

The Pentagon's Robotic Warfare Arsenal

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(Please read [Part I](#) before this article)

The Third Offset

The most significant aspect of Work's speech lies in his explanation of what constitutes the Third Offset Strategy, the ongoing progressive trend of the entire US Armed Forces.

Background:

To briefly establish some background context, he describes an offset as being "broad technological strategies" that essentially nullify an opponent's existing military advantage. The first offset is identified as being the US' "[reliance] upon tactical nuclear weapons as an offset for [Soviet conventional] numbers." Then, "in the 1970s, when the Soviets achieved strategic nuclear parity with the United States and the threat of tactical nuclear warfare was too great, was no longer an effective deterrent, we changed sites and we went after what was then called conventional weapons with near-zero CEP, or conventional error probability — what everybody knows today as smart guided munitions." Tactical nuclear weapons and precision-guided munitions thus represent the two offsets of the Cold War era, which brings the US to the cusp of the Third Offset Strategy that forms the basis of Work's announcement on 8 April.

Step Three:

So what exactly is the Third Offset Strategy, anyhow? In Work's own words:

The whole purpose of the Third Offset Strategy or Strategies is to identify the technologies, identify the operational and organizational constructs, the new operational concepts to fight our future adversaries. Now, unquestionably, a big part of this is going to be identifying, developing and fielding breakthrough technologies, in addition to using the capabilities we have now in a different way... the real essence of the third offset strategy is to find multiple different attacks against opponents across all domains so they can't adapt or they adjust to just one, and they died before they can adapt again.

Considering the previously mentioned challenges that the US must overcome in order to avoid fighting a "fair fight" against China, the Third Offset Strategy takes the following three forms in practice:

Tomahawk Anti-Ship Missiles:

The US grand strategic doctrine mandates that it must maintain full control over the world's

waterways, and accordingly, it cannot allow a rival navy to compete with it. In response to [China's naval buildup](#) and potentially even that of [Russia](#) in the future (as well as the [joint collaboration](#) between the two [strategic partners](#)), the US has innovatively transformed its notorious Tomahawk stockpile into anti-ship precision-guided missiles. Work brags that:



Deputy Secretary of Defense Robert O. Work

We just demonstrated firing the Tomahawk land attack cruise missile against a ship, without changing its seeker-head, completely doing it by off-board sensing. Well, now we have 2,000 potential thousand-mile range anti-ship missiles.

The strategy here is for the US to decimate whatever naval resistance is present in the A2/AD zone prior to beginning its physical intrusion into the area and facing bombardment from its land-based defensive component. Upon entering the salvo zone, the US plans to utilize the second manifestation of the Third Offset Strategy to protect itself from the precision-guided munitions that are expected to be unleashed against it.

The Electromagnetic Game Changer:

The deployment of electromagnetic rail guns is expected to completely revolutionize the field of missile defense, as not only does its immediate and precise firing mechanism allow for constant overhead defense, but it brings about the opportunity to achieve interception cost parity against the oncoming projectile. Work explains:

The electromagnetic railgun is going to provide us deep magazines and high volumes of shots. It's going to change the cost-imposing strategy on its head. Right now, we're firing \$14 million missiles to go after a \$50,000 missile. It doesn't make sense. But when you have electromagnetic railguns and powder guns, using the same smart projectiles, now you can start to break the raid.

Not only is this game-changing technology expected to be deployed amongst the naval units that are likely to lead the charge in "breaking into the theater", but there are pivotal plans for a land-based mobile application as well:

Right now, every Paladin that the Army owns might be a very effective counter-swarm weapon by combining the smart projectiles with our hyper-velocity guns, our electromagnetic railguns, using the exact same rounds, and advance computing. All of the modeling right now is telling us that every single Army artillery piece using powder guns, using these advanced guided munitions, will be able to knock down heavy missile raids... And what Paladin will provide the Joint Force is a mobile raid-breaking capability. We've already demonstrated this on the Navy's five-inch guns. This summer, we're going to demonstrate it on the Paladins. It's something the Army needs to think about. The Army, with its THAAD and its PAC-3s and potentially Paladins in the future will be the mobile raid-breaker for the Joint Force.

Electromagnetic rail gun-outfitted Paladin tanks could accompany the invasion force into battle upon landing in order to become a land-based extension of the naval missile defense

shield that nullified the target's defensive deterrent capability in the first place, thereby creating the possibility of theoretically limitless and unconstrained protection from precision-guided munitions for the aggressor's entire ground assault force. This would absolutely and irrevocably alter the strategic balance against Russia and China towards the US' definite favor, and when buffeted with the [global missile defense shield](#) that Washington is unveiling all throughout the world, it would make Moscow and Beijing vulnerable to the Pentagon's blackmail. Additionally, if the US proliferates electromagnetic rail gun technology to its Israeli and [Arab NATO](#) allies, then this would abrogate Iran's retaliatory missile deterrence and in turn open up Tehran to a devastating first-strike potential by Tel Aviv and Riyadh (or even a joint attack by both).

In sum, electromagnetic rail guns radically change the global strategic calculation and represent a 'defensive' super weapon that would embolden US aggression against Russia, China, and Iran with no conventional retaliatory consequences. In fact, if the technology can be tried and tested in ICBM interception, then it would also eliminate or grossly undercut those states' nuclear reactions as well, meaning that the only hope that remains for a credible deterrence would be asymmetrical responses such as space-based launchings or some yet-to-be-determined strategy. Still, these might be alarmingly vulnerable to being undercut by a pre-emptive "informationalized" attack by the US.

