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Droning On

Remote-controlled mayhem does not win wars.

By *[William S. Lind](#)*

When *TAC* asked me for a piece on military drones, I had to consider which variety of drone was most important: the drone aircraft, the drones who operate the aircraft, or the drones back in the Pentagon who think drive-by shootings can win wars.

Drone aircraft are simply model airplanes. It would be easy enough to construct one from parts picked up at a toy store. Kitbash a small video camera that can broadcast an image—some model trains now have one in the engine cab—onto a remote-controlled model aircraft big enough to carry it, and you have a useful military drone. (Paintballers take note.) In fact, you have the most useful type of military drone, a reconnaissance drone. For millennia, commanders have wanted nothing quite so much as an ability to see over the next hill. A simple drone can do that nicely.

In the Pentagon, “simple” is a bad word because it implies cheap. The Pentagon is not a military headquarters; it is a bank. Its main mission is to add to the money flow. Simple systems do that poorly. Therefore, American military drones have grown rapidly in complexity and cost, far beyond what a company or battalion commander needs to see over the next hill. The Predator is perhaps the most famous of a growing family of drone aircraft. Not only does it take pictures, it also carries air-to-ground missiles it can shoot with great precision out of the night sky at gatherings of Taliban fighters, compounds serving as IED factories, and Afghan wedding parties.

What’s wrong with that? Yes, we have to say “sorry” when a Predator turns a wedding into multiple funerals. But who would not want to be able to strike enemy targets swiftly and silently with no risk to an American pilot? Is this not military technology at its best?

To answer these questions, we must grasp a basic fact about war that the American military cannot understand, namely that there is more to it than putting firepower on targets. American military doctrine—with the exception of the Marine Corps—is Second Generation doctrine, sometimes called firepower/attrition warfare. Derived from French Army doctrine of the interwar years, it reduces war to putting fire on targets in a contest of mutual attrition: think Verdun. The French summarized it as “the firepower conquers, the infantry occupies.” Seen from the perspective of that doctrine, Predators firing missiles are entirely a plus. Other than those pesky wedding parties, they have no negatives. Remember, high cost is another benefit.

The problem, as the French discovered in 1940 when they faced a Third Generation German army with a doctrine of maneuver warfare, is that Second Generation doctrine is

deeply flawed. War is the most complex of all human endeavors. It can seldom be reduced to a mere contest in mutual attrition. Col. John Boyd, USAF, America's greatest military theorist, observed:

When I was a young officer, I was told that if you have land superiority, air superiority, and sea superiority, you win. Well, in Vietnam, we had land, air, and sea superiority, and we lost. So there is obviously something more to it.

Boyd went on to explore and explain what that "more" is. He posited that war is fought on three levels: physical, mental, and moral. The physical level, where Second Generation focuses, is the weakest. The moral level, on which guerrilla war centers, is the most powerful. And the mental level, the basis of maneuver warfare, lies somewhere in between.

The primacy of the moral level carries over from classical guerrilla warfare into Fourth Generation war, the type of war we are fighting in Iraq, Afghanistan, and, thanks to those wonderful Predators, in Pakistan. The defining characteristic of Fourth Generation is that it is multi-sided and many of the parties are not states. Some nonstate entities may fight for political goals, but many do not. Instead, their goals may range from martyrdom to loot to impressing the local girls. In the Fourth Generation, war moves beyond Clausewitz's politics carried on by other means. For many of the entities waging such wars, the moral level replaces the political. It is power on the moral level that brings recruits, money, good press, and, perhaps, victory.

In Fourth Generation wars, one of the most important factors on the moral level is what Israeli military historian Martin van Creveld calls the power of weakness. A state, especially a major power such as the United States, is incomparably stronger physically than its Fourth Generation enemies. The U.S. military has the fanciest weapons in the world, including the Predator. The Taliban, al-Qaeda, and the like are armed mostly with light weapons of World War II design. Our troops have the latest body armor, excellent medical care if they are wounded, and base camps with all the comforts of home. Our opponents fight in bathrobes and flipflops, usually die or are captured if wounded, and live the life of scavengers.

To themselves and onlookers, they are David and the U.S. is Goliath. In the 3,000 or so years that the biblical story has been told, how many listeners have identified with the giant?

Here we begin to see why Osama should have on his cave wall a picture of the Predator with the line under it, "Our best weapon." Maybe he does. Perhaps no other weapon so well represents the conflict between al-Qaeda's David and the American Goliath. The Predator strikes in the night with no warning. Its missiles can instantly pulverize an entire mud-brick compound. There is no defense against it other than hiding. If by a miracle our opponents shoot one down, they do us no injury. The drone operator sits in air-conditioned comfort in Tampa or some similar garden spot. With the Predator and with

airstrikes generally, Americans fight from a safe distance. Like the Trojan hero Paris, who was an archer, we appear to be cowards.

Seen from John Boyd's physical/ mental/moral vantage point, the Predator is a stunning success physically. It may terrify our enemies mentally. But on the moral level, it is a boomerang. Those on the receiving end say, "I'm going to get back at the murdering cowards no matter what it costs." Their families, friends, fellow tribesmen, and co-religionists around the world have the same reaction. The Predator calls forth its low-tech, Fourth Generation counterpart and nemesis, the suicide bomber.

