

CHAPTER 3

RUSSIAN RULE AND THE REGIONAL MILITARY INDUSTRIAL COMPLEXES

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Introduction.

Since the collapse of the Soviet Union, the U.S. Government and the West in general have been concerned about the proliferation of weapons of mass destruction (WMD) stemming from the far-flung Soviet/Russian military-industrial complex. Beneficiaries of weapons proliferation may include rogue states and terrorist organizations acquiring nuclear WMD, e.g., warheads and missiles; chemical and bacteriological weapons, such as toxins and bacteria/virus cultures; and ready-made technology to produce all of these. In addition, the U.S. Government and the American expert community have raised concerns about the safety and accountability of materiel, such as weapons grade uranium and plutonium. The unsafe storage of radioactive materials in civilian use, ranging from fuel for nuclear power stations to trans-uranium substances used in medicine and research, represent a proliferation threat, as it is possible to acquire and enrich such materials to weapons-grade levels, or use them in dirty, sub-critical devices. A separate but related issue is the availability of experts capable of developing strategic systems who are for hire by rogue states, whether the projects the experts contract for are completed abroad or while they continue to reside in Russia.

Problems with control over strategic weapons and nuclear materials in the regions have been widely reported on all levels: at the federal center, in the military, in security/law enforcement, and in the national economy. This chapter will examine the factors affecting proliferation, and will draw conclusions regarding the interaction between proliferation and questions of center-periphery relations.

Conventional wisdom holds that the decline in resource allocation to maintain Russia's far-flung military-related facilities is encouraging the scientists and managers of these facilities to sell their goods abroad. Yet some believe that local economic and environmental concerns have also encouraged local authorities to contain and restrict the activities of these facilities. This chapter will identify the factors determining which of these trends is likely to be prevalent.

The conclusions are far from hopeful. In view of the overwhelming evidence that the military and the Russian military-industrial complex are the leading proliferators, there is little reason to believe that local authorities have either the motivation or the power to act as efficient inhibitors of proliferation.

The pervasive corruption among national and local authorities; inadequate and corrupt law enforcement; powerful criminal organizations with links to global organized crime; severe problems of budgeting insufficiency and irresponsibility in Moscow and at the regional (*oblast*) levels; lack of interaction between nationally owned facilities and local governments; and turf battles between the center and the local governments, all combine to make the Russian military-industrial complex and the civilian facilities of the Ministry of Atomic Energy (Minatom) leaky and dangerous vessels bearing some of the most deadly weapons systems and technologies on the planet. As these vessels sink, WMD technologies are being sold and smuggled out of Russia.

At the time of this writing, evidence abounds that proliferation of strategic weapons is under way, with the complicity of Russia's central and regional authorities. It seems that the government of Russia, the U.S. Government specifically, and Western allies as a group failed to develop a comprehensive strategy to address this issue, and a quick and comprehensive solution to the problem may not be achieved in the near future.

The Russian Military and The Military-Industrial Complex: Primary Agents of Proliferation.

As the Soviet Union collapsed in the wake of Mikhail Gorbachev's rule, a taste for personal enrichment spread within the ruling communist bureaucracy. During the period 1988-90, economic liberalization under "self-sufficient accounting" (*khozraschet*), and the Law on State Enterprises, promulgated in 1988, allowed state-owned economic units to sell their production at state prices to small commercial firms set up by their managers, which could in turn sell the goods abroad at international market rates. For the first time since Lenin's New Economic Policy of the 1920s, the outlook of Russia's industrial managers began to change, as profit once again became the main motivating force behind economic activities. The call was, "Get it while you can." Unfortunately, the pursuit of profit in the absence of the rule of law and adequate mechanisms of control opened the Pandora's box of weapons proliferation.

The Economic Roots of Proliferation.

By 1990, assets were being transferred from the state pocket to a vast number of companies set up by the Central Committee of the Communist party with the participation of its most trusted agents, usually from among Committee for State Security (KGB) officers and others. These "red directors" were joined by military and security generals in gigantic asset-stripping schemes. During this period,

industrial enterprises, including those in the military-industrial sector, began selling strategic stockpiles of raw materials, an activity that was previously punishable by death.

For the first time in Soviet history, unprecedented events in the area of licit and illicit foreign trade in military-related goods were noted by Russian and Western observers. For example, ANT, a company with ties to Prime Minister Nikolay Ryzhkov and other senior Soviet officials, was caught trying to sell and ship modern Soviet tanks (T-80s) and other military equipment out of the port of Novorossiysk.

In 1990-92, while serving on the Board of the California-Russia Trade Association (CARTA), a small non-profit organization, I witnessed a flurry of faxed business offers from the Soviet Union (and later Russia) containing proposals to sell anything from rare metals used in military production to military equipment, helicopters, and aircraft. The floodgates of the Soviet economy, bottled up for 60 years, had suddenly burst.

