA Loop. For a long time, I thought it was the military, albeit modernized, version of the older Shewhart cycle, also known as the Plan-Do-Study-Act (PDSA) cycle. Dr W. Edwards Deming improved this latter cycle and made it world famous as the Plan-Do-Check-Act (PDCA) cycle. But my simple approach was a mistake.



The above illustration of the OODA Loop (or Boyd's loop) shows that all decisions are based on observations of the evolving situation tempered with implicit filtering of the problem being addressed. These observations are the raw information on which decisions and consequent actions are based. The observed information must be processed to orient it for decision making.

Boyd said, the second O, 'orientation' – as the repository of your genetic heritage, cultural tradition, and previous experiences – is the most important part of the OODA Loop since it shapes the way you observe, the way you decide, the way you act. As stated by Boyd and shown in the 'Orient' box, there is much filtering of information through your culture, genetics, ability to analyse and synthesize, and previous experience.

Once oriented by making sense of the information, you make a decision ('D') in the form of a hypothesis or understanding. This decision will drive your actions ('A') with the understanding that you will influence the environment towards a positive outcome.

Utility theory (the basis of game theory) describes how decisions are made based on the perceived value of taking an action. The OODA Loop shows that prior to making a decision (the Decide phase), the person will first have to get information (Observe) and determine what it means and what can be done about it (Orient). In this way, the utility sought at the Decide phase can be altered by affecting the information the opponents receive and thus the cognitive model they apply when orienting to it.

The OODA Loop in Military Operations

Since the OODA Loop was designed to describe a single decision maker, the situation is usually much more complicated and worse than shown, as most decisions have a group of people observing and orienting, each bringing their own cultural traditions, genetics, experience and other things. It is here that decisions often get stuck, which does not lead to winning, since in order to win, you should operate at a faster tempo or rhythm than your adversaries, or better yet, get 'inside' their OODA.

The key is to obscure your intentions and make them unpredictable to your opponents while you simultaneously clarify their intentions. That is, operate at a faster tempo to generate rapidly changing conditions that inhibit your opponents from adapting or reacting to those changes and that suppress or destroy their awareness. Thus, a hodgepodge of confusion and disorder occur to cause the other side to over- or under-react to conditions or activities that appear to be uncertain, ambiguous, or incomprehensible.

With their familiar clues hopelessly scrambled, your rivals under pressure will usually try to interpret the mess from their accustomed perspective. While the confused rival struggles, the savvy commander quickly executes yet another set of manoeuvres, once more scrambling the parts and further feeding the opponent's confusion. Ultimately, Boyd wrote, the winner "collapses his [adversary's] ability to carry on." You win the competition by destroying your opponent's frame of reference. This because your adversaries will be unable to generate mental images or pictures that agree with the menacing as well as faster transient rhythm or patterns they are competing against. They have simply not enough time to orient and make sense of the observations, resulting in decisions that are advantageous to us.

The proper mind-set is to let go a little, to allow some of the chaos to become part of your mental system, and to use it to your advantage by simply creating more chaos and confusion for the opponent. You have to funnel the inevitable chaos of the battlefield in the direction of the enemy.

It is easy to understand that an entity (whether an individual or an organization) that can process this cycle quickly, observing and reacting to unfolding events more rapidly than an opponent, can thereby 'get inside' the opponent's decision cycle and gain the advantage.

Some people reduce, based on this 'getting inside the decision loop', the art of war to speeding up the cycle. This is a simple way to interpret the use of the OODA Loop, but it is misleading in its simplicity. There is a point where you can go too fast. You must give your opponent the time to react to what they think is happening to them. There is no use for further action if the other side only needs time to come to the inevitable conclusion. You don't need to shoot a decapitated chicken, just because it runs around. Does that mean that you have to sit and wait? No.

The deeper meaning of the OODA Loop

Frans Osinga argues that Boyd's own views on the OODA Loop are much deeper, richer, and more comprehensive than the common interpretation of the 'rapid OODA Loop' idea. Boyd developed the concept to explain how to direct one's energies to defeat an adversary and survive. Boyd emphasized that 'the loop' is actually a set of interacting loops that are to be kept in continuous operation during combat. He also indicated that the phase of the battle has an important bearing on the ideal allocation of one's energies.

Taking control of the situation is key. It is not enough to speed through OODA faster - that results in flailing.

According to Boyd, systems work well if the organization is focussed because of 'schwerpunkt', a German term meaning organizational focus. 'Schwerpunkt', Boyd wrote, "represents a unifying medium that provides a directed way to tie initiative of many subordinate actions with superior intent as a basis to diminish friction and compress time." That is, individuals decide and act locally, but they are guided by a keen understanding of the bigger picture.

In effective organizations, 'schwerpunkt' connects vibrant OODA Loops that are operating concurrently at several levels. Soldiers close to the action stick to tactical loops, and their commanders travel in operational loops, while generals navigate much broader strategic and political loops. The loops inform each other: If everything is clicking, feedback from the tactical loops will guide decisions at higher loops and vice versa.

Additionally, the loop doesn't require individuals or organizations to observe, orient, decide, and act, in that order, all the time. This may just take too much precious time. Think instead of the loop as an interactive web with orientation at the core. Orientation directly guides decisions, but it also shapes observation and action. At the same time, orientation is shaped by new feedback. An effective combatant, Boyd reasoned, looks constantly for mismatches between his original understanding and a changed reality. In those mismatches lie opportunities to seize the advantage.

And reality, Boyd understood, changes ceaselessly, unfolding "in an irregular, disorderly, unpredictable manner," despite your vain attempts to ensure the contrary. "There is no way out," Boyd wrote. "We

must continue the whirl of reorientation, mismatches, analyzes/synthesis over and over again ad infinitum." The OODA Loop persists endlessly. Instead of just speeding up, you should extend and enhance your understanding, your sense-making capacity.

Is the OODA Loop still valid?

The OODA Loop gives us a good insight on how people and organization take decisions, but its direct military application supposes a typical, centralized command and control. Confuse the enemy until the complete C2 falters, ending in futile, uncoordinated actions. A bit like killing a chicken by cutting off its head. The chicken will still run around for a bit, but in the end, it drops dead.

But does the loop help us in the case of a decentralized counterpart? In their book 'The Starfish and the Spider: The Unstoppable Power of Leaderless Organizations' the authors explore the characteristics and implications of decentralized organizations. The spider and starfish analogy refers to the contrasting biological nature of the respective organisms, starfish having a decentralized neural structure permitting regeneration.

The decentralized organization strives on the power of chaos, making the use of chaos the weapon of choice to render the opponent less efficient. Every person added to the organization makes it stronger and less prone to breakdown. When attacked, a decentralized organization tends to become even more open and decentralized. The chicken drops dead but is soon replaced by more and smaller chickens that are better adapted to fight you. Imagine Hercules fighting a variant of the Lernean Hydra that does not grow extra heads, but new hydras. In the end, even the half-god would have succumbed to this labour.

On the other hand, when attacked, a centralized organization, like the military, tend to become even more centralized. Reaching the 'schwerpunkt', as the accelerating force for decision-making, becomes harder. This centralization tendency makes the OODA Loop throughout time longer and less adapted to deal with the increased chaos by the attacks from a multitude of organizations with their own and different mental frameworks. The slowing down OODA Loop loses its grip on the increasingly complex environment, resulting in a multitude of enemies with faster loops getting inside the cycle. In the end, the spider will succumb to the starfishes.

Do we need another model to fight decentralized organizations?