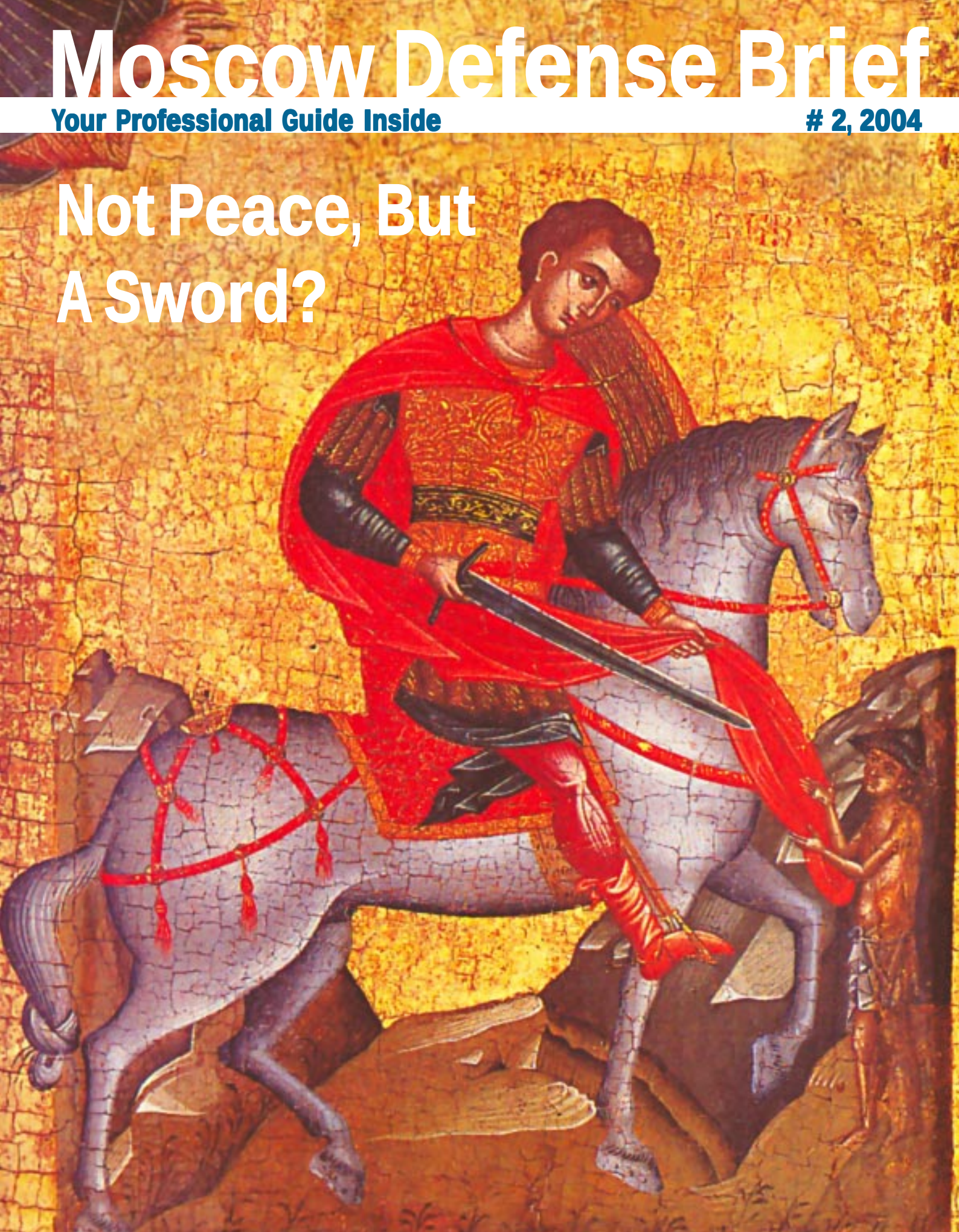
Moscow Defense Brief

Your Professional Guide Inside

2, 2004

Not Peace, But A Sword?



About CAST

The Centre for Analysis of Strategies and Technologies (CAST) was founded in 1997 and is located in Moscow. CAST is a non-governmental research center specializing in the analysis and study of Russia's defense and security policy, the Russian defense industry and arms trade with foreign countries. In their studies, CAST staff work closely with the Russian research community and a number of foreign partner organizations and experts.

About Moscow Defense Brief

CAST began publication of Moscow Defense Brief in 2004. The principle aim of this publication is to present Russian perspectives on security and defense issues to readers beyond Russia's borders. Moscow Defense Brief serves as a comprehensive and reliable source of public information and unbiased analysis on all aspects of Russia's policy and activities in the security and defense spheres. The magazine is an important resource for foreign governments, policy makers, industrialists, political and economic experts, and researchers interested in Russian and/or CIS affairs. The content of Moscow Defence Brief is provided by CAST staff, in cooperation with affiliated experts and journalists from Russia and other CIS countries.

Icon on a cover: St. Martin of Tours (4th Cent.)

