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Economic Reform and Military Technology in Soviet Security Policy

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Mikhail Gorbachev's "new thinking" in security policy has been greeted with some measure of ambivalence in the West. There is a suspicion that the new line in foreign policy is intended merely to provide a temporary "breathing space," so that the internal program of reform, known as *perestroika*, can have a chance to revive the stagnant Soviet economy. Then, the argument goes, the Soviets will be back for another round of competition with the West, which will have meanwhile dropped its guard in anticipation of a long period of Soviet moderation. In this view, *perestroika* is a kind of fitness program for the Russian bear, making it stronger, but no less dangerous.

A key component of the "breathing space" argument is the notion that the Soviet military supports the reforms in the expectation that a reinvigorated economy will provide a firm foundation for the development of advanced military technologies in the future. Civilian reformers are assumed to agree with the long-term goal of a "leaner, meaner" high-tech Soviet military, and to believe that only a temporary shift in resources is necessary to provide the technological base for the military developments of the next century.

The breathing space argument assumes more consensus between the military and the civilian reformers than probably exists. In fact, a wide range of divergent views is represented in the current Soviet debate on national security. At the risk of oversimplification, we can identify three schools of thought: the "new thinkers" advocate a permanent reorientation away from militarized approaches to international security in favor of economic interdependence and "common security," and a priority allocation of resources to domestic economic development; the "technocrats" favor at most a short-term reallocation of investment resources to the militarily-relevant sectors of the civilian economy in order to develop the prerequisites for advanced-technology weapons;

and the "old thinkers" want to continue emphasizing military spending and believe that economic mobilization in support of weapons development can meet any foreseeable challenges.

The most influential civilian reformers appear to be firmly located in the first camp. The military is divided between the second and third, with a heavy emphasis on economic mobilization even for those concerned about a high-tech arms race. Contrary to the breathing space argument, which puts both the civilian reformers and the military in the "technocratic" camp, the two groups appear to be in sharp disagreement on fundamental issues. Moreover, there is little sign that the new thinkers and the old thinkers will converge on the technocratic approach even as a least common denominator.

If this analysis is accurate, it calls into question the fear that a successful *perestroika* will produce a more dangerous Soviet rival. If Gorbachev and his new thinkers have their way, Soviet foreign policy will continue to evolve in the direction of cooperation and moderation. New thinkers reject the traditional Soviet overemphasis on the military, high-tech or otherwise. Therefore, they are unlikely to convince the military to join a coalition in support of *perestroika*. The prospects for reform in Soviet security policy hinge, then, on Gorbachev's ability to weaken the power of the military as an institution, while broadening the definition of security to encompass political, diplomatic, and economic factors. Although the final outcome depends at least in part on forces beyond Soviet borders, Gorbachev has set out on a determined course to achieve his objectives.

The Civilian Critique

Reform-oriented civilians have long expressed concern about the effect of economic stagnation on Soviet security.



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Indeed, warnings about the USSR's technological shortcomings and their military implications predate Gorbachev's policy of *glasnost*. Civilian critics intend their warnings to appeal to the traditional Soviet preoccupation with security, but their prescriptions will not necessarily attract the military. As they delve deeper into the sources of Soviet technological backwardness, the civilians make clear that their solutions entail much more than a short-term reorientation to civilian technology. Moreover, as they emphasize the importance of a strong civilian sector, they gradually reveal their view that economic strength itself is a key component of security. The new thinkers may be trying to win over the military to support their reforms, but if their vision of economic security is achieved, they will not want to risk it by squandering new resources on another arms race.

One of the first writers to use the security argument to advance economic reforms was Fedor Burlatskii, political commentator for *Literaturnaia gazeta*. In 1984, he published an article on "the new technological revolution," in which he praised the technical accomplishments of an "inexhaustible human genius." At the same time, he argued, "it is impossible to escape a heavy feeling of anxiety, seeing where and how the capitalist centers of industrial power are directing these accomplishments" — an obvious allusion to the military applications of advanced technology. Writing of the economic competition between the United States, Japan, and Western Europe, he argued that "a restructuring [*perestroika*] of the entire industrial map of the world has begun." A hierarchy is forming, with those countries that have mastered the "latest technology" and developed the "most modern branches of industry" at the top.¹

What does this have to do with Soviet security policy? One needs to read between the lines, but not much. Burlatskii writes that it is "already possible to see how painfully those who lag behind will be beaten." He seems still to be describing the economic competition among capitalist countries, but his choice of words unmistakably evokes Stalin's 1931 speech to Soviet industrial managers: "Do you want our Socialist fatherland to be beaten and to lose its independence?... We are fifty or a hundred years behind the advanced countries. We must make good this distance in ten years. Either we do it or they crush us."² Burlatskii makes the security implications of his argument clear when he asks whether it is necessary to remind the reader "of the influence that the first industrial revolution of the 18th century had on the whole world." Europe, the first to undergo that revolution, "occupied the dominant position in the world and subordinated whole continents to itself." The United States was the first to undergo the "second revolution, called the scientific-

technological one," following World War II. "Relying on its military and industrial power," argues Burlatskii, the U.S. "seized the leadership of the non-socialist world."