The Terminator Doctrine:

The most evolutionary form of the Third Offset Strategy is the creation of hybrid man-machine soldiers and the seamless combat integration between man and machine. Work recalls an anecdote in attempting to justify this disturbing post-modern leap:

Tyler Cowen wrote a book called "Average is Over." He's an avid chess player. What he said was, "It used to be a matter of faith that a machine would never beat a human," because a machine would not have the intuitive cognition. You know, it just wouldn't be able to have the intuitive spark to think through an interactive dual like chess. That proved to be wrong. Now machines consistently beat grandmasters. And what he found out in a thing called three-play chess is the combination of a man and a machine always beats the machine and always beats the man.

He then continues by prophesizing that:

I believe that what the Third Offset Strategy will revolve around will be three-play combat in each dimension. And three-play combat will be much different in each dimension, and it will be up for the people who live and fight in that dimension to figure out the rules. We will have autonomy at rest, our smart systems, being able to go through big data to help at the campaign level and to be able to go through big data at the tactical level. So autonomy at rest and autonomy in motion.



Before leaving office, Defense Secretary Chuck Hagel got a look at high-tech projects being developed by the Defense Advanced Research Projects Agency.

What he's saying here is that man-machine hybrids, perhaps created via the augmentation implants that were forecasted by the Directorate of National Intelligence's [Global Trends 2030: Alternative Worlds](#) report from 2012, will be capable of besting any 'purebred' man or machine offensive or defensive unit in one-on-one competition, even indirectly via the cyber and electronic realms. He also suggests that forward-operating assault squads in the future will be "disaggregated" into smaller, more fluid formations that would require "overmatch by providing support in fires, intelligence and logistics", something which man-machine collaboration can solve. He goes on to propose that:

If we combine them (the squad) into well-trained, cohesive combat teams with new advances in robotics and autonomy and unmanned systems, three-play combat at the squad level, we can create super-empowered squads, super-empowered small units with enhanced situational awareness and lethality. DARPA's Squad X program, among others, is working on a number of ideas right now to increase human and machine collaboration at the lowest tactical level, including ground robots, small micro-drones, and trying to figure out how to push the squad situational awareness and lethality out to a large, large battlespace area.

He predicts that "much of this technology is going to come from the commercial sector", and also lists some of the examples currently in development:

This is not as far away as you might think. The Army is — right now is kind of leading the way in manned and unmanned teaming with the Apache in the shadows, which is going on in the Army's Aviation Restructure Initiative, which we think is exciting and kind of a leading indicator of where we need to go. Automated driving seemed like the work of fiction not long ago, but there's a race going on between big-tech companies and some of the larger auto makers who are looking to develop self-driving cars. So, in the not-too-distant future, squads are going to operate with robotic support, sapper robots, counter-mine robots, counter-sniper robots.

The autonomous robot support units take on a heightened raid-breaking significance when one considers Work's earlier prognosis that:

"We're not too far away from a sensor-fused weapon, and instead of going after tanks, we'll go after the biometric signature of human beings."

This should be interpreted as meaning that one of the weapon classes of the future will directly target human beings inside of their protective structures (be they tanks, planes, buildings, etc.), inferring that the only guaranteed defense against such an armament would be the deployment of non-human autonomous units that would destroy these weapons prior to actual human or hybrid introduction to the field.

✘ Altogether, everything that Work has described vis-à-vis robotic warfare systems amounts to a clear "Terminator Doctrine" in rolling out hybrid man-machine soldiers and autonomous robot support units, perhaps even in the form of Paladin anti-missile electromagnetic rail gun tanks that would provide the necessary cover for the aforementioned blitzkrieg force (be it man, man-machine hybrid, or purely autonomous). Robotic and man-machine hybrid warfare is evidently what the US is planning to develop in order to win Air Land Battle 2.0 and guaranteeing the success of the Third Offset Strategy

against Russia, China, and Iran.

Concluding Thoughts

Robert Wolf's announcement of the Third Offset Strategy and his detailed description of the trajectory that the US plans to take in actualizing it present the greatest declaration of strategic destabilization in modern history. The US is essentially proclaiming its intent to acquire the full-spectrum technology to initiate a first strike against the Eurasian Great Powers of Russia, China, and Iran, which in turn will likely spur them to partake in their own Third Offset buildup to create breakthrough defensive means in safeguarding against this impending vulnerability. If they're not able to achieve this, then the US will more than likely place each of them in a position of military blackmail in dictating its geopolitical and economic demands, which would of course mitigate the global movement towards multipolarity.

Out of the three Resistant & Defiant states mentioned, the US may most likely attempt to use this technology against Iran first as a means of perfecting it prior to utilization against the others. This is because Tehran currently doesn't have the nuclear deterrent necessary to make the US second-guess using the country as a testing ground, nor does it have as much of a relative ability as Russia or China in escalating any potential crisis to the level of brinkmanship that may be needed to make the US back down (e.g. the nuclear triad and potentially space-based weapon deployments). It should be clear at this point that the US is dedicated to militarily institutionalizing its unipolar hegemony for the indefinite future (the real "velocity of instability"), and that the Eurasian Great Powers must take similar technological measures in defending against the Third Offset Strategy and/or succeed in pulling off a major asymmetrical counter-move such as de-dollarization that would 'offset' the US' grand strategy before it's too late.

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