St. Martin entered military service in the Roman army at age 15. At 18, already an officer, he was baptized a Christian by St. Hilary, the Bishop of Arles. He served in the military as Christian for another two years, enduring the criticism of his compatriots for his youth and faith. His term of duty ended during a campaign against the Germans and, being free to leave, he was accused of cowardice. To this he replied, "Put me on the front line, without weapon or shield. I shall no more carry a sword for I am now a soldier of Christ". St. Martin went on to become the bishop of Tours and an advocate of prisoners of conscience and prisoners of war, imploring Christian and pagan alike to have mercy on the defeated. He reposed in 401. The Orthodox Church celebrates him memory on October 12.

PUBLISHER

CAST Centre for Analysis of Strategies and Technologies

CAST Director & Editor
Ruslan Pukhov

Advisory Editor
Konstantin Makienko

Researcher
Ruslan Aliev

Researcher
Sergei Pokidov

Researcher
Dmitry Vasiliev

Editorial Office
Russia, Moscow, 119334, Leninsky prospect, 45, suite 480
phone: +7 095 135 1378
fax: +7 095 775 0418
http://www.mdb.cast.ru/

To subscribe contact
phone +7 095 135 1378
or e-mail: mdb@cast.ru
E-mail the editors: editor@cast.ru

Moscow Defense Brief is published bimonthly by the Centre for Analysis of Strategies and Technologies

Computer design & pre-press: ZEBRA
www.3ebra.com

The editorial team would like to thank Simon Saradzhyan, News Editor, *The Moscow Times*, for his insightful guidance and generous advice

The editorial team would like to thank Gannon Bond, from the Law Faculty of Moscow State University, for his constributions in editing and translating

Printed in Russia

CONTENTS

Not Peace, But A Sword?

Vladimir Legoyda

The words of Christ "I come not to bring peace, but a sword…" (Matt. 10:54) have been variously interpreted as bearing on the ascetic nature of the Christian struggle as well as the Christian role in progressive social activism. Many, citing the historical involvement of Christian societies in warfare, have sought to either defend or condemn the Church on the basis of the seemingly conflicting relationship between its doctrine and practice. In this article Professor Legoyda examines the relationships between Christianity and the Military, and in particular Russian Orthodox Christianity and the Russian military, to shed light of the respective roles they have played and could play in the future.

WAS CHRIST A PACIFICT?

It is interesting that in modern Russian the only people who serve are the clergy and those in the military. The rest of us ordinary mortals just work. The idea implicit behind the linguistic parallel referring to both soldering and religious observance by clerics is that of performing a solemn or sacred activity, one that is somehow apart from ordinary activity in society.

To be sure, such a linguistic analogy is a contingent truth. Yet is this really an accidental lexical coincidence? How can we reconcile the ideas of Christian love for our neighbors and the inevitable slaughter of war? What models of ecclesiastical and military leadership should be cultivated within Russian society and, perhaps more importantly, are there any components for such models available within Russian culture? These and other questions relating to the Church, the military and our Orthodox culture need to be aired to gain perspective as the issues of compulsory military service, terrorism and the future of Russian military organizations and their spheres of activity press upon us while we rediscover our Orthodox Christian roots in the beginning of the 21st century.

In contemporary Russian society there still exists an oversimplified attitude that Christianity, as the embodiment of Divine love on earth, must consistently oppose any kind of violence and, it follows naturally, repudiate any kind of military operations, including their goals as well as their means. Or, at least, there is a feeling that Christians should not partake in such activity. Hence, if a priest should bless any soldier sent to war, is this nothing more than an ecclesiastical formality in the service of his country? If so, this would seem to imply a contradiction or at least gross negligence regarding tradition. Just how does this implied pacifism relate to the Christian confession?

When we turn to Orthodox history, even in ancient times, it is impossible to find any narrow, dogmatic response to the questions posed above. Moreover, this problem would appear to be outside the competence of dogmatic theology. The Orthodox Church considers dogmas or doctrines as various revelations from God, which "the clergy must disseminate as *indisputable* and *true* concerning the faith and salvation."[1] It is therefore absolutely impossible to speak of any unique, explicit position of the Church from a dogmatic point of view as such an issue does not pertain directly to the economy of salvation or ecclesiastical matters regarding the faith per se. As one Orthodox theologian has said, "the problem of war and how clergy must regard it are among the most difficult and problematic of our theology."[2] One could ague that any definitive theological solution to the problem is ultimately impossible due to the seemingly implicit, insurmountable antimony of war and Christianity. This in turn deflects the issue to the more general sphere of Christianity and its relation to culture and society.

Should we try to define a specific Christian relationship to war or to approach the issue, we need then to seek an answer in the more conventional sphere of traditional Christian culture. Such an approach would be far removed from any ethic of non-resistance to the use of violent force. This latter concept has been defined in detail by the popular religious thoughts of Leo Tolstoy (who, as it is well known, was excommunicated from the Orthodox Church), Mahatma Gandhi and others. As for Christians, this position is maintained only by a few Protestant denominations, which take extreme positions regarding the use of firearms and weapons in general and specifically prohibit active military service. In general, however, the concept of non-resistance to evil or the violent use of force is essential to neither Christian ideology in general nor Orthodoxy in particular.