This General Went to Market.

As Gorbachev negotiated the withdrawal of Soviet troops from East Germany, the Soviet generals launched “economic” activities, selling off military materiel and equipment worth billions of U.S. dollars. For example, the Western Group of Forces (Zapadnaya Gruppa Voisk, or ZGV) entered frenetic economic activities, selling vast supplies of the fuel that had been stored in East Germany for the Soviet Army’s future thrust into Western Europe and the conduct of World War III.

General Pavel Grachev, who later became President Boris Yeltsin’s Minister of Defense, and General Matvei Burlakov were often mentioned in the Russian news media as being leading culprits of this sell-off. Grachev even earned the nickname “Pasha-Mercedes” for allegedly using

Russian transport aviation to import luxury cars, such as Mercedes Benzes and Volvos, into Russia. Both Grachev and Burlakov were linked to the murder of investigative journalist Dmitrii Kholodov, who was assassinated by an exploding briefcase after publishing allegations of high-level corruption in the military. The head of an intelligence unit with the Russian air assault troops was convicted of the Kholodov murder years later.

The 1990s yielded a bumper crop of accusations of and indictments for corruption in the post-Soviet military. In addition to Grachev, Air Marshal Shaposhnikov, the last Soviet Minister of Defense, was fingered in the news media as being deeply involved in corruption. Colonel-General Konstantin Kobets, one-time acting Minister of Defense of the Russian Federation and a hero of resistance to the 1991 putsch, was sentenced to a relatively short jail term. A Pacific fleet commander, an Air Force Major-General in the Far East Military District,¹ as well as a number of general officers in the strategic rocket forces were accused of corruption. Some were dismissed, but very few were actually convicted. Generals also in a few cases used conscript labor to build villas and to farm out labor to civilians for construction and other projects—an activity both corrupt and harmful to the morale of their troops.

Russia's junior officers were not far behind their leaders. In Murmansk, headquarters of the Northern Fleet, five naval officers were arrested and charged with attempts to sell radioactive rods from a number of nuclear submarine reactors anchored in the bay. In a particularly notorious case, the former head of Pacific Fleet counter-intelligence became an operations officer for one of the organized crime gangs in Vladivostok, headquarters of the Pacific Fleet. Thus, towards the end of the Gorbachev era and throughout Yeltsin's rule, the Russian military demonstrated pervasive corruption, often at the highest levels. Moreover, with the beginning of the war in Chechnya (December 1994), reports began to surface alleging sales of weapons to the Chechen rebels seeking independence. Some cases of officers selling

conscripts to the Chechens as slaves or to be ransomed later by their families were also reported in the news media. Unauthorized sales of Russian and Ukrainian weapons were publicized, as wars raged in the former Yugoslavia and Africa.

It was only a matter of time before the trade would begin in WMD systems, components, and technology. In one of the more notorious of such cases, General Anatoly Kuntsevich, former head of the Russian chemical weapons program and later adviser to Yeltsin on chemical disarmament, was caught selling chemical precursors to binary weapons to Syria. In 1995, he was charged by the Federal Security Service with selling 800 kilograms of chemicals in 1993 and five and half tons in 1994.² Still, Kuntsevich did not serve out his jail term.

Even more disturbing are reports that Aum Shinriki, a Japanese doomsday cult, reportedly obtained chemical weapons from Russia. It used the deadly nerve gas Sarin during its 1995 attack on a Tokyo subway station. There were reports that Aum was also negotiating for the purchase of a nuclear warhead from Russian sources. An even greater cause for concern is reports that Osama bin Laden's Al-Qaeda terrorist organization, harbored by the Taliban regime in Afghanistan, attempted to acquire nuclear capabilities. Bin Laden may have the means, the dedication, and the motive to do so.³

An American researcher and former Pentagon official, Phil Petersen, claimed that while visiting Russia on a research project in 1992, a missile base commander offered to sell him a decommissioned SS-20 missile. Although Russia was supposed to have destroyed all of its SS-20s under the Intermediate-range Nuclear Forces Treaty (INF), several apparently were stored "for instruction purposes." The Clinton administration refused to go ahead with a sting operation to catch the culprit.⁴

Not only missiles but also submarines were available for sale. U.S. law enforcement authorities thwarted an attempt

to sell a Russian submarine to a Colombian drug cartel, complete with a crew and a vice admiral to command the vessel. Senior officials in the Ministry of Defense in Moscow were supposed to clear the submarine sale. An almost completed sub, along with blueprints in Russian and various components, was discovered in the Colombian jungle—yet another attempt to sell a sensitive weapons platform to a drug cartel.