According to Burlatskii, a new technological revolution began in the mid-1970s, with microelectronics at its heart. He asks his readers to "imagine" what it would be like for microcomputers to play a major role in the domestic economy, and goes on to describe images that are commonplace in the United States today: children's video games, computerized money-dispensing machines at banks, electronic mail, and so forth. Perhaps not all of his readers realize that Burlatskii is describing the contemporary situation in the non-socialist industrialized world. All of them, however, are aware that he is not describing the Soviet Union.

Soviet academic writers have pursued specific analyses of the relationship between civilian and military use of computers in the United States. They have argued that the widespread use of computers in the U.S. military owes to their relatively low cost; that under present circumstances development of software constitutes the limiting factor on further growth in the military use of computers; and that development of software in turn depends on increasing the effectiveness and productivity of computer programmers. One article maintains that the problem of military software development in the U.S. is perceived there as a crisis, which legislators, military officials, industrialists, and other "leaders of the highest rank are energetically occupied with surmounting."³ One infers from the article that the Soviet Union has a long way to go before it can experience the luxury of such a "crisis" in military software development. The prerequisites are still missing: low cost and wide use of computer systems and a large supply of trained computer programmers. Indeed, within the military itself the use of computers is not very extensive. It is apparently a novelty, for example, for air-defense batteries to employ computer simulations for training purposes or for air force units to do simple computer modeling of air combat and bombing raids.⁴

Although their arguments stress military implications, many Soviet analysts believe that the computer problem must be dealt with first in the civilian economy. The director of the Academy of Science's new Department of Information Science, Computer Technology and Automation is Evgenii Velikhov, vice president of the Academy and deputy director of the Kurchatov Institute of Atomic Energy. Along with corresponding member A.P. Ershov, he has instituted a new program to expand access to computers in Soviet society. Ershov is responsible for educational programs to develop computer literacy in schools. Civilian computer experts appear to be arguing that the USSR must improve its level of computer

1 *Literaturnaia gazeta*, October 31, 1984, p. 14.

2 Quoted in David Holloway, *The Soviet Union and the Arms Race* (New Haven: Yale University Press, 1983), pp. 6-7.

3 V.V. Lipaev and A.I. Potapov, "Programmnoe obespechenie dlia EVM voennogo naznacheniia," *SShA: Ekonomika, Politika, Ideologiya*, No. 4 (1985), pp. 113-118, at p. 114. See also I.N. Loshilov, *Vychislitel'naia tekhnika v voennom dele* (Moscow: Izd. DOSAAF, 1987).

4 V. Platonov, "Metodiku meniaet EVM," *Krasnaia zvezda*, February 28, 1987, p. 2; A. Iudin, "Komp' iuter ili karandash?" *Krasnaia zvezda*, September 7, 1988, p. 1.

development in the economy at large before it can hope to compete in the sphere of advanced military technology.⁵

Some Soviet critics argue that the task is even greater than Velikhov and Ershov believe, that the attitudes and habits of Soviet workers are inappropriate for the computer age. As I. Radkevich, Doctor of Physical and Mathematical Sciences, writes, "the basic problem today does not consist of an absence among the majority of workers of a 'second [computer] literacy.'" Rather, he argues, there is something wrong with the "first" literacy: "not the ability to read and write (that, thank God, we've all learned), [but] the professional training for a chosen field of work, be it technology or cooking, medicine or firefighting. It is necessary," he maintains, "to fight first of all not against computer illiteracy, but against unprofessionalism." He criticizes (without naming names) those who favor the wide-scale introduction of computer courses into school, maintaining that the material and methodological foundations are inadequate for such a program to succeed. Before learning computer skills, Radkevich argues, Soviet workers and students must learn math. Even more importantly, they must develop a responsible attitude toward their work.⁶

Thus, Soviet civilians who believe the USSR needs reforms in order to enhance its security offer a range of prescriptions: from increasing computer literacy in society to broad changes in the economic system and a fundamental transformation in work attitudes.

Military Views

It is highly implausible that the military have come to a consensus on the need for restraint in military spending in order to support *perestroika* and provide for long-term military-technical advances. Although military writers often invoke Lenin to the effect that military power depends directly on the overall strength of the economy, they vary in their estimation of what contribution the economy should make to the military sphere. Most analysts appear to embrace a mix of old thinking and technocratic views, although one occasionally encounters arguments compatible with the new thinking as well. It should be emphasized that these labels are used only to characterize different points of view found in the Soviet military literature. There is no evidence to suggest the existence of self-defined groups promoting coherent programs along these lines.