Within a specifically Orthodox context, this problem has been more often considered in relation to the question of evil and the means to resist it. From the Orthodox Christian viewpoint, the root of all evil is contained in fallen (that is perverted and unnatural) human nature. Any external manifestation of this nature, such as malice and individual or collective aggression are a *consequence* of the inherent human condition of spiritual deformity and moral imperfection. Since the time of Cain's fratricide, war has been an integral part of fallen human existence. Therefore the

principal Christian aim has been to salvage and renew the human personality through the means of grace in Christ and struggle against the *cause* of evil - fallen human nature, but not necessarily its consequences, viz. aggression and the use of force. The Orthodox struggle is then a spiritual struggle, the internal warfare within the human soul against the ego and the passions. In the New Testament the Apostle Paul defines the essence of Christian struggle in the following words: *For we wrestle not against flesh and blood but against principalities, against powers against the rulers of the darkness of this world, against spiritual wickedness in high places* (Ephesians 6:12).

This said, it does not therefore follow that Orthodox ideology is 'up in the clouds' or passes over any real problems in silence. But unlike liberal humanist theory, which seeks to prevent wars and to achieve world peace at any price, the Orthodox notion proceeds from the assumption of eliminating the cause of depravity but not its effect. As A. Osipov, a professor of modern Orthodox Theology has noted, the definition of *peace* in the New Testament (or *irini* in the original Greek) within the Orthodox context means "humility,"[3] the inner spiritual rest attained by human beings who have overcome their passions and selfishness. According to Osipov, this notion has a broader sense then the Hebrew word for peace *shalom* used in the Old Testament where the word means simply the absence of war. While the former definition of peace does not exclude the latter, including the meaning of *irini*, it incorporates the meaning of *shalom* and expands upon it.[4] Modern discourse focuses more and more on the issue of the survival of mankind and the consequent imperative for peace, even world peace, but very rarely speaks on the issue of what kind of peace or, for that matter, what kind of *humanity* will survive. Certainly, the Orthodox opinion does not reject the idea of continued human existence, but if we speak about physical survival only, the prospect of such a peaceful coexistence would be nothing more than a utopian fantasy because, from the Orthodox point of view, the relevant cause of evil is rooted within human beings and not in their external condition. In other words, the absence of war does not equal the presence of peace.[5]

And if for L. Tolstoy or M. Gandhi pacifism is an imperative requirement for peace,[6] this doesn't have any stereological or Slavonic sense from the Orthodox Christian standpoint. War is not an absolute evil for which pacifism leads to human salvation and participation results in condemnation or vice versa.

It follows, then, that Orthodoxy is open to various interpretations regarding the question of war as well as to many other (no less important) questions not directly covered in the historical range of purely dogmatic theological issues. This would include, for instance, political structure and social order. Many followers who see Jesus Christ as a pacifist cite as an example His wording that it is necessary to …*render therefore unto Caesar the things that are Caesar's; and God the things that are God's*…(Matt. 22:21) in an attempt to substantiate the notion that Christ was a kind of proto-anarchist or popular revolutionary and, consequently, an opponent of military service as an arm of governmental manipulation of the masses. Tolstoy, for example, was of this opinion. For him the non-violence ethic precluded any participation in military hostilities and even extended service in many governmental institutions, the courts in particular.

But this interpretation should be considered perfunctory and biased. In the said wording Christ emphasized the *different natures* of the state (the Kingdom of Caesar) and the Church (the Kingdom of God). While distinct, these two phenomena are not mutually exclusive at all. At the same time, Christ's words by no means point to Orthodoxy as a kind of Marxist-Leninist principle of the state as a "special mechanism of violence" to be avoided. On the contrary, Christianity has always considered Government pleasing to God, both in the Gospel (Matt. 17: 24-27, John 19:11) as well as in the Apostles' messages (Tit 3:1, I Peter 2:13, I Timothy 2:1-2, Romans 13:1-2) where respect toward lawful authority has been emphasized. In his Epistle to the Romans, the Apostle Paul warns frankly: *For rulers are not a terror to good works, but to evil. Wilt thou then not be afraid of power? Do that which is good and thou shall have the praise of the same: For he is the minister of God to thee for good. But if thou do that which is evil, be afraid: for he beareth not the sword in vain*. (Romans 13:3- 4).

More concretely, there are points where these two realm meet and they are particularly striking. When asked by soldiers who came to him what they should do to be saved, St. John the Baptist, in Church tradition known as the Forerunner or prophet of Christ, replied: *Do violence to no man, neither accuse any falsely; and be content with your wages* (Luke 3:14). The phrase *do no violence* in Church Slavonic is *ne obezhaitye*,[7] that is, *be not a cause of offence*. This specifies both the idea of not giving offence or doing harm *without reason*, or, more precisely, unwarranted aggression. Some consider this to be a linguistic subtlety and insufficient as proof for a pacifist interpretation. Either way, though, one can see clearly that St. John has in no way suggested that soldiers lay down their arms and abandon their duty.

All this, of course, does not mean that the Christians consider war as essentially good. Not in any sense. War is an evil act, just as any murder. Yet the early Christians did not compare murder with the premeditated intent to kill in a time of war. Giving one's life in defense of another's was seen as noble and good. In this vein Christ's words, *Greater love hath no man more than this - that a man lay down his life for his friends* (John 15:13) are often interpreted by Biblical scholars as a calling to be ready for death while guarding

relatives and friends. From this, as in any case, we can see the primarily burden of sin is determined above all by the relevant *motives* and not necessarily by the nature of the conflict in which blood is shed.