As James Woolsey, former Director of the Central Intelligence Agency, testified,

If Russia either follows the path of Weimar Germany's collapse into fascism or breaks apart, our problems in this regard will become far more severe. At the heart of the matter is Russia's failure, in the aftermath of the fall of the Soviet Union, to establish the rule of law.⁵

Woolsey pointed out another important phenomenon which U.S. authorities dealing with Russian proliferation were slow to understand—the nexus and inter-penetration between Russia's security services, organized crime, and Russian firms, which regularly do business with the two other segments of the corrupt Russian society.⁶

The Russian government often tolerated and sometimes even facilitated these transactions. For example, Evgeny Primakov, in his capacity as chief of the foreign intelligence service (SVR), foreign minister, and prime minister, was interested in these sales as a means to curry favor with his supporters in the armed services and the military-industrial complex. Primakov scored points with the political “red-brown” coalition, which supported both his foreign policy and his prime ministership.⁷ In addition, Primakov, who cultivated high-level contacts among most radical and anti-American Middle Eastern leaders, could easily facilitate weapons sales. Another politician who developed expertise in promoting arms sales, particularly to Iraq, is Vladimir Zhirinovskiy, the rabble-rousing, ultra-nationalist leader of the Liberal-Democratic Party.

People living in the relatively orderly Western world, ruled by laws and lawyers, have a difficult time fully grasping the dire significance of the phenomenon described by Woolsey. This was a merger between a sophisticated and ruthless global intelligence service, criminal organizations with world-wide reach, and a decaying and corrupt military possessing sufficient resources, including WMD, to wage an intensive nuclear world war. As of 1990, there were no government, no laws, and no legal mechanisms to stand in the way of the unprecedented opportunity to proliferate strategic weapons.

Regions in Chaos: From Decentralization to “Strengthening the Vertical Flow of Power.”

The dynamics of center-periphery relations affected Russia’s proliferation of WMD in the 1990s, and will continue to do so in the new millennium. During 1992-99, the executive power in Russia’s federal government rested with an erratic and increasingly ill Boris Yeltsin. While not a dissident, Yeltsin had at least some inclination toward promoting a “Russia of regions,” and experimented with a federal structure that delegated some authority to regional governors and the presidents of ethnic constituent republics of the Russian Federation.

Weak Center and Feeble Control: The Yeltsin Years.

In the beginning of Yeltsin’s tenure (1991-92), governors were nominated, but after the adoption of the Russian Constitution in 1993, they were elected. Yeltsin’s political advisers included a number of academics who sought to build a federal structure different from the rigid Soviet system. These included Leonid Smirniagin, a Moscow State University political geographer who was Yeltsin’s adviser on federal affairs; Georgy Satarov, a liberal political scientist who became Yeltsin’s political aide; and Emil Pain, an expert on ethnic affairs who advised on nationality issues. The period of the early 1990s is best summarized by

Yeltsin's famous call to the regions, "Take as much sovereignty as you can carry away."

In some cases, that dictum was taken too far, too fast. Moscow could not stomach the attempts of Chechen president General Jokhar Dudaev to declare independence. A long and bloody war ensued, which continues to this day. Tatarstan had negotiated a more autonomous status for itself than other ethnic republics, which were somewhat more independent from Moscow than the regular regions. However, the loosening of Moscow's grip on the provinces, and the poor leadership of the armed forces, which tolerated corruption and the sell-off of military hardware, resulted in more emboldened governors, local military commanders, and others pursuing risky deals which involved increasingly sophisticated weapons.

While dozens of incidents of nuclear smuggling were reported during the 1990s, security experts believe that only 10-15 percent of these activities were uncovered. While in most cases the amounts of intercepted radioactive materials were too small to produce even a single nuclear weapon, some experts believe that these were samples, and that larger amounts of uranium and plutonium may have been shipped to customers. Moreover, the higher the rank of the officials involved, the better their capabilities to cover up the smuggling and the smaller the chances of their being apprehended.

In any event, during this period most of the military and military-industrial facilities with the potential to proliferate were under federal control—that of the armed services, the Ministry of Defense, and the ministries in charge of military production. What facilitated smuggling in the 1990s were loose border controls, corrupt customs officials, and ill defined (and sometimes, nonexistent) laws. Local generals were sometimes dependent on the governor's largesse, while Federal Security Service (FSB) commanders in the regions were either in the local oligarchs' pockets or engaged in business themselves. Federal prosecutors'

offices in the region did not function well, to put it mildly. Thus, the bureaucratic structures that were supposed to prevent proliferation by investigating, apprehending, and prosecuting the culprits were corrupt and inefficient.

