

Finding a Way for the Military to Rise Above Tanks

By [Roger N. McDermott](#)

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Russia's top brass, reflecting on four years of military reform, is considering how to overcome a technology-based conundrum to drag the armed forces into the 21st century. These issues no doubt lay behind the decision by the Defense Ministry leadership to conduct a surprise exercise in the Central Military District on Friday, a day before the Defender of the Fatherland Day holiday. The aim of the exercise was to bring an airborne forces division and several ground forces brigades in the district to full combat readiness and test their strategic mobility in deploying troops and hardware from their bases to distant training ranges.

Afterward, the chief of the General Staff, Valery Gerasimov, highlighted many of the failings in the first exercise of its kind in 20 years, especially the slowness of movement by these units. But he chose to focus on issues linked to aging equipment rather than question the existing system of military manpower.

Gerasimov took a similar stance while addressing a military security conference in Moscow last month, with the key message being that for Russia to boost its defenses, its conventional

armed forces must move from platform-centric to network-centric warfare capabilities.

Gerasimov's high-technology focus is by no means novel. But his theme is timeless and serves as a reminder to those engaged in rearming the military that the conceptual programs involved must be well-founded and drive the entire process. Gerasimov, consequently, is betting that the armed forces will successfully manage the transition to an information-based and technologically equipped military. He knows that unlike World War II, future conflicts involving Russia probably will not be tank-centric and demand high levels of manpower. They will require network-centric operations by smaller but more lethal forces. In his words, warfare is moving from its traditional air, land and sea spheres into space and information. Electromagnetic fields are increasingly the areas where advanced militaries harness and use force.

But it is questionable whether such technology-based advances are possible for the Russian military in light of the well-publicized problems facing the country's defense industry as well as related issues of coordinating advances in highly technical areas between these defense companies and the Defense Ministry. Yet the demand for microelectric innovation and nanotechnology will only increase as a result of Moscow's pursuit of network-centric warfare capabilities. Defense industry companies with expertise in the research and development of computer hardware and software will be at the forefront of this complex process. Already much attention has been devoted to the creation of digitized command and control, which the Defense Ministry wants to extend into C4ISR (command, control, communications, computers, intelligence, surveillance and reconnaissance).

Indeed, the entire process of rearmament will depend on how well the political and military leadership understands network-centric warfare, including its limits and challenges. Judging by the commentaries of Russian military experts, there is little consensus on the precise meaning of the term "network-centric warfare," with representations ranging from the simplistic to the overly technical.

Nonetheless, unusually for the Russian top brass, there is a glimmer of hope.

This is illustrated by the prolific work of Lieutenant-Colonel Alexander Kondratyev, a professor in the Academy of Military Sciences. Kondratyev avoids any suggestion that the adoption of such modern approaches to warfare will prove to be a panacea resolving all the well-known problems within the Russian military. Yet he does present a definition of the term, clear understanding of its evolution in foreign militaries, and a plausible way to develop a Russian version of what the late General Vladimir Slipchenko had termed "sixth-generation warfare," or noncontact war fought at a distance from enemy forces harnessing information-based systems.

Kondratyev, writing in a commentary a few months ago, offers clear insight into the exact nature of network-centric approaches to combat and cuts through the debates on its precise meaning and importance for Russia. "Military operations make use of modern information and network technology for the integration of geographically dispersed government, reconnaissance, surveillance and target acquisition, and as troops and weapons in a highly adaptive, global system," he said. Conceding that network-centric capabilities are essentially foreign, developed mainly by the U.S. military and now prevalent among the leading NATO-

member militaries, Kondratyev says Russia must learn from such experience and not merely copy it.

If these concepts are understood at the highest levels, including by Gerasimov, then it may be possible to construct a version of network-centric methods in combat to suit Russia's long-term future. Using information-era concepts to underpin force structure and combat training will equally demand the technology from domestic defense companies to develop C4ISR. Cost-effective computer-control microchips, which are being designed at Russian companies, may offer precisely the innovative approach needed to boost and sustain the long-term transformation of the defense industry.

But its challenges lie as much in the minds and mentality of the top brass and whether it grasps the fundamentals involved in pursuing a transition to information and space, as the new spheres of modern warfare will determine the longevity of military modernization planning and its define the terms of its success.

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