The history of the early Church knows many examples of Christians who remained soldiers even after baptism. Many of them were high-ranking leaders and held the general concept of war as morally acceptable, however unpleasant. In one of his epistles, St. Athanasius the Great (4th century) wrote, "It is not permissible to kill, but to extirpate enemies during war is lawful and worthy of praise. This is why those who distinguish themselves in battle receive great glory and monuments which depict their deeds are built in their honor."[8] It is interesting to note that canonicity (the norms of Church tradition) of this letter was confirmed in the Ecumenical Councils of the 5th and 6th centuries and possesses for the Orthodox church the highest dogmatic and canonical authority.

Of course, this concerns not war in general, but a "just" war; in other words, warfare which proceeds as a result of defense against an assault or invasion of ones motherland from an enemy.

But even this seems to be only one approach to a definition and not a final solution to the problem. Moreover, such an evaluation is not the equivalent of a direct Church blessing or Church approval for the vanquishing of ones foes in battle. In the 4th century the most authoritative Christian saint, St. Basil the Great, stated in the 13th Cannon, "Having killed on the field of battle, our ancestors are not guilty of murder, and, in defense of them, it seems to me they are upholders of chastity and piety. But, perhaps, it would be good to advise them, as having *unclean hands*, to refrain from receiving the holy mysteries for three years."[9] In other words, soldiers who had participated in military operations and therefore the taking of life could not receive the sacraments for three years, this being among the severest punishment for any Christian. For comparison, according to the 56th Cannon of St. Basil, any person found guilty of aggravated murder was excommunicated for a period of twenty years while those found guilty of manslaughter for ten years respectively.[10] It should be noted that all these measures are founded upon the implied repentance of the person involved, that is to say that those committing acts resulting in the death of another human being, for whatever reason, acknowledge that killing itself is wrong regardless of the circumstances which predicated the act, whether necessity or human weakness.

Thus, it seems to me, even the understanding of a "just war" (i.e. defensive and not offensive warfare) is rather relative as well. Of course, the Church has always prayed and will continue to pray for those who are obliged to perform military service. But this is not because the Church blesses or *consecrates* this service or military operations in general, but is rather due to the fact that the Church cares for those human beings who may be killed. For instance, during the Russian Japanese war of 1905, Orthodox believers in Japan prayed for the "Lawful Authorities and Armed Forces" of their country, but not for the Orthodox Russians; in essence, for a victory of the Japanese Emperor's Army over the Russians. Such an example, in my view, shows quite clearly the relativity of any human truth and further demonstrates the impossibility of any defensible concept of an "Orthodox" war.

As coda to these remarks, the following words of Orthodox Archpriest Vassily Zenkovsky are appropriate: "The Church does not conceal, but, on the contrary, clarifies and confronts the fundamental ambiguities in the world; in history and in war, the Church proceeds forward where such ambiguity prevails so as to magnify the good and to extract what is good from tragic conditions. Any denial of war, any prohibition from participation in it (which may be implied, for a Christian, by the mere absence of a blessing to participate) would mean a departure from the world we live in. The wisdom of the Church, embodying a clear awareness of this, with perpetual grief observes how the world has dominion over us, yet never leaves us alone without its guardianship."[12]

RUSSIAN TRADITIONS

The relationship between the warrior class of the nobility and the Church is one of the oldest traditions in the history of Russian national culture. This relationship nurtured cultural offshoots and was the direct ancestor of the Russian army under the Orthodox Tsars. This tradition has always supposed an 'active cooperation of the Church and the army, with the single purpose of training servicemen in the spirit of a *Christ-Loving armed force*, infusing boyars and later ordinary soldiers with an awareness of their high calling and responsibility.'[13] The Russian ideal for a warrior has always been that of the warrior-liberator or protector. The images of the saint and the warrior are deeply intertwined both in Russian history and national folklore. On the one hand, about half of all men in the Russian anthology *Lives of the Saints* are warriors.[14] The prototype of such an epic hero can be found in Ilya Murom, a quasi-legendary figure who personified the image of ancient Rus in the 12th century. He was an ordinary peasant who, touched by a mystical event in his life, later became a warrior defending his motherland. It is known that the historical Ilya Murom later became a monk. and that his earthly remains are located in the Kiev Caves Lavra, where he is venerated as a saint to this day. Another powerful example of one of the most famous warrior saints is Alexander Nevsky, the Grand Prince, who expelled the Swedes and the Lithuanian Teutons as well

as negotiated a peace with the Huns. He later took the name Alexis and also became a monk. The images of these saints have not only formed the ideal for the Russian military, but have played a significant role in the formation of Russian culture as a whole.

Perhaps the most remarkable and culturally relevant illustration of the Orthodox attitude towards war is contained in the history of the life of St. Sergius of Radonezh, who blessed Prince Dmitry Donskoy to engage the enemy in the famous battle of Kullikovskaya. According to his *Life*, prior to marching off to fight the Tartar Khan Mamay, Prince Dmitry visited Abbot Sergius at the Troitskaya Monastery, now known as the Trinity St. Sergius Lavra. There the abbot did not immediately bless the prince for the coming battle, but first inquired of the prince if he had tried "to please that obnoxious Mamay with gifts or favor." And only when the prince confirmed that he had taken all possible measures so as to conciliate this warlike and yet inexorable Khan did St. Sergius give his blessing.