Russia was dizzy with its newfound freedom, and often put it to ill use. Still, WMD smuggling was an activity that carried a high risk and uncertain reward. Many other commercial ventures, such as trade in oil, gas, and metals, were both safer and more lucrative. Still, regional leaders in the government, business, the military, and organized crime were minor league players in comparison with their Moscow betters. The center, on one hand, led the way in proliferation activities, while on the other, it lacked the tools to effectively prevent such activities when undertaken in the regions.

Recentralization under Putin.

The rise of Vladimir Putin and the allied group of St. Petersburg FSB officials, businessmen, and government bureaucrats changed the tone, but not the substance, of proliferation as related to federal control over the regions, and center-periphery relations. By appointing seven presidential plenipotentiary representatives (governors-general), five out of seven of them former KGB and military generals, to oversee the regions, Putin changed the constitutional make-up of Russia without changing the Constitution. These presidential envoys have already been nicknamed “sovereign’s eyes.” They will obviously report to the Kremlin about any suspicious activities undertaken in their region, including anything as politically lucrative and sensitive as sales of WMD and related technology.

Through this latest reform, Moscow is attempting to reassert its control and to diminish the power of the elected governors. As part of Putin’s new order, the regional governors will cease to be ex officio members of the Council of the Federation (the upper house of the Parliament). Instead, they will appoint “senators” to represent the

regions in Moscow. By diluting the prerogatives of the governors, the Kremlin is attempting to consolidate its authority. Rumors abound that constitutional reforms will be introduced, cutting down the number of Russian regions from 89 to 30-40. Thus, at least theoretically, it will be more difficult to engage in proliferation activities under Putin's rule **without the Kremlin's approval and financial "participation" in the profits.** However, this does not necessarily mean that proliferation will become more difficult—just more orderly.

While reports of corruption continue unabated, a survey of those named indicates that the Prosecutor General's office has been used as a political battering ram against hostile oligarchs, not as an institutional tool to fight official graft and organized crime. Few, if any, high profile corruption trials have taken place under Putin thus far. No prominent criminal "godfathers" have been jailed. The only public investigation focusing on Ministry of Defense generals who allegedly committed embezzlement involves former Ukrainian Deputy Prime Minister Yulia Timoshenko and former Russian Deputy Minister of Finance Sergei Vavilov, and their alleged offense was purely financial fraud, not corrupt proliferation activities. This investigation may have been a part of a political struggle to bring the Ministry of Defense under control of Putin's political appointees. No trials of high-level generals from the military or the FSB have taken place so far—for proliferation or otherwise.

On Putin's watch, as under Yeltsin, the most crooked officials are either quietly dismissed or pushed out, often being given prestigious jobs. For example, after being dismissed, Governor Evgeny Nazdratenko was appointed Chairman of the State Committee (Minister) of Fisheries, while Governor Nikolai Kondratenko of Krasnodar was approved for appointment to the upper house (the Council of the Federation) by his handpicked successor.

Putin himself has admitted that the Customs Service is beyond repair, and that he cannot see a way to clean it up. Governors and presidents of the autonomous republics are learning to coexist with Putin's viceroys, sometimes publicly trading barbs, as in the case of the young and brash former Prime Minister Sergei Kirienko, special envoy for the Volga area, and Tatarstan's erstwhile President Minitmer Shaimiev and Bashkortostan authoritarian Murtaza Rakhimov. However, in most cases, the regional leaders cooperate in business areas, rather than conduct open political warfare.

Two areas of concern have emerged to date under Putin's rule: first, with a more pliant mass news media, Russia is becoming less transparent. If, under Yeltsin, reports of high-level corruption in the military and arms exports, including WMD proliferation, were relatively numerous, today little on the subject reaches the newspaper pages, let alone the television screens.

Secondly, under Putin, powerful state structures such as Minatom began to openly proliferate, primarily to China, Iran, and North Korea. These activities are well covered elsewhere.⁸ While high officials usually are behind such activities, they are instances of the blurring of lines between state and private interests, not the outright contraband that many feared during the period of lax controls over regions under Yeltsin.

Some experts have expressed the hope that a more centralized or even authoritarian Russia will deal with proliferation more effectively. However, such an undemocratic Russia could take anti-Western stands and find its ideological soul mates among rogue states. Such a Russia would be more likely to conduct an orderly, government-sponsored proliferation that could be even more difficult to contain than the semi-clandestine, black market variety, which is at least subject to law enforcement activities both domestically and internationally.

The Scope of the Proliferation Threat.