"Old thinkers" were naturally prominent during the Brezhnev period and earlier. They typically argued for reorienting the economy in order to build a reserve of material

supplies that would be needed in a future war and to make preparations for a quick transfer from civilian to military production in the event of war. They pointed to the lessons of the war against Nazi Germany and even the Russian Civil War to make the case for preparing the Soviet economy now for a rapid transfer to war footing if necessary in the future. Their arguments were often accompanied by explicit demands for higher military spending.⁷

Other Soviet military analysts, even during the Brezhnev years, recognized that military requirements cannot be met simply by throwing money at them. Their writings follow the trend in Soviet civilian analyses of the economy as a whole toward emphasizing "intensive" over "extensive" development (raising the productivity of existing inputs instead of increasing inputs). Such "technocrats" have tended to stress the need for optimal use of limited resources in the military sphere, and to note the importance of "using the achievements of scientific-technical progress for the development of contemporary military technology."⁸

The technocratic view comes through most clearly in the writings of Marshal Nikolai Ogarkov, former chief of the General Staff. He has made the argument several times in print that "for the first time in history, the main opposing sides have created a surplus of military, and especially nuclear, potentials." He expresses confidence in the ability of either side to retaliate after a nuclear first strike but seems concerned about "rapid changes in the development of conventional means of destruction" and the "appearance in the developed countries of automated reconnaissance-strike complexes, long-range, highly accurate combat systems with remote-controlled guidance, unpiloted flying machines, and qualitatively new electronic control systems."⁹ He argues that these new systems, rather than nuclear weapons, should be the focus of Soviet military efforts.

In contrast to the technocrats, the "new thinkers" give priority to a high level of technical development and skills in the civilian economy as a whole. When Ogarkov combines his warnings about the West's new advanced-technology conventional weapons with remarks stressing the importance of "the state's economic system and capabilities" and its "level of development of science and technology," he seems to adopt a reformist perspective.¹⁰ But Ogarkov is also thought to have pushed for sharp increases in Soviet military spending, a position inconsistent with the new thinkers' intent to favor the civilian economy.

Some elements of what might constitute a reformist perspective appeared in an article by Major General M. Iasiukov in the journal of the Main Political Administration

5 "Vstupitel' noe slovo Prezidenta Akademii nauk SSSR Akademika A.P. Aleksandrova," *Vestnik Akademii Nauk SSSR*, No. 6 (1983), p. 11; E.P. Velikhov, "Personal'nye EVM — segodniashniaia praktika i perspektivy," *Vestnik Akademii Nauk SSSR*, No. 8 (1984), pp. 3-9.

6 I. Radkevich, "O komp'utere — bez difirambov," *Literaturnaia gazeta*, September 17, 1986, p. 10.

7 Major General M. Cherednichenko, "Sovremennaia voina i ekonomika," *Kommunist Vooruzhennykh Sil*, No. 18 (September 1971), esp. pp. 23-25; Colonel S. Bartenev, "Ekonomika i voennaia moshch'," *Kommunist Vooruzhennykh Sil*, No. 14, 1980, esp. pp. 68-69.

8 Major General A. Gurov, "Effektivnost' materialnogo obespecheniia," *Krasnaia zvezda*, December 9, 1982, pp. 2-3; see also Ia. Riabov, "Nauchno-tehnicheskii progress i effektivnost' proizvodstva," *Planovoe khoziaistvo*, No. 12 (1979), pp. 3-10.

9 N.V. Ogarkov, *Istoriia uchit' bditel' nosti* (Moscow: Voenizdat, 1985), pp. 88-89; *Krasnaia zvezda*, May 9, 1984.

10 Ogarkov, *Istoriia*, p. 43.

(MPA) of the Soviet armed forces in October 1985. What distinguishes Iasiukov's discussion is his attention to the need for wide-scale adoption of computer technology in the Soviet military, and especially his apparent contention that a prerequisite for such adoption is a high level of civilian progress in this sphere. He explicitly associates his proposals with the political leadership's rhetoric on economic reform. He characterizes developments in computer technology, robotics, and electronics as "basic catalysts of military-technical progress," and implies that advances will not come from the military sector alone: "the current stage of military-technical competition, imposed on us by the imperialists, demands a high level of development of the most promising (*perspektivnykh*) branches of industry, the most up-to-date technology, and a highly qualified work force."¹¹ The problem with using such articles as an independent indicator of support for Gorbachev's new thinking is that they are typically written by political officers of the MPA or professors at military academies (as in this case) and are published primarily in order to drum up support within the military for the Party's policy of reform.

Support for Restraint?