Moreover, at Dmitry's request the abbot sent two monks - Alexander Peresvet and Andrey Oslyaba - both former boyars who were well-known for their military skills when they lived in the world - to assist Prince Dmitry. According to an account, Abbot Sergius ordered them to wear ordinary monastic cassocks with a cross in the place of amour and helmets. Prior to the battle itself, St. Sergius sent another monk, Nektary, along with other clergy for the purpose of spiritually strengthening the Prince and his army.[15]

These ties between the Church and army remain a constant factor in Russian Church history and are not a peculiar feature restricted to the Russian Middle Ages. Even during the reforms of Peter the Great, when the traditional Russian way of life was almost completely destroyed and the Church was transformed into one of the newly established state ministries, this relationship was not changed in principal. After Peter's era, Russian history could boast of some splendid examples of prominent commanders who were zealous Christians. Such renowned Russian generals as Alexander Suvorov and Mikhail Kutuzov were noted for their piety as well as their military ability.

Even during the Soviet era, books devoted to A. Suvorov's military genius didn't fail to emphasize such characteristics as his sincere patriotism and love for his Motherland while also emphasizing his particular attention to soldiers and care for every warrior. For reasons of Party doctrine, there was never any mention of the deep spiritual or moral foundation of the greatest Russian strategist. Suvorov's adherence to Orthodox values, however, was neither a secret nor something unaccountable for his contemporaries. Pre-revolutionary biographical works as well as contemporary memoirs give us an image of a sincere and faithful person who led a devout life of religious fervor, which Soviet officers were aware of. Suvorov's daily routine included morning and evening prayers, obligatory attendance of Sunday services and holy days without fail.[16] Suvorov's faith was not his 'private matter' only: the general was quite convinced of the necessity of worship for soldiers because he considered it a form of basic spiritual and moral training for his men.

It was for this reason the Divine services were performed before each battle as an integral part of Suvorov's heroic life. The liturgy and thanksgiving services were performed solemnly in particular upon successful military campaigns. Many cathedrals and churches were built under Suvorov's direction. Uncompromising to the enemies of the Fatherland, Suvorov was nevertheless noted for his special mercy towards any prostrate adversaries. In his soldier's catechism, Suvorov expressed his ideas quite definitely: "The defeated must be spared because they are people all the same; to kill them unjustly is a sin." In an order on May 16, 1778, the composition was very Christian in tone and content: "Captives should be treated with humanity, we *should be ashamed* of any barbarism." (author's emphasis added)

Suvorov's deep religious sense may be evidenced by the fact that upon his resignation, he made a decision to withdraw from society and retire to a monastery. In December 1798, Suvrov even wrote a letter to the emperor asking His Majesty's permission to take the monastic vow at the Nilova hermitage near Novgorod where he intended to dedicate the rest of his life to "the service of God." But instead of obtaining the Sovereign's permission, Suvorov received the Tsar's order to prepare for an impending Italian campaign. After having a service of thanksgiving performed at the village church, the general obediently made his way back to his army.

In 1800, several months before his death, Alexander Suvorov himself wrote a Canon to Our Lord and Savior, Jesus Christ, which reflected his deep penitence and reflected poetic influence from the Great Canon of Repentance of St. Andrew of Crete, a significant liturgical component of the Lenten (that is to say penitential) services of the Orthodox Church. Perhaps the example of Suvorov is an exceptionally striking one, but it is not, however, a unique example of a Russian military leader whose sincere faith in no way hindered his service to his nation in a martial capacity.

To be sure, the personal religiosity of various Russian generals was neither the most important nor the only foundation of the spiritual and moral education of soldiers. The church itself has always carried the main burden of infusing society with the salvation of Christianity, but special emphasis was made on penetrating the military ranks with Orthodox culture and piety. Regimental clergy served, naturally, as the main carriers of this ecclesiastic mission. At the beginning of the twentieth century, the institution of the military priesthood presented a developed network within the full tradition of the Church. It is necessary to underline

that the Church supported the army not only in an exclusively spiritual sense but also practically. During World War I, more than 200 monasteries opened temporary hospitals in parallel with many individual parishes. In 1914, there were 157 such hospitals in operation within the Moscow Eparchy alone. Along with Russian servicemen, more than 5,000 clergymen ran the gauntlet of war, more than 30 were killed in action and 14 were decorated with the Cross of St. George "for distinction in the service of their country."[17]

It is, no doubt, quite tempting to project from these present examples an idealized picture of a Russian Army permeated with the high spirit of Christian morality defending the motherland from generation to generation. The ecclesiastic reforms introduced by Peter I, however, served to erode much of what had been built up over the centuries. All examples previously cited can't compensate for the fact that the spirit of the "Christian Army" in Russia was systematically disassembled over the course of time – as it was from Russian society in general. It is very bitter to note that all talk of pre-revolutionary Russia as an ideal of the Orthodox state and about the Russian Army as an ideal of the Orthodox Army has no real basis. Nevertheless, military service under the Soviets was even further removed from this mold. A single fact explains that after the October revolution, many former Orthodox began to actively destroy Orthodox churches and to shoot clergymen. On the eve of the February Revolution, Russian soldiers were obliged to attend Sunday services and the Liturgy. Consequently, attendance was almost 100%. The Interim Government, however, abolished the obligatory Church attendance for soldiers and already by 1917 the figure for servicemen attending Church was reduced to a mere 10% or less.[18] In essence, that left us with less than 10% of the soldiers in the Russian Army who were conscientious Christians on the eve of such a horrible national tragedy as the October Revolution.