An examination of the sources of proliferation in the Russian regions highlights the multiple sources of danger:

- Nuclear weapons in active service in the hands of the military, primarily the Strategic Rocket Forces. During the Soviet era, 45,000 nuclear bombs and warheads were produced;⁹
- Decommissioned nuclear weapons in storage by the Minatom;
- Stockpile of nuclear materials, such as highly enriched uranium (HEU) and plutonium (altogether 1,200 tons, enough to produce thousands of nuclear devices), stored by Minatom;¹⁰
- Stockpile of low enriched uranium (LEU) and plutonium for nuclear power stations, which can be enriched into weapons-grade materials, also stored by Minatom;
- Nuclear substances used in medicine, civilian research, and other fields, which could be used in fission bombs after enrichment, or in “dirty” radioactive devices powered by regular explosives. These nuclear substances are widely dispersed, mostly unprotected, and difficult to control and inventory;
- Nuclear warhead and missile factories and research facilities, often located in closed or highly restricted “nuclear” and “missile” cities;
- Chemical weapons deployed in the field and in storage;
 - Precursors for binary chemical weapons;
 - Technology to produce chemical weapons;

- Biological weapons (toxins, bacteria, viruses, and other micro-organisms) stored in research labs in Russia and countries of the former Soviet Union, such as Kazakhstan;
- Technologies to build biological and chemical weapons; and,
- Scientists, engineers, and other experts necessary to build the WMD arsenals.

Since the Soviet Union did not **have** a military industrial complex, but rather **was** one, these sources of proliferation are widely scattered from Moscow to Eastern Siberia. Dispersed throughout eleven time zones, Russia’s WMD “crown jewels” are hard to count and harder to keep.

Table 1 indicates closed cities which, in some cases, are not even shown on the map. In other cases, severe restrictions apply to foreigners wishing to visit them.

CITY	SPECIALITY
Sarov	Nuclear weapons development; the Federal Nuclear Center
Snezhinsk	Nuclear weapons development; the Federal Nuclear Center
Trekhgorny	Serial production of nuclear weapons
Lesony	Serial production of nuclear weapons
Zarechny	Chemical industry complex
Zelenogorsk	Chemical industry complex
Ozersk	Chemical industry complex
Novoural’sk	Chemical industry complex
Zhelznogorsk	Chemical industry complex
Seversk	Chemical industry complex
Miass	Rocket Center: Makeev Design Bureau (submarine-launched missiles)
Votkinsk	Votkinsk machine building plant (SS-27 <i>Topol</i> ICBMs)
Korolev	Outer space systems and orbiting stations

Table 1. Specialization of Closed Cities.¹¹

As the Soviet Union collapsed, the Cold War rationale for huge defense budgets and gigantic strategic stockpiles became a legacy of the past and Russian military production plummeted. In 1992, military procurement budgets were slashed by 67 percent.¹² While many Russian towns and regions were dependent upon the military-industrial complex for their welfare, healthcare, and education, since the early 1990s the federal government in Moscow began cutting corners and budgets. The military-industrial complex was told to fund its research and development through raising export revenue. The situation did not change until 1999, when a 50 percent increase in the military budget was announced.

The regional governments never felt ownership over these federally owned and controlled enterprises and closed cities. Regional jurisdiction over these areas was extremely restricted in the Soviet era and remains quite limited today. Still, enterprising and corrupt former governors, such as Leonid Gorbenko in Kaliningrad, Evgeny Nazrdatenko in the Maritime Province (Primorskii Krai), and others, are capable of pillaging the resources of the military-industrial facilities and closed cities to generate a cash flow for their own needs.

Masses of scientists and technical experts—between 60,000 and 70,000 in the Russian nuclear complex alone, according to one U.S. estimate—remained stranded in the closed cities with salaries below Russia's poverty line, or unemployed.¹³ Severe unemployment—up to 50 percent or higher—has devastated many of these towns. Prominent scientists, such as the scientific director of one of the nuclear research centers (Arzamas-16/Sarov nuclear research facility) have even committed suicide.

Living standards have fallen precipitously in those geographical areas that are most capable of spawning proliferation. The national government is often months behind in paying salaries in the military-industrial factories on which whole towns depend. The majority of

scientists and engineers with master's degrees in technical disciplines are paid \$50-\$100 a month. According to a recent study, only 3 percent of technical experts are paid \$100-\$125 a month.¹⁴ Many residents in the military-industrial factory towns have become depressed and desperate, taking to drinking and suffering from other social ills such as drug addiction. The residents in nuclear and missile towns are hobbled by the residency registration (the infamous—and unconstitutional—*propiska* system), which in many cases prevents them from leaving and seeking employment elsewhere.

Even with massive aid from the U.S. Government, sensitive weapons, enriched uranium, and technology are not safe from illicit acquisitions by rogue states or terrorists. According to a report by the U.S. General Accounting Office in February 2001, after spending \$2.2 billion over almost 10 years, only 14 percent of Russia's weapons grade material has been fully secured.¹⁵ Obviously, nuclear safety is not a priority for the Russian government, which, with its increasing anti-Americanism, makes cooperation by Minatom and other official Russian agencies with American-funded programs sponsored by the Departments of Defense and Energy (and with some American nongovernment organizations [NGOs] in Russia), particularly difficult.¹⁶ This is unfortunate, as the Russian federal government has partially abandoned responsibility for maintaining the social infrastructure of the closed cities, leaving it to the regional governments to provide social services, including schools, healthcare, subsidized heat, and housing.

