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Yoda and the Jedis: the Revolution in Military Affairs and the Transformation of War  
by [Armin Erger](#)

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*"This opportunity [to project America's peaceful influence] is created by a revolution in the technology of war. Power is increasingly defined, not by mass or size, but by mobility and swiftness. Influence is measured in information, safety is gained in stealth, and force is projected on the long arc of precision-guided weapons. The best way to keep the peace is to redefine war on our terms."*

—  
George W. Bush, September 23, 1999

Since the early 1990s, the discourse over the so-called Revolution in Military Affairs (RMA) has gained strong political and military influence. In fact, the theories associated with the RMA have become one of the guidelines of American defense policies. Defense analysts, military officials, and politicians follow the idea that a change in the nature of warfare is under way, and that advances made in technology, most notably in electronics, bring about this change. The application of computer power to military systems since the 1970s has resulted in dramatically improved weapons, detection, and command and control systems.

The Roots of the Revolution in Military Affairs

The Revolution in Military Affairs as a military-political phenomenon has its roots in the late 1970s when American defense

planners began to withdraw their attention from the war in Vietnam and turned it again to the threat posed by Soviet and Warsaw Pact forces in Europe. New threat analysis and altered estimations of the military situation in Europe were giving the American commanders and the strategists in the Pentagon headaches. It seemed that the Soviet forces had achieved a three-to-one numerical advantage in tanks, artillery, armored personnel carriers, and total manpower in the European theater and, moreover, that the equipment had been improved qualitatively to match Western standards. Since American and NATO forces were in a position where they had a conventional disadvantage, the only military response left, in case of hostilities, would have been – if limited – a nuclear strike. But crossing the nuclear threshold involved the massive risk of triggering a wholesale nuclear exchange with the Soviet Union. This was a risk that could not be taken.

The answer to the military dilemma faced by the US was the implementation of a new strategy that was soon to be called the Offset-Strategy. The idea of the new strategy was to counter the numerical advantage enjoyed by the forces of the Warsaw Pact by the introduction of high-technology military systems, and to compensate the disadvantages in quantity through improved quality. William J. Perry, who served as Undersecretary of Defense for Research and Engineering from 1977 to 1981, remembers:

“The only way we had of dealing with the three-to-one quantity advantage . . . was to try to offset that with our superior technology. . . . It was not just precision strike. Precision strike was at the heart of it, but it also involved stealth aircraft to deliver these precision weapons, and it involved an intelligence and reconnaissance system that would target for them. Those were the three components of what we called a “reconnaissance strike force,” and the reconnaissance strike force was the heart of the offset strategy.”

Spending for research and development of appropriate military systems was increased on a massive scale. The Department of Defense budget for the Defense Advanced Research Projects Agency (DARPA) almost doubled from 1977 to 1981, and huge defense programs like ITASS (Integrated Target Acquisition and Strike System) were initiated. Weapon programs like Assault Breaker, a precision anti-tank missile; JSTARS, a surveillance system; and testing phases of the satellite [global] positioning system (GPS) were implemented in the early to mid-1980s.

The changes in the American defense policy did not go unnoticed. High-ranking Soviet officers observed the new American strategy and intellectualized about it. Most notably among these are the writings of the Marshal of the Soviet Union and Chief of Staff of the Red Army Nikolai Ogarkov. In an article titled “Always Ready to Defend the Homeland” for the *Voyenizdat* from March 25, 1982, Ogarkov argued that the implementation of the Offset-Strategy by

the American military was changing fast and, in fact, was revolutionizing contemporary warfare. He perceived the changes to be so profound that he called them a Military-Technical Revolution (MTR). For Ogarkov and other Soviet military intellectuals, the reconnaissance-strike complexes, as they called them, posed a military threat that the Red Army could not match. In 1983 in a long unpublished interview with *The New York Times*, Ogarkov offered a clear-minded analysis of the situation:

“We cannot equal the quality of US arms for a generation or two. . . . We will never be able to catch up with you in modern arms until we have an economic revolution. And the question is whether we can have an economic revolution without a political revolution.”