Indeed, few in the Soviet military appear to have explicitly adopted such reformist views. Even articles that some analysts have identified as supporting the notion of near-term restraint for the sake of longer-term technological advances are at best ambiguous, and more often advocate a combination of old thinking and technocratic views. A case in point is an article in the *Military-Historical Journal* by Colonel V.A. Zubkov. The author invokes Lenin's views on the importance of the economy, and selectively quotes Gorbachev, but in such a way as to support the traditional goals of the Soviet military: an emphasis on heavy industry, transport, and the "creation of large-scale reserves" of fuel and stocks of weapons. He quotes Lenin's injunction that the USSR should not permit "the slightest weakening in the task of equipping the Red Army with 100% of its needs." This hardly sounds like a new thinker's desire to impose restraints on Soviet military spending. Nor is Zubkov a technocrat, concerned about the USSR's ability to compete with U.S. high-tech weapons. He claims that the Soviet Union's present "level of development of science and technology permits [it] successfully to resolve the most complicated technical tasks and in a short time to create any kind of weapon on which the aggressors stake their hopes."¹² An editorial in the same journal repeated some of the rhetoric of Gorbachev's reform proposals, but waxed far more enthusiastic about a mix of

policies favored by old thinkers and technocrats. In keeping with technocratic arguments, the article demanded the most advanced weapons and insisted on greater participation of scientists in the military sphere to prevent a technological breakthrough by the opponent. More consistent with the old thinking, however, it praised the Party's putative support for "a broad program of growth of the main branches of heavy industry," and for the development of machine-building, transport, and the natural resources of Siberia. The article stressed the importance of preparing the economy for a quick transition from peace to a war footing; unlike the technocratic arguments of the Ogarkov type, it emphasized nuclear weapons, maintaining that wide-scale economic mobilization was all the more important because a nuclear attack by the opponent could destroy the USSR's "military-economic potential" at the very beginning of a war. Like the old thinking, the article played up the "enemy image" of the United States: the threat of a sudden U.S. nuclear attack, U.S. striving for military-technical superiority, the U.S. government as captive of a military-industrial complex, and so forth. Having emphasized the threatening nature of the opponent and the immediacy of the threat, it could hardly advocate any restraint, short-term or otherwise, on the part of the USSR.¹³

The only prominent Soviet military official to have made a point of emphasizing restraint in Soviet military spending is Army General V.M. Shabanov, deputy minister of defense for armaments. Even before Gorbachev came into office Shabanov had written of the importance to defense of the overall health of the economy, although the example he cited — the crucial role of the home front in the victory over Nazi Germany — might not seem particularly relevant to current Soviet security concerns. More recently he has argued that the USSR's shift to a defensive doctrine of "reasonable sufficiency" would permit a reduction in resources allocated to the military and a consequent improvement in the economy. In an interview with the *Washington Post*, he claimed that the USSR had already begun to reduce its military spending, starting in 1986.¹⁴

All the same, Shabanov does not fit the image of a new thinker very well. During most of his career he has been involved in the development and testing of new weapons and is surely one of the USSR's most prominent military technologists. He told the *Washington Post* that the USSR would not continue to restrain its military spending in the absence of U.S. reciprocation and that we should expect to see yet another modernization of the SS-18 missile. One small bit of "kremlinological" evidence on Shabanov's true views is the difference in the titles of two of his articles, published exactly three years apart, before and during Gorbachev's tenure, respectively. The first was called "Reliable Shield of the

11 M. Iasiukov, "Voennaia politika KPSS: sushchnost', soderzhanie," *Kommunist Vooruzhennykh Sil*, No. 20 (October 1985), pp. 14-21., at p. 20.

12 V.A. Zubkov, "Zabota KPSS ob ukreplenii ekonomicheskikh osnov voennoi moshchi sotsialisticheskogo gosudarstva," *Voenna-istoricheskii zhurnal*, No. 3 (1986), pp. 3-8.

13 "XXVII s'ezd KPSS o dal'neishem ukreplenii oboronosposobnosti strany i povyshenii boevoi gotovnosti Vooruzhennykh Sil," *Voenna-istoricheskii zhurnal*, No. 4 (1986), pp. 3-12.

14 V. Shabanov, "Nadezhnyi shchit Rodiny," *Ekonomicheskaiia gazeta*, No. 8 (February 1985), p. 5; "Shchit Rodiny," *Ekonomicheskaiia gazeta*, No. 8 (February 1988), p. 18. R. Jeffrey Smith, "Arms Budget Cut, Soviet Says," *Washington Post*, July 27, 1988, pp. A1, A18.

Homeland;" the second was simply "Shield of the Homeland." Perhaps Shabanov has some doubts about the reliability of Soviet defense under Gorbachev's new thinking. The new thinkers, in turn, probably conclude that Shabanov is not the most reliable ally they could want in the Soviet military.