It comes as little surprise that under these conditions of extreme hardship, Russians find ways to cash in on their expertise. For example, the Reutov Mashinostroyeniye Science and Production Association in the Moscow *oblast*, and Aksion, a firm from the highly militarized city of Izhevsk (Udmurt Autonomous Republic), are participating in selling to Iran a national satellite communications system with numerous defense capabilities. Other firms

from the regions are participating in transferring SS-4 Intermediate Range Ballistic Missile (IRBM) technology and cooperating with Iran on developing its *Shihab* series IRBMs and intercontinental ballistic missiles (ICBM).¹⁷

Russian government agencies, led by Minatom, facilitated the transfer to Iran of 500 technicians and engineers who work on the Bushehr nuclear reactor project, and cooperated with Iran in bringing other Russian scientists to develop less innocuous nuclear projects. Employment of Russian specialists abroad alleviates the domestic employment situation in closed cities and money-starved military-industrial facilities; earns hard currency for the state; and lines the pockets of corrupt government officials who facilitate such projects.

Russia's Regions: First in Production, First in Commerce.

Since the late 1990s, the Russian regions realized the naivete of passively waiting for handouts from the center. Instead, they are actively seeking markets abroad for the conventional weapons systems they manufacture. For example, firms from cities with strong military-industrial capabilities such as Per'm, Sverdlovsk, Tula, and Izhevsk regularly participate in a huge weapons show in the United Arab Emirates. Alexei Arbatov, Deputy Chairman of the Duma Defense Committee, stated recently that Russian weapons exports to China, India, and Iran are equal to one-half of the Russian military acquisition budget.¹⁸ It is only logical to assume that players from the regions with business and technical expertise are being approached to sell more sensitive systems, including WMD.

Sometimes, cases of outright violation of applicable laws occur, but these are hushed up by the proliferators' friends and associates who work for the security services and other influential branches of the government—often in exchange for a percentage of the profits or an agreed-upon sum of money. Thus, a prominent businessman from Siberia

admitted in an interview with a credible, well-known Russian sociologist, whom the author knows personally, that a large part of his wealth comes from sales of weapons-grade enriched radioactive materials from Krasnoyarsk-26, a well-known closed city, to Middle Eastern countries. FSB, the Russian secret police and successor to the KGB, summoned the researcher and requested that he not publish the story, effectively playing the role of “roof” (criminal protection) for the businessman who admitted violating Russian laws.¹⁹

Instead of participating in proliferation, it has been suggested by American experts that nonproliferation and arms control centers can be created in Russian nuclear cities. Such centers, employing some of the scientists and engineers, could be given the status and authority of proliferation monitors responsible for keeping tabs on Russia’s sensitive exports. Western advisers further suggested that these centers be granted a more prominent role by the Russian government in export control and evaluation, similar to that of U.S. government labs, which are routinely consulted by the U.S. Department of Energy in export control decisions. The center in Snezhinsk already performs such a role.²⁰ However, Moscow has been slow to delegate its controlling authority over sensitive exports to regional players.

Russia’s Regional Rationale for WMD Proliferation.

As time goes by, the Russian regions, military districts, and industrial enterprises are developing direct relations with countries around them. No longer do all economic ties, including those in the military sector, have to be approved by Moscow. Thus, the Russian Far East *oblasts* have developed particularly strong connections with the People’s Republic of China. Tatarstan has made a point of developing bilateral economic ties with foreign countries while paying little attention to Moscow’s wishes. Iran has developed ties to research and academic institutions in Moscow and St.

Petersburg, where the bulk of Iranian students study nuclear physics, military engineering, and space-related disciplines.²¹

Moscow actively pursues high profile contacts with the leaders of rogue states, such as the visit of President Khatami of Iran to Moscow in the spring of 2001, and the “historic” train ride through Russia in August of 2001 by North Korean leader Kim Jong-il. While in Russia, these leaders visit Russian aerospace and nuclear facilities in highly publicized media events. These contacts send a clear message to the Russian regions that rogue countries are respectable military-industrial partners of the Russian Federation.