THE PRESENT DAY

In the Soviet era, when relations between the Church and Army were not only impossible but absolutely inconceivable, the remnants of former traditions and pious customs were finally lost altogether. Today, our nation's army and its leader's, in the wake of state officials and leaders, often appeal to the Church as a spiritual and moral authority. There is a conscious effort to revive the former traditions. In connection with this, it is necessary to bear two key issues in mind: Firstly, the Church can and must take part in the matter of the moral education of Russian servicemen. Army commanders should not consider the clergy as some kind of modern political tool, or as instructors in political ideology for other ends. Military leadership applying for assistance from the Church needs to take into account the position of the Church very keenly, including coming to an understanding of the true goals of priests who serve in the armed forces. The Army, as the state and society in general, cannot view the Church as a government institution with the purpose of indoctrinating its subjects with state ideology. It is true that this process will not be carried out at once, and yet it is quite difficult to speak about such collaboration without an emphasis on this fundamental understanding.[19]

Secondly, it follows that serving clergy and military leaders must not forget that the pre-revolutionary model, from which any future relationship between the Church and the Army is to be built, is fundamentally different from our current situation. Russia is neither an Orthodox state (the Russian Federation, according to the Constitution, is a secular state), nor is the Church a state institution. This in no way prevents a viable relationship between the Church and Army, but it does presuppose a completely different legal basis for such a relationship. The modern Russian Army, in both composition and personnel, is multi-national as well as multi-confessional, so the sphere of activity of any Orthodox clergy is limited to those servicemen who have a desire for such a component in their tour of duty. To this end, Army commanders should be responsible to neither put obstacles in their way nor to drive these soldiers together against their will to "to listen to this or that priest."

Attempts at cooperation between the Church and Army have already been made: in 1994 and 1997 the Russian Orthodox Church (ROC) and the Ministry of Defense concluded agreements on cooperation targeted towards forming and strengthening high morale. Such efforts have thus far produced tangible effects. One of the most interesting outcomes related to this has been the establishment of the Faculty of Orthodox Culture at the Military Academy of Strategic Missile Forces in 1996. This Faculty is a non-governmental organization of continued education under the RF Ministry of Defense and ROC, respectively. Studies at the Faculty are voluntary and outside the required curriculum. This initiative has been met with approval and is being developed further: in Spring of 2000, a similar Faculty of Orthodox Culture was established at the Military Air-Defense University for Ground Forces in Smolensk.

The goal of these faculties is to assist the Army in the matter of modifying its induction system for young soldiers. Colonel K. Sergeev, Deputy Dean of the Faculty of the Orthodox Culture at the Military Academy of the Strategic Missile Forces comments on this: "The methods and forms of the moral and psychological training for soldiers presently in use have been goal-oriented, mostly for the enhancement of political consciousness. In this case the necessity of arousing hatred, the use of cruelty and severity against an enemy are imperative to the formation of a soldiers" consciousness. From a spiritual standpoint, such a psychological attitude will lead to the degradation of the

human personality. For the Orthodox soldier, there is always the very important issue concerning the purpose for which he must kill. Is it for the sake of the Motherland or the sake of protecting people, a human life perhaps? Or is it for some other political goal, unknown to the soldiers or even to the unit commanders? At the present time, soldiers and officers, unfortunately, have no idea of their responsibility in a given situation when they may be required to cross the threshold of violent force. And although they frequently say – "a la guerre comme a la guerre", meaning that some brutality, violence and excesses are inevitable in a time of war, the soldier must clearly understand that he has a right to use his weapon, to use force and aggression against an enemy only, but not against ordinary citizens. This is, if you will, a certain code of honor, and in breaking it, a person suffers the psychological consequences, often in the form of nightmares, heavy drinking and drug-use; in short, this man will have serious problems. We all are very much aware of the "Afghanistan syndrome" or now even the "Chechen syndrome."[20]

To this I'd like to add a final conclusion: the greater responsibility always lies with the senior officers and, even more, with the politicians who dictate policy. With soldiers lies the responsibility of fulfilling their sworn oath of duty. Therefore, while we concern ourselves with the matter of the spiritual formation of our servicemen, at the same time we need to remind our political leaders of the moral nature of their activities so that soldiers will not be put into a moral dilemma: to disobey a commander's order or to violate a moral law.