The Civilians' Not-So-Hidden Agenda

What if, contrary to the argument presented here, there were a strong military constituency for short-term restraint in military spending? Would they become the allies of the presumably most loyal supporters of Gorbachev's reforms, the intelligentsiia? If it were true that the civilian critics of high military spending really wanted to divert resources to the civilian sector only temporarily, in order to strengthen the foundations for future military programs, there might be some basis for a deal. In fact, it seems far more likely that the critics favor civilian development for its own sake and would always view military claims as unwarranted. Even Burlatskii, who deliberately linked his critique of the USSR's technological backwardness to security concerns, actually takes a rather dim view of military solutions to Soviet security problems, including technocratic ones, as his writing both during and after the Brezhnev era reveals.¹⁵

The impression of civilian resistance to military interests is reinforced by the sharp criticisms that a number of prominent scientists and politicians have levied at military research and development (R&D) — the key to future weapons innovations — and from their overall views about the military and the changing nature of security. In June 1986, for example, shortly after his appointment as Central Committee secretary in charge of international affairs, Anatolii Dobrynin explicitly criticized military R&D, including its supposedly beneficial effects on civilian technology.¹⁶ Dobrynin argued that new weapons complicate arms negotiations, that "quick changes in military technology lead objectively to the appearance of such types and systems that can make verification of limitations and reduction of armaments unthinkably difficult, even impossible." Rapid innovation also contributes to a deterioration of relations and an atmosphere of distrust. Dobrynin dismissed the notion that such programs as the U.S. Strategic Defense Initiative (SDI) would "guarantee a new breakthrough in the area of technology" or "give a stimulus to the development of scientific thought."

In a July 1986 meeting with Soviet and foreign scientists, Mikhail Gorbachev devoted a large portion of his remarks, subsequently printed in *Pravda*, to the same point. He argued that "it is said that SDI is the path to the development of science, to new heights of scientific-technical progress. But is it true," he asked, "that we can't move science and technol-

ogy, all the components of scientific knowledge, including the creation of new materials, radio-electronics, mathematics and so forth by carrying out peaceful projects?" He then went into great detail, listing the advances that had been achieved through international scientific cooperation in such areas as space exploration, concluding that the "argument that science and technology can be developed only with the help of an arms race is an absurd argument."¹⁷

The strongest case against military R&D appeared in the Party's theoretical journal *Kommunist* in October 1986. Nuclear physicist Lev Feoktistov wrote of the "prejudice that unfortunately has so far dominated the consciousness of a good deal of people, including scientists and politicians" to the effect that war and military production are "the companions, the accelerators, and even the sources of scientific-technical progress." Much like Dobrynin's observations about the arms race, Feoktistov's criticisms of the products of military research do not appear to exclude the USSR: He describes the major weapons of the postwar period as "an impressive spectacle of the concentration and material embodiment of the accomplishments of science, the human intellect, talent, and labor! An impressive spectacle, but at the same time a bitter one: indeed, intellect, talent, and labor expended essentially in vain, or even for human harm." Such remarks doubtless would not please the Soviet military, whose efforts Feoktistov describes as wasted at best.

Feoktistov specifically criticizes claims for the benefits of civilian "spin-off" (*obkhodnoi put'*) from military research, arguing that Japan's emphasis on civilian over military R&D accounts for its success in rivaling the U.S. for preeminence in microelectronics. In a section of his article that appears directly to address a Soviet audience, he argues that "the significance of the military sector for civilian production is often exaggerated, and their relationship to each other is wrongly interpreted. Contrary to the widespread view, the military sphere much more often borrows from the civilian than the other way around." He observes that the hope that "results of military research and development will be able to find wide application in civilian sectors is essentially unfounded... For what civilian purposes," he asks, "would one need an aircraft with variable-geometry wings, flying at supersonic speeds, hiding from radar, at the very surface of the ground; or a laser cannon, destroying targets at a distance of thousands of kilometers?"¹⁸

Feoktistov appears to be straddling the outer limits of the debate on military R&D in the Soviet Union. Yet he must have received high-level political sanction in order to publish in *Kommunist*. If prominent members of Gorbachev's reform coalition sympathize with such views they are unlikely to want to divert resources to an ambitious high-tech military

15 See, e.g., F.M. Burlatskii, "Filosofiiia mira," *Voprosy filosofii*, No. 12 (1982), pp. 57-66; Burlatskii, "Brezhnev i krushenie ottepei," *Literaturnaia gazeta*, September 14, 1988, pp. 13-14.

16 A. Dobrynin, "Za bez'iadernyi mir, navstrechu XXI veku," *Kommunist*, No. 9 (June 1986), pp. 18-31, at p. 20.

17 "Vstrecha M.S. Gorbacheva s predstaviteliami mezhdunarodnogo foruma uchenykh za prekrashchenie iadernykh ispytani," *Pravda*, July 15, 1986.