It is only a matter of time before these foreign parties request their Russian counterparts to provide sensitive technologies, either dual-use or WMD. At the same time, export and customs controls have been rendered ineffective due to pervasive corruption, which allows Russian regional players with pecuniary interest in military-related sales to serve as intermediaries and facilitators in such sensitive transactions. Civilian officials, such as governors, military-industrial “red directors,” and senior military officers have their networks of contacts and patronage. They are in a position to bribe customs officials, obtain export control exceptions and necessary export licenses, or arrange for items to be exported using the ubiquitous Russian military-transport aviation. This air transport system often flies around the world, sometimes on missions having little to do with ferrying Russian troops, such as transporting illegally trafficked arms and drugs.²²

Brain Drain or Brain Upgrade?

The employment situation in the military-industrial complexes in the regions is desperate, and an absolute majority (80 percent) among Russian technical experts in the closed cities would be willing emigrate and work for the military industries of other states.²³ It is worth mentioning

that 64 percent of those prepared to emigrate would be willing to work with “any” organization to achieve their goal, while 24 percent would like to cooperate with a “special state-run agency.”²⁴ This is a strategic threat in itself, and will be treated separately in Chapter 6 of the present volume.²⁵ However, there is another clear and present danger—Russia still boasts an impressive array of colleges and universities which can prepare competent scientists and engineers capable of producing WMD arsenals. These institutions of higher learning, which specialize in nuclear physics and chemistry, ballistics, and rocketry, are located not only in Moscow and St. Petersburg, but also in provincial towns, often those which boast advanced military industrial facilities, as well as in the closed cities.

One of the more prominent among such institutions is the Baltic State Technical University in St. Petersburg, which specializes in ballistic missile design and space technology. Together with ten other institutions, the University was selected for sanctions by the U.S. Government for educating Iranian students. While a professor at the University claimed that he earned 83 cents a day in Russia, Iranians were willing to pay salaries in excess of \$2,500 a month—a fortune for a Russian academic who is close to retirement. Some of the faculty, such as Baltic Technical University Rector Yurii Saveliev, do not hide their anti-American animus.²⁶ The authorities in these institutions of higher learning not only tolerate, but even approve education for students from India, Iran, Iraq, and other problematic states. They also authorize faculty travel to rogue states to teach in technical institutions there.

While, during the Soviet era foreign students from the Third World were provided free education, lodging, and stipends, today these students or their governments pay for their education.²⁷ Thus, the “export of higher education” not only keeps Russian professors employed, it earns otherwise scarce funds for colleges and universities.

There is no unified authority in Russia monitoring the education of foreign students in sensitive fields. When the author recently raised this issue with Russian security experts and government officials, the answer was that the West is educating even more Iranian and other students in physics and sensitive technological fields, and that Russia is no more to blame than the West. According to the Russian Foreign Ministry, “hundreds” of Iranians and Iraqis received advanced degrees in physics and other disciplines in Great Britain, France, and the United States in the 1980s and 1990s. Moreover, according to the Russian Ministry of Foreign Affairs, when Moscow raised this issue with the United States, the answer allegedly was that the United States was a free country, and no academic censorship was tolerated.²⁸ The government of Russia thus refuses to take responsibility for the proliferation of sensitive knowledge from its colleges. This is yet another aspect of proliferation which allows often unstable regimes in developing countries to build up their WMD arsenals.

Conclusions.

The role of Russia’s regions in this process is important, but still secondary when compared to that of Minatom, the Ministry of Defense, and Moscow-based aerospace firms. It is Moscow that sets the pace for sabotaging international efforts against proliferation. While the Russian government maintains that it adheres to international export controls, such as the Missile Technology Control Regime (MTCR), the Nuclear Suppliers Group, and the Australia Group, the reality is different. Russia is exporting sensitive systems and technologies to countries hostile to the United States and her allies, such as China, North Korea, Iran, and Iraq. It is likely that Russia’s military exports of conventional, dual-use, and WMD systems and technology to clients in the Indian subcontinent, East Asia, and the Middle East will grow in the future. These technologies cover the whole spectrum of nuclear, missile, chemical, and elements of biological weapons.

The gap between rhetoric and performance is yawning, while American protests encounter a range of responses which are totally inadequate, from marginal attempts to bring illegal and sensitive military exports under control to outright sabotage and denial.

Russia's regions cannot fail to notice the double standard, which Moscow promotes, rhetorically denying proliferation while pursuing it in practice. It can only be expected that the regions will follow Moscow's lead in the dangerous proliferation game the Russian government is playing. And as long as the regional players keep Moscow's gatekeepers happy by sharing the proceeds, the deadly exports will continue.

It would be in U.S. interests if the Russian government were to offer alternatives to proliferation to the military-industrial enterprises and the military units possessing strategic systems and technology. Military conversion and civilian economic development, possibly involving U.S. firms, would provide an alternative source of revenue to potential and actual proliferators. However, the degree of transparency and reliability of Russian partners has been a problem in past U.S. efforts, and must be held to the highest standard. Safeguards designed to prevent proliferation activities by beneficiaries of U.S. conversion and investment programs must be designed and adhered to.