1 Archbishop Macarius. *Orthodox Dogmatic Theology* (Russian) St. Petersburg, 1868. V. 1, p 7. (author's emphasis added)
2 Presbyter Gregory Shavelsky on Orthodox ministry. Cit.: D. Predein *Ivan Ilyn's Orthodox Sword*, Vstrecha, 1998 ¹3 (9), p 22.
3 In Russian the word for peace is mir (*ì èð)* and the word for humility is smireniye *(ñ ì èðå í èå)*, which contains the same root: s-mir-eniye *(*ñ- ***ì èð***-å í èå).
4 A. Osipov. *The Sword and Peace: the Orthodox Outlook*, Vstrecha, 1998, ¹ 3 (9), p 7.
5 In fact, the Orthodox theology perceives such a state of world peace in an apocalyptic context, a precondition for Antichrist and not part of the establishment of the Kingdom of God on earth at some point in the future, a concept that is completely alien to Orthodox Theology.
6 The followers of the non-violence ethic often appeal to the words of Christ: *…whosoever shall smite thee on thy right cheek, turn to him the other also* (Matt 5:39). This idea can hardly considered a categorical imperative for Christians to be pacifists. Against this literal, tract like interpretation we have the Savior's own behavior at the court proceeding where endures an insult from a soldier but does not turning the other cheek. Thus, here the matter concerns not advice for any specific situation but a general moral principle: go to meet your foe or offender, do not revenge yourself, but be able to forgive.
7 In Church Slavonic í å î áèæàéòå
8 St. Athanasius the Great. Epistle to Monk Amoun // Tvorenniye. M.: Spaso-Preobrazhenskogo Valaamskogo Monastery Publishers. 1994. T.3. p 369.
9 Cit. Alphabetic Syntagma of Matthew Vlastarya. M., 1996. p 427. (authors emphasis added)
10 Ibid. p 426.
11 Prayers from the litany in the Divine Liturgy.
12 Archpriest Vassily Zenkovsky, regarding I. Ilyin's book *Concerning Resisting Evil With Force* I. Ilyin, Collected Works. M.: Russkaya Kniga, 1995. V. 5. p 436.
13 D. Predein Ibid. p 23.
14 The *Lives of the Saints* is an Orthodox anthology of biographies intended to inspire and edify the faithful.
15 Archbishop Nikon (Pozhdestvensky). The Life of St. Sergius of Radonezh. St. Sergius-Trinity Lavra. 1997. pp 166-177.
16 This material on Suvorov was obtained from the book *I am Truly Yours…* M., 1998. It is of note that the author of this work on the Suvorov's life as a real Christian is M. Zhukova, daughter of the other great Russian commander-in-chief, Marshal G. Zhukov.
17 O. Lebedev. *For Your Friends. Clergy During World War I*// NG-Religions. 26.06.97. p 3.
18 D. Pospelovsky *The Feat of Faith in the Atheistic State* // Russians Abroad During the Millennium of the Baptism of Russia. M.: Stolitsa. 1991. p 71.
19 Here is but one observation which gives a very vivid testimony that there is as yet no deep mutual understanding between the Church and the Army: in many television broadcasts of funeral services for Federal servicemen who died in Chechnya, officers attending the service spoke openly of getting revenge. It is reasonable to concede the feelings of these officers who lost their men, but we cannot forget that revenge is a category that belongs outside the framework of the Christian ethic.
20 *An Army Without Faith Will Not Stand*. Interview of Colonel K. Sergeev, Deputy Dean of the Faculty of Orthodox Culture, Peter The Great Military Academy of the Strategic Missile Forces.// Vstrecha. ¹ 3(9), 1998. p 14.

A Survey of Russian Naval Forces: The Surface Fleet in Decline

Mikhail Barabanov

The surface forces of the Russian Navy have been downsized several times over since the collapse of the Soviet Union, reducing their battle readiness considerably. The fleet command has in turn responded to the sore lack of financing by maintaining the Strategic Nuclear Sea Forces as a top priority, leaving only a few budgetary leftovers to the conventional surface forces. Although the surface forces of the Northern and, to a lesser degree, the Pacific Ocean Fleet can still provide support to nuclear powered missile submarines in coastal areas, the Baltic and Black Sea Fleets have been reduced to mere squadrons over the past few years, and are barely able to meet even modest military objectives.

In light of this, the leadership of Russia's Navy is trying to remedy the situation. The press has recently reported on the Ministry of Defense's "Plans for Naval Development to 2040-2050", which will allegedly expand the long-term construction of small displacement multi-purpose surface ships; in particular, those of the corvette and frigate classes.[1] There is also the "Armaments Program to 2010" and the "Program for the Construction and Reequipping of the Fleet to 2015." Navy Commander in Chief Vladimir Kuroyedov said the latter provides for a near wholesale renewal of the fleet. This new stage of construction is focused on vessels for littoral zones, rather than for marine and oceanic zones.[2]

These programs have already produced tangible dividends, evident by the production (in 2001 and 2003) of two new Project 20380 corvettes. However, a severe shortage of funds, coupled with the absence of a clear military doctrine, and instability in the ranks of top management all strongly hint that the targets set in these plans may not entirely be reached. It is thus likely the mainstay of the Russian Navy will for many years to come consist of ships which were built or whose construction began in Soviet times.