18 L. Feoktistov, "Gonka vooruzhenii, voina i nauchno-tekhniceskii progress nesovmestimy!" *Kommunist*, No. 15 (October 1986), pp. 97-106.

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buildup, even assuming the Soviet economy revives at some point in the indefinite future.

The evidence of anti-military sentiment among reform-oriented intellectuals, although fragmentary, is nonetheless striking. In a joint Soviet-American survey of 100 Soviet experts on international relations, including journalists, diplomats, and academics, 33% denied the existence of an "American threat," 73% agreed with the statement that the "scrupulous maintenance of parity between the USSR and USA is meaningless" and only slightly more than half of the respondents believed that the Soviet Union's possession of nuclear weapons served the maintenance of peace. The vast majority of respondents felt that "the most effective means for ensuring the USSR's security" was political or economic, whereas only a minority (17%) favored reliance on military means.¹⁹

The taboo on criticizing the Soviet military clearly has been lifted and the anti-military attitude of some pro-reform intellectuals is becoming increasingly evident. Journalists have criticized the military for its decision to develop and deploy the SS-20 missile, and have chastised the Ministry of Defense for its excessive secrecy and argued that "it may well have its own mercenary interests, like many other ministries whose arbitrariness has damaged the economy."²⁰ In a similar fashion, Academician Roald Sagdeev, former director of the Institute of Space Research and a prominent Gorbachev adviser, criticized military secrecy and alluded to a Soviet "military-industrial complex, [which] demands more and more money."²¹ Evgenii Chazov, the minister of health, implicitly criticized Soviet military spending in his speech to the 19th Party Conference in July 1988, when he expressed his hope that the military would give up the value of "at least a few aircraft carriers or a hundred missiles" in order to help fund the Soviet health-care system.²²

Potential Coalitions

Given their views on the military, scientists such as Feoktistov, Velikhov, Sagdeev, and their colleagues are not like-

ly to take well to demands that "basic and exploratory research [be] directed toward the invention of promising military systems," even when issued by supposed military reformers.²³ For their part, the military will be justifiably suspicious that if they yield to demands for short-term restraint in military spending, the restraints will become permanent and they will never see their favored high-tech weapons. If the prospects are bleak for a coalition between new-thinking scientists and intellectuals, on the one hand, and reform-oriented military officers, on the other, what are the chances that the more dominant military views will prevail?

Old thinkers are probably quite common in the Soviet military today, although their agenda for wide-scale mobilization and militarization of the Soviet economy stands little chance of implementation. It suffered a major setback in the mid-1970s, when the Brezhnev leadership evidently succeeded in restraining the growth of military spending to the same (sluggish) rate as the economy as a whole. Military procurement apparently remained flat, especially in the strategic nuclear realm, as older systems were retired and new ones deployed only up to the limits imposed by the SALT accords. At the same time, the political leaders insisted that military industries produce more goods for the civilian sector.²⁴ Under present economic conditions, it is unlikely that the old thinkers could succeed in promoting policies for a large-scale militarization of the civilian economy and for an increased stockpiling of weapons and raw materials.

The technocratic approach favored by Marshal Ogarkov may have a better chance of success in the short term. One would expect to see increasing Soviet efforts to develop the kinds of high-tech conventional weapons that NATO is deploying as well as systems intended to respond to the U.S. Strategic Defense Initiative. The Soviets would probably seek to overcome the difficulties entailed in developing the microelectronic and computer technologies that are essential for the new systems through a vigorous program of industrial espionage of the sort carried out in the late 1970s.²⁵

This approach is not the one that Gorbachev and his associates prefer. They appear far more inclined to forestall a

19 Andrei Melville and Alexander Nikitin, "Not Everyone Can Think Alike," *Moscow News*, No. 32 (August 14-21, 1988), p. 7. A more extended discussion of the findings is found in an unpublished paper, "Prospects for a New U.S.-Soviet Relationship: Perceptions of the Soviet Foreign Policy Community," by Melville and Nikitin of the USA and Canada Institute, V. Marinov of the Institute of Sociology of the USSR, and Philip D. Stewart of the Ohio State University.

20 Aleksandr Bovin, "Breakthrough," *Moscow News*, No. 10 (March 8-15, 1987), p. 3; Anatoly Akhutin, "Communicate and Take Responsibility," *Moscow News*, No. 30 (July 31-August 7, 1988), p. 3.

21 Roald Sagdeev, "In Search of the Algorithm," *Moscow News*, No. 26 (July 3-10, 1988).

22 "Vystuplenie tovarishcha Chazova E.I.," *Pravda*, June 30, 1988, p. 4.

23 "XXVII s"ezd KPSS," p. 8; also Iasiukov, "Voennaia politika KPSS," p. 20.