The American perception dismissed the Soviet writing and many of the articles and memoranda as Soviet propaganda. It was Andrew W. Marshall, first and until now only director of the Department of Defense Office of Net Assessment (ONA), who was probably the first to argue that the Soviets had a point. Marshall adopted the arguments of the Soviets and started an intensive discussion over the coming military revolution in the US.

#### Operation DESERT STORM

The starting point for the discourse over the RMA on a broad basis in the American political and defense establishment was Operation DESERT STORM. It was in the US-led war against Iraq in 1991 that most of the systems and weapons developed to cope with the Soviet threat saw their first deployment under field conditions. The overwhelming success in the use of the GPS and laser-guided bombs against the mostly Soviet-equipped Iraqi forces exceeded all expectations. Although the percentage of precision weaponry was comparatively low, the most important and best-defended targets had been hit with those weapons. For many observers familiar with the discussions about the military revolution, DESERT STORM was the first glimpse into a future of revolutionized warfare. An analysis of DARPA shows the impact DESERT STORM made:

“A new notion of combat was demonstrated in Operation DESERT STORM. . . . The combined impact of better battlefield information, the ability to suppress defenses, and the ability to strike precisely at high value targets demonstrated a new way of achieving and maintaining military control in which large platforms play a less important role.”

The success of DESERT STORM also transformed the expectations of what was achievable by military means. Now that the Cold War had ended, war – if one had the ability to fight and win as in Iraq – appeared once again to be a useful tool for politics. Since blurred images of precision bombardment dominated the TV coverage of the war and the military control over pictures was tight, the war appeared to be clean, almost a technical problem waiting to

be solved. Politicians and the military leadership recognized the potential of this new kind of war. William Perry:

“ . . . the application of precision strike had achieved an alternative policy objective. When used in a major regional conflict like DESERT STORM, when used against an opponent with equal numbers, our technology did not simply offset the other side. It gave us the ability to win quickly, decisively, and with remarkably few casualties.”

#### Yoda and the Jedis: The Office of Net Assessment

After DESERT STORM, it was the decision of the Office of Net Assessment to use the war's momentum and push their agenda further. Marshall's ONA and a couple of the younger defense intellectuals coming out of ONA, or closely linked to it, started promoting the idea of the revolutionized nature of war. Marshall became the pivotal figure in getting the RMA discourse spread in the military and political scene. Because of this, and because of the sometimes rather enigmatic public appearances of Marshall, they became known as “Yoda and the Jedis.” Capitalizing on the impact of the Gulf War, Andrew W. Marshall commissioned Andrew F. Krepinevich, Jr. in August 1991 to assess the Soviet writing on the Military-Technical Revolution. Krepinevich's *The Military-Technical Revolution: A Preliminary Assessment* was published in July 1992. Krepinevich found that the Soviets had drawn the right conclusions about assuming a military revolution and that, as DESERT STORM had shown, this revolution already existed on an operational level. Still, the revolution would get stuck halfway through if there were no organizational and operational reforms accompanying it; hence the need to reform the military:

“ . . . while new technologies are the ultimate cause of a military-technical revolution, they are not themselves the revolution. The revolution is fully realized only when innovative operational concepts are perfected to exploit systems based on new technologies, and when organizations are created to execute the new operations effectively. Such a revolution creates new military capabilities that dominate previous modes of warfare.”

In 1993 Marshall wrote a memorandum for the Secretary of Defense William Perry. In “Some Thoughts on Military Revolutions” Marshall compared the situation of the early 1990s with the time from 1918 to 1939. Relative to this time frame, 1993 would correspond to the years 1922 or 1923. People could scarcely begin to understand the changes brought about by the RMA, just as people in 1922 had only a limited understanding of how the next war would be fought. Marshall's memorandum consisted of only eight pages but together with Andrew Krepinevich's *The Military Technical Revolution: A Preliminary Assessment* it soon became an important document in early discussions about a profound transformation of the US military.