Finally, information is the key to monitoring and preventing proliferation. While Moscow and St. Petersburg boast ample contingents of American diplomats and consultants, the situation is different outside the capital areas. Thus, the United States might consider increasing its presence and developing contacts in the regions. This could include official U.S. Government representatives and American NGOs. Even more importantly, contacts have to be expanded with potential Russian allies in the government and the NGO communities, who may play a role in curtailing proliferation activities. The official institutions could include governors' offices, the FSB, the General Staff,

military district commanders and staff, and customs officials. The nongovernment community could include the environmentalist movement, the news media, and authorities in higher education.

Only through broad cooperation with Russian institutions can U.S. efforts to stem the flow of proliferation have a chance at succeeding.

ENDNOTES - CHAPTER 3

1. Gregory J. Rattray, "Explaining Weapons Proliferation: Going Beyond the Security Dilemma," *USAF Institute for National Security Studies, FNSS Occasional Paper I*, July 1994, p. 6. See www.usafa.af.mil/inss/ocpl.html.

2. Kent Esbenschade, "Weapons Proliferation and Organized Crime," *USAF Institute for National Security Studies, FNSS Occasional Paper X*, p. 17. See www.fas.org/irp/threat/ocp10.

3. "Plutonium for Sale," *New Scientist*, May 12, 2001, p. 6.

4. Phil Petersen, former Pentagon official, interviewed by author, Washington, DC, 1994.

5. R. James Woolsey, "Russian Weapons Sales to Rogue Nations," testimony before the House International Relations Committee, Thursday, May 25, 1999, p. 2, as reported by Federal Document Clearing House. See www.web2.westlaw.com.

6. *Ibid.*

7. *Ibid.*

8. Stephen J. Blank, "Russia as Rogue Proliferator," *Orbis*, Vol. 44, No. 1. See also Blank, "Russia Seeks to Profit from Iranian Rearmament," *Jane's Intelligence Review*, Vol. 13, No. 4, April 1, 2001.

9. Vitaly Shlykov, "*Chto pogubilo Sovetskii Soyuz. Amerikanskaya razvedka o sovetskikh voyennykh raskhodakh*" (What Destroyed the Soviet Union. American Intelligence on the Soviet Military Expenses), *Voyennyi Vestnik* (Moscow), No. 8, April 2001, p. 26. U.S. estimates were lower: "only" 30,000 nuclear weapons.

10. *Ibid.*

11. Valentin Tikhonov, "Russia's Nuclear and Missile Complex. The Human Factor in Proliferation," Washington, DC: Carnegie Endowment for International Peace, 2000, p. 5.

12. Shlykov, p. 9.

13. "Transforming the Russian Nuclear Weapons Complex. The Role Of Non-governmental Institutions," Russian Nuclear Complex Conversion Consortium (RANSAC), June 22-23, 1999, p. 1. See <http://www.ransac.org/new-web-site/pub/reports/ccr-report.html>.

14. Tikhonov, p. 9.

15. "Plutonium for Sale."

16. Steve Howard, Executive Director of Russian Technology Initiative, interview by author, Washington, DC, June 2001. Russian Technology Initiative is a Russian-American NGO dedicated to military conversion.

17. Stephen J. Blank, "Russia and the Proliferation of Weapons of Mass Destruction," *The World and I*, Vol. 13, No. 10, October 1, 1998.

18. Alexei Arbatov, "Russian National Security at Home and Abroad," lecture, Washington, DC: Center for Nonproliferation Studies, Monterey Institute of International Studies, August 13, 2001.

19. Source interviewed by author, Washington, DC, June 2001. The source requested anonymity stemming from his fear of invoking more wrath of the businessman in question and the FSB.

20. "Transforming the Russian Nuclear Weapons Complex," p. 12.

21. A Russian aerospace academic expert who requested anonymity, interview by author, New York City, May 2001.

22. Rattray.

23. Tikhonov, p. 11.

24. *Ibid.*, p. 57.

25. Mark Kramer, "Demilitarizing Russian Weapons Scientists: The Challenge," chap. 6 in this volume.

26. Colin McMahon, "For Russia's Top Scientists, Disillusionment and Misery," *Chicago Tribune*, September 9, 1999, reprinted in *Orlando Sentinel*, September 12, 1999, p. G1.

27. Tuition ranges from \$5,000 to \$7,000 a year in "non-technical" universities. Engineering degrees that require extensive lab use may be even more expensive. Professor Z. I. Mishina, Patrice Lumumba University, interview by author, Moscow, May 2001.

28. Official, Department of North America, Russian Ministry of Foreign Affairs, interview by author, Moscow, May 2001.