The collapse of the USSR in effect put an end to Soviet aircraft carrier programs. The sale to India of the heavy aircraft-carrier *Admiral Gorshkov*, which had long been under repairs, leaves the Project 11435 *Admiral Kuznetsov* as the only such vessel in the Russian Fleet. As the first and last Soviet ship built with a bow ski-jump for take-off and horizontal landing capability, the *Kuznetsov* is of crucial symbolic and practical importance and an invaluable source of training and experience for Russia's naval aviation. The fleet command is keen on keeping this ship, which first set sail for tests in 1989, in good condition. It will be no small task, though, as it is long past due for even medium repairs. Mechanical deterioration and poor coastal support infrastructure (which explains the unusual step of basing the ship at the 35th Ship Repair Dockyard) together with the low reliability of the high-pressure main boilers and the lack of qualified personnel conspired to bring the ship to a ruinous state by the end of the 1990s. As a result, the poor condition of the propulsion plant prevents the ship from maintaining a pace of more than 16-18 knots.[3]

Navy management hesitated to initiate full medium repairs for fear that at current levels of financing they would not be able to see the repairs through to completion. Thus, in 2001, the cruiser underwent scheduled repairs at the 35th Ship Repair Dockyard – a low-cost measure to boost the power plant of the ship. The ship was finally released from repairs in August 2004 (a date which coincides with the 100th anniversary of the birth of Admiral Kuznetsov), and soon thereafter was put to sea to participate in exercises in both the Mediterranean and Atlantic.

Russia's carrier aviation is relatively well developed by today's standards, with the 279th Ship borne Fighter Air Regiment at its core.[4] The Su-33 (Su-27K) carrier variant was virtually the only type of fighter produced serially in Russia in the 1990s. Twenty-six have been released up to now, in addition to the nine prototypes of the T-10K series.[5] Though two test and three serial aircraft have been lost, there are still, on the whole, enough planes to equip the 279th Ship borne Fighter Air Regiment. Two Su-27UBs and six of the twelve Su-25UTG trainers that are still in Russia are used for deck flight training. For regular practice, the NITKA ground-based simulator is leased in Ukraine. The complete air wing of the Kuznetsov is made up of 20 to 24 Su-33 fighters supplemented with 18 Ka-27 and Ka-31 helicopters.

Several measures are in the works to raise the battle potential of Russia's naval aviation. The Su-33 fighters are to be modernized and equipped with multifunctional radar and air to surface guided weaponry, including anti-ship missiles, giving the *Kuznetsov*'s aviation an offensive capability. The test flight of the prototype ship borne two-seat multifunctional fighter Su-33UB (Su-27KUB) in 1999

was an important event as this aircraft may come to serve as the foundation of the Russian Navy's ship borne aviation, perhaps even for some future aircraft carriers.[6]

Navy leadership has on several occasions, for example, in the "Basic Naval Policy of the Russian Federation to 2010," expressed the need to build new aircraft carriers.[7] However, this is clearly not an option at present. In early 2004, Kuroyedov said that it was too soon to speak of new aircraft carriers — in effect calling them an issue for "the next decade"— though he maintained that the *Kuznetsov* was fit to sail, and that nobody was thinking of selling or decommissioning Russia's only heavy aircraft-carrier.[8] At the very least, it would appear that the issue is being studied.[9]

The category of guided missile cruisers is being effectively eliminated from the Russian fleet. This development stems not only from financial difficulties but is in keeping with the world-wide trend toward the return to multi-role destroyers as the basic ship for oceanic zones. This is particularly evident with respect to the huge and expensive Project 1144 (Kirov class) nuclear-powered guided missile cruisers, whose tactical value and combat stability is dubious in the absence of air cover by carrier-based aviation. Although *Petr Velikiy*, the flagship of the Russia fleet, was completed in 1998, the Navy is clearly not capable of maintaining another three ships of this type in active service. For example, the *Admiral Ushakov* (formerly the *Kirov*) had been laid up since 1990 because the emergency nuclear reactor had to be replaced. Though many observers trumpeted its eventual return to active service, the ship was decommissioned in 2002.[10] The Pacific cruiser *Admiral Lazarev* (formerly the *Frunze*) has also been kept in reserve since the early 1990s at Strelok Bay near Vladivostok, but the chances of its return to service are rather slim. There has been some progress only in Severodvinsk, with respect to the third ship, of the *Admiral Nakhimov* (formerly the *Kalinin*), where steps to recharge the active zone of the reactor were finally undertaken in February 2003, though the duration of these repairs is expected to be a minimum of three years.[11]

The Russian fleet can still boast of three Project 1164 gas-turbine guided missile cruisers, of which the first ship *Moskva* (formerly the *Slava*) and the *Marshall Ustinov* underwent mid-life repairs in the 1990s, which in essence makes them relatively fit for service. The Pacific *Varyag* (ex-*Chervona Ukraina*) is past due for medium repairs, though it entered the Dalzavod Ship Repair Dockyard for running repairs in 2002. The fourth ship, *Admiral Flota Lobov*, built in Nikolaev as an improved project ship, was given to Ukraine 85% complete in 1993 and promptly renamed *Ukraine*. The Ukraine has been unable to complete the ship and in any case has no practical use for such a large vessel, which ironically has led to the attempted resale of the still incomplete cruiser back to Russia; a proposal the Navy brass has shown little interest in due to the near obsoleteness of the project.[12]

The export of military ships is in a deplorable state. The Project 956 *Sovremenny* class large destroyers were undermined by their unreliable high-pressure steam boilers and poor servicing; factors which led to 7 of the 17 built from 1980 to 1994 to be stricken. Of the remaining ten ships, only the *Bespokoyniy* and the *Nastoichiviy* of the Baltic Fleet and the *Besstrashniy* of the Northern Fleet are