24 Richard Kaufman, "Causes of the Slowdown in Soviet Defense Spending," and comments by John Steinbruner and David Holloway, *Soviet Economy*, Vol. I, No. 1 (January-March 1985); Julian Cooper, "The Civilian Production of the Soviet Defence Industry," chap. 2 in Ronald Amann and Julian Cooper, eds., *Technical Progress and Soviet Economic Development* (Oxford: Basil Blackwell, 1986).

25 Henri Regnard (pseud.), "L'URSS et le renseignement scientifique, technique et technologique," *Défense nationale* (December 1983), pp. 107-121; and *Soviet Acquisition of Militarily Significant Western Technology: An Update*, a report prepared by the C.I.A. and released by the U.S. Department of Defense in September 1985.

competition with the United States in advanced-technology weaponry, in favor of securing limitations through arms control. The USSR has made a number of important concessions in order to persuade the U.S. to agree to such limitations on new weapons technologies, and has expressed increasing interest in limiting conventional forces in particular.²⁶ Indeed, it is on the issue of conventional forces that Gorbachev and military figures of the Ogarkov school appear to part ways, and the notion of a consensus between new thinkers and military technocrats breaks down.²⁷ Ogarkov voiced strong support for investment in advanced-technology conventional weapons, the so-called "weapons based on new physical principles," in order to respond to NATO's technological innovations.²⁸ Yet Gorbachev's disarmament proposals include restrictions on such weapons. His decision, announced December 7, 1988, to cut the Soviet armed forces by 500,000 soldiers, reinforces the impression that Gorbachev intends to avoid a conventional arms race.²⁹

There is no reason to mistrust Gorbachev's expressed desire to focus on internal economic reform rather than external military rivalry — the problems of the Soviet economy could easily occupy his full attention. If, however, he does not succeed in restraining U.S. military advances through arms control, Gorbachev would not necessarily be forced to adopt the approaches of the old thinkers or even the technocrats. His statements and those of his advisers suggest a predilection for relatively inexpensive countermeasures to American systems, rather than costly imitation, and a willingness to forego high-profile, "prestige" weapons that his predecessors appeared to believe were necessary for the USSR to maintain its superpower status. Gorbachev has taken a number of measures to help ensure that his preferences in security policy prevail.

Gorbachev's Priorities

Gorbachev seems to be relying on two methods for carrying out his security policy. The first is putting people who share his views or are beholden to him in important positions of responsibility in the military sphere. The second is recasting the security debate in ways that weaken the arguments of the old thinkers and technocrats.

Shortly after coming to office, Gorbachev made a number of personnel changes in the military, replacing much of the high command, and bringing General Dmitrii Iazov in as

defense minister over the heads of many higher-ranked officers. These new appointees do not necessarily share Gorbachev's goals entirely, but they now owe their positions to him. In December, 1988, Marshall Sergei Akhromeev, the last of the old guard, retired as chief of the General Staff.

Perhaps more significant than his handling of the military is Gorbachev's appointment of key civilians to oversee areas of importance to security policy. Anatolii Dobrynin, for example, as head of the Central Committee's International Department, endeavored to increase civilian participation in matters of military policy. He set up a section of his department charged with providing an alternative source of information on security issues to the political leadership.³⁰ Aleksandr Iakovlev, another Gorbachev protégé, was chosen to head a new foreign policy commission of the Central Committee upon Dobrynin's retirement in September 1988. He is assumed to consult with a number of academic specialists on military policy — people he knows from his previous position as director of the Institute of the World Economy and International Relations (IMEMO) — and he has encouraged social scientists to play a more active role in analyzing Soviet military doctrine.³¹ Within the Foreign Ministry, Eduard Shevardnadze has established a new Scientific Coordination Center to provide greater access for academic analysts to the policy process and he has strongly criticized the excessive reliance on military power in past Soviet foreign policy.³²

On matters related to military technology — and especially on the question of appropriate Soviet responses to SDI — Gorbachev appears to rely considerably on highly placed experts in the Academy of Sciences, such as Evgenii Velikhov and Roald Sagdeev. He chose Lev Zaikov, a man who owes his career to Gorbachev's direct intervention, to be Central Committee secretary in charge of overseeing the military industry. Anatolii Luk'ianov, a close Gorbachev associate from law school days, is responsible, as head of the Central Committee's General Department, for reviewing personnel decisions of the defense ministry as well as the KGB and interior ministry. He was recently made a candidate member of the Politburo. L.D. Riabev, a specialist on foreign trade in the Central Committee Secretariat, was named head of the Ministry of Medium Machine Building, the agency responsible for Soviet nuclear weapons development. He replaced E.P. Slavskii, who had held the position for 27 years.