Here we see the broader failing in the American military, an error that had its origin in the idea that war is a firepower-based attrition contest, but has since taken on a life of its own. That is the assumption, usually unstated but now so widespread that it underlies everything the Pentagon does, that wars' outcomes are determined by technology. The fact that complex technology is a great justifier of higher budgets may not be irrelevant to this notion's popularity.

Van Creveld's book *Technology and War*, a historical survey, concludes that very few wars have been decided by technology. Boyd sums up the reason: "Weapons don't fight wars, people do, and they use their minds."

One consequence of this fact is that most high-tech weapons systems have simple, low-tech counters. A classic example comes from the "McNamara Line" in the Vietnam War, a collection of high-tech sensors in the jungles that was supposed to pick up any Viet Cong movements. One sophisticated sensor was designed to detect human odors. The VC countered it by hanging buckets of urine in trees.

The Taliban's most successful counter to the Predator is of similar simplicity. They make sure that when they gather and thus provide a good target, they have plenty of women and children around. In effect, they say, "Go ahead, make my day."

Because complex weapons are expensive, they are usually in service for a long time, sometimes decades. Soon after their introduction, most if not all of their operating characteristics are known, especially in the age of the Internet. Our opponents can invent and deploy generations of simple countermeasures during the lifetime of one high-tech system. They are "outcycling us," in Boydian terms: they can go through many cycles of observing, orienting, deciding, and acting against our systems while the systems go through only a single cycle. Boyd argued that there are few more certain prescriptions for defeat.

In contrast, simple systems, such as those our Fourth Generation opponents rely on, can go through many Boyd cycles in a comparatively short time. We see this face on display in Iraq and Afghanistan with the deadly weapon we face, the Improvised Explosive Device. Our opponents continually and rapidly invent and deploy new generations of IED, with new warhead designs, triggering mechanisms, and camouflage techniques. The U.S. has a multibillion-dollar top-priority program to counter them, most of it focused on

high-tech solutions. (Again, think budget justification.) It has had small successes, but if you ask many of our troops what their mission is, they reply, “Driving around and waiting to get blown up.”

The disadvantageous time factor—no factor is more critical in war; Napoleon said, “I may lose a battle, but I will never lose a minute”—is compounded in hi-tech systems by the fact that their designers are engineers, few of whom have any understanding of war. War and engineering are not merely different, they are opposite in nature. A river cannot think how to counter an engineer who is building a bridge across it. War, in contrast, is continually shaped in unexpected ways by what soldiers call “the independent, hostile will of the enemy.” That means the other guy keeps doing things you never imagined. Complex weapons systems cannot deal with situations not envisioned by their designers. A striking example of their problem surfaced shortly after a U.S. Aegis cruiser shot down an Iranian passenger aircraft over the Persian Gulf. Aegis, a shipboard anti-aircraft and anti-missile system, is one of the most expensive weapons systems in the American military inventory. We have spent, and continue to spend, tens of billions of dollars for ships that carry Aegis as their main armament. A designer of the Aegis system wrote to the *Naval Institute Proceedings* to exculpate his creation, saying, “Of course, it was never designed to deal with ambiguity.” The independent, hostile will of the enemy means that ambiguity is a constant companion in war.

Ambiguity, deception, surprise, camouflage, and ambush have characterized war since its prehistoric beginnings and always will. Complex, high-technology weapons systems have trouble with all of them. They work best in clean, simple environments, like the carefully contrived “tests” the Pentagon uses to convince Congress to keep the money flowing.

Air and sea warfare are comparatively clean and simple, and high technology plays an important role there. The land warfare environment, in contrast, is vastly “dirtier.” Nowhere is it more so than in Fourth Generation wars, where the line between military and civilian is blurred to the vanishing point. In that endlessly complex setting, high-technology systems often trip over their own numerous feet even before the enemy has had a go at them. Just ask one of our company or battalion commanders what he thinks of our wonderful, computerized command and control system. One told me that it required him to submit more than 100 reports per day. Several years ago, I was in a meeting in which a retired general extolled the contribution his part of that system had made to “victory” in Iraq. The commander of the famous “Thunder Run” into downtown Baghdad said the first thing he did was turn it off.

The Pentagon’s financially self-serving belief that technology wins wars has come to grief in the sands of Iraq and the mountains of Afghanistan, just as it did in Vietnam. In the early days of that war, Secretary of Defense Robert McNamara was interviewed by the French journalist Régis Debray, who asked him what the French experience in Vietnam meant for the Americans. McNamara replied that what had happened to the French could never happen to the Americans. It was not a matter of bravery, he said, but of technology.

In contrast, John Boyd argued that for winning wars, people are most important, ideas come second, and hardware comes third. The Pentagon stints our people to feed its hardware programs, while the pursuit of technological solutions to every problem stifles creative thinking about tactics and doctrine. The American military promotion system washes out the combat leaders, who tend to have rough edges, in favor of bureaucrats and managers who can run big weapons programs and testify smoothly before Congress. In pursuit of the foxfire of victory through technology, America has forgotten the basics of war.

While the Predator and other drones in the air are killing Taliban, the drones in the Pentagon are killing us.

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