### Defense Policy under George W. Bush

Under the presidency of George W. Bush, the idea of an RMA reached the inner circles of the American political system. Secretary of Defense Donald Rumsfeld and his former Vice-Secretary Paul Wolfowitz are considered to be aggressive reformers of the American military following the ideas of the RMA. Both of them and Vice President Cheney are considered to be closely associated with Andrew W. Marshall and the ideas that come out of ONA. While still a candidate, Mr. Bush made remarks that could be construed as strong hints that he had embraced the Revolution in Military Affairs and its reformatory implications. In a speech at The Citadel in Charleston, SC, he said:

“... our military is still organized for the Cold War threats, [rather] than for the challenges of a new century – for industrial age operations, rather than for information age battles.”

Shortly after coming into office, President Bush ordered a full top-down review of the US military. The review caused a considerable amount of unrest, since the services feared that they might lose resources for their huge armament programs. The role of Andrew W. Marshall who had been marginalized by the Democratic administrations of Bill Clinton, but who under the Republican Administration seemed to have made a comeback, was seen especially critically. Marshall led the Strategic Review working group, only one of several groups working on the review. Marshall's group received a large proportion of the attention since he was known to be very critical towards various of the service's large and costly pet programs. In the past he had criticized the Air Force's F-22 Raptor program and the Navy's plans for a new generation of aircraft carriers as not being in tune with future requirements. For these criticisms, Marshall in turn received a lot of criticism from the services and the defense industries connected with the programs. Certainly in the aftermath of the September 11 attacks, the “Quadrennial Defense Review 2001” which included the findings of the top-down review, did not challenge the status quo and proposed only modest reductions in numbers in the large armament programs. Commentators considered it to be a defeat for Defense Secretary Rumsfeld who had announced large cuts and cancellations of programs when he came into office.

### The Attacks of September 11, Afghanistan, and the “New Kind of War”

The terrorist attacks on the World Trade Center and on the Pentagon dramatically confirmed, in the views of the American top officials, that their threat analysis since the end of the Cold War had been right: attacks by other nations were not the greatest danger the US had to face but, instead, asymmetric attacks by “private” actors. The declaration of the attacks as acts of war, a “new kind of war” in fact, put issues of defense policy into the

focus of the public and to the top of the Administration's political agenda. Promoters of the RMA and the Transformation now had weighty arguments to overcome resistance from conservative elements in the military and the Department of Defense. The military response to the terrorist attacks, and the war in Afghanistan that began on the October 7, 2001, seemed to confirm the promise of the RMA. In the difficult and rough terrain of the Hindu Kush, precision bombardment, combined with battlefield surveillance by Unmanned Aerial Vehicles (UAV) such as the Predator drone and only a few Special Operation Forces on the ground, worked astonishingly well. The fact that the majority of the "boots on the ground" were provided by the forces of the Northern Alliance meant that the lives of American and Western soldiers were barely put at risk in the initial stage of the war. Until the end of November 2001, only one American had been killed in combat: a CIA agent in a prison uprising at Mazar-i Sharif.

In December 2001, George W. Bush returned to The Citadel to claim victory in Afghanistan and to emphasize the correctness of the transformational approach:

"We are fighting shadowy, entrenched enemies – enemies using the tools of terror and guerilla war – yet we are finding new tactics and new weapons to defeat them. This revolution in our military is only beginning, and it promises to change the face of battle. . . . Afghanistan has been a proving ground for this new approach. These two months have shown that an innovative doctrine and high-tech weaponry can shape and dominate an unconventional conflict."

#### Operation IRAQI FREEDOM

*"More than ever before, the precision of our technology is protecting the lives of our soldiers, and the lives of innocent civilians. . . . In this new era of warfare, we can target a regime, not a nation."*

- George W.  
Bush, April 16, 2003

On the night of the March 20, 2003, the American military tried to end the war with Iraq before it actually began. A so-called "decapitation strike" was launched in Baghdad against what intelligence reports believed was a meeting of Saddam Hussein with his top military and political leaders including his two sons. However, since Hussein appeared the next day on TV it seemed that the attack did not succeed. A massive air campaign and a full-scale ground attack were launched the same day. The American forces met with remarkably little resistance, and where they did they overcame it easily. US forces took the direct route to Baghdad and captured it on April 9. On May 1, President Bush announced on board the USS Abraham Lincoln that the major fighting was over.

However, the real war in Iraq was about to begin. The looting in Baghdad was the first indication that things were not going to calm down after the fall of Saddam Hussein's regime. Secretary of Defense Rumsfeld's insistence on a small ground force for Operation IRAQI FREEDOM seemed to have backfired, in the light of the growing insurgency. Several former generals and some current officers claimed that the army was too lean and overextended, and that Rumsfeld wanted to "showcase his vision of a technologically advanced, fleet ground force."

#### Political Impact of Defense Technology and New Wars

The precision-strike and standoff capabilities that have been developed in the pursuit of the RMA have had an important impact on military and political thinking. Concepts that are often associated with the RMA tend to increase the social – and hence the political – distance between the general public and military issues. Since the available technologies can diminish Western military casualties to almost zero, while avoiding large-scale (foreign) civilian casualties, the political costs for the use of military force have been significantly lowered. By so doing, the political freedom of action in the use of force has been extended, and military means appear to be appropriate and politically cheap when dealing with threats to the national security. The political control function of the general public has not been reduced in a legal sense, but the significance of war has been reduced socially.

It has been proven that RMA systems can operate very successfully and highly efficiently in a conventional conflict. But the fact of the matter is that this sort of conflict will be increasingly rare. The majority of conflicts in the world today are not interstate wars, but armed conflicts that are often referred to as New Wars. These wars are characterized by a breakdown of state control of the means of violence, and by a wide variety of actors participating one way or the other in the conflict: rebel movements, state authorities or remains thereof, terrorist networks, private military corporations, intervention troops of the world community, and the global media. The war and its economic rationale are inseparable, making these conflicts extremely difficult to end. The complex structure and the multiple global entanglements of the wars of today make it unlikely that high-tech military systems can provide what RMA proponents expect of them. The political danger is that decision-makers may draw the wrong conclusions from the very few conventional wars that are still fought. In the initial stages of the wars in Afghanistan and Iraq, US forces performed outstandingly in terms of military efficiency. The American military overwhelmed the forces of the Taliban and Saddam Hussein rapidly and with very few casualties. Nevertheless, fighting in both countries has continued and, especially in the case of Iraq, a dirty low-intensity conflict has evolved. The insurgents know that they cannot match the vast conventional superiority of US forces, and so use "asymmetric" tactics such as suicide attacks, car and roadside bombs, and

hostage-taking. From a tactical point of view these are challenges that require an approach much different from a strictly military one. Political, economic, and ideological aspects of conflicts must be taken into account much more than ever before. In doing so, the definition of war itself has been broadened to a point where there is no longer any difference between times of war and times of peace. Whether Western states will learn to cope with the emergence of such threats is a question critical for their future and for their very existence. This is reflected in the National Security Strategy 2002:

“The struggle against global terrorism differs from any other war in our history. It will be fought on many fronts against a particular elusive enemy over an extended period of time. . . . The characteristics we most cherish – our freedom, our cities, our systems of movement, and modern life – are vulnerable to terrorism. This vulnerability will persist long after we bring to justice those responsible for the September 11 attacks. . . . This is a new condition of life.”

Armin Erger’s book *Futurismus im Pentagon? Neue Kriegsformen im 21. Jahrhundert* about the topics treated in this article has recently been published by the Braumüller Verlag, Vienna. For more detailed information and to order the book on-line, please visit the following websites:

<http://www.braumueller.at>  
<http://www.amazon.de>

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