Gorbachev's second means of promoting his preferred security policy has been to broaden the definition of what con-

26 Matthew Evangelista, "The New Soviet Approach to Security," *World Policy Journal*, Vol. 3, No. 4 (Fall 1986), pp. 561-599; Robert Legvold, "Gorbachev's New Approach to Conventional Arms Control," *The Harriman Institute Forum*, Vol. 1, No. 1 (January 1988); Jack Snyder, "Limiting Offensive Conventional Forces: Soviet Proposals and Western Options," *International Security*, Vol. 12, No. 4 (Spring 1988), pp. 48-77.

27 R. Hyland Phillips and Jeffrey I. Sands, "Reasonable Sufficiency and Soviet Conventional Defense," *International Security*, Vol. 13, No. 2 (Fall 1988), pp. 164-178.

28 "Zashchita sotsializma: opyt istorii i sovremennost'," *Krasnaia zvezda*, May 9, 1984; see also his remarks at a meeting of the Party *aktiv* of the Soviet Ministry of Defense, reprinted in *Krasnaia zvezda*, June 22, 1983; and *Istoriia uchit bditel'nosti*, p. 25.

29 *The New York Times*, December 8, 1988.

30 Dobrynin, "Za bez'iademyi mir," pp. 25-28. For a useful discussion of this issue, see Pat Litherland, *Gorbachev and Arms Control: Civilian Experts and Soviet Policy*, Peace Research Report Number 12, School of Peace Studies, University of Bradford, England, November 1986.

31 A. Iakovlev, "Dostizhenie kachestvenno novogo sostoiianiia Sovetskogo obshchestva i obshchestvennye nauki," *Kommunist*, No. 8 (May 1987), pp. 17-19.

32 "Doklad E.A. Shevardnadze," *Vestnik Ministerstva Inostrannykh Del SSSR*, No. 15, August 15, 1988, pp. 27-46.

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stitutes "security." He has emphasized the economic component of national security to such an extent that the military proponents of mobilization are automatically put at a disadvantage. Further, by criticizing the argument that military R&D can benefit civilian technology, Gorbachev has put the military technocrats on the defensive as well.

Gorbachev has implied that he sees economic reform as the most important response that the USSR can make to new American weapons developments, SDI in particular. In an interview in September 1986 with the Czechoslovak newspaper *Rudé právo* that was widely reprinted in the Soviet press, Gorbachev called attention to American "attempts to undermine the USSR economically by means of an arms race." He argued that "we will do everything so as not to allow this malicious plan to come true," by acting "above all" on the economic level. If we are weak economically, he argued, "the pressure from the enemies of socialism intensifies." But, if "we become stronger, more solid economically, and on the social and political level, the interest of the capitalist world in normal relations with us will grow."³³

Gorbachev's Prospects

Gorbachev's preferred strategy in the military sphere is to limit the costly Soviet-American competition in weapons technology through arms control agreements with the United States. Failing to secure such agreements, he would not necessarily revert to the previous Soviet approach of trying first to counter, then to develop and produce in large number, most American innovations. Nor would he necessarily be forced to adopt wholesale the policies of the old thinkers or technocrats. It is possible, though, that his optimal approach to dealing with American weapons developments, in the wake of the failure of his arms-control efforts, would combine elements of each group's agenda. As the technocrats advocate, Gorbachev would continue a vigorous military research effort, in order that the USSR not be taken by surprise by an American breakthrough. This effort would also provide a

basis for a program of countermeasures that could be less expensive than imitating the American weapons. Soviet interest in inexpensive means to offset U.S. weapons has received a good deal of attention in regard to strategic defenses, but the Soviets are undoubtedly also developing such means to meet the challenge of new American reconnaissance and target-acquisition systems, terminally-guided missiles, and so forth. Some of the approaches, such as electronic countermeasures, would appeal to the technocrats. Others, such as mass production of decoys, camouflage, and dispersal, might be more congenial to the traditional military preferences of the old thinkers.

It is impossible to predict the course of future Soviet security policy, especially since it depends in part on actions of the United States. It seems clear, however, that Gorbachev, his civilian associates, and his science advisers favor a program of domestic economic reform coupled with arms control efforts to limit competition in military technology. They might be able to form a coalition with those military officers, however few, who recognize that security must be defined by more than military power. But Gorbachev will disappoint those who would like to see economic reform put to the service of a new high-tech arms race. If his strategy proves infeasible, Gorbachev could adopt some aspects of proposals advocated by other sectors of the military. In any case, it is clear that Gorbachev has altered the terms of the Soviet debate on security in such a way as to limit the likelihood of a return to the military policies pursued by the Soviet Union during the 1970s. By embracing a concept of national security that gives precedence to economic strength, he has sought to rule out a major weapons build-up and a technological arms race in favor of a healthy domestic economy.

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³³ Interview published in the Soviet press as "Otvety M.S. Gorbacheva na voprosy glavnogo redaktora gazety 'Rudé právo' tovarishcha Zdeneka Gorzheni," *Krasnaia zvezda*, September 9, 1986, p. 1, and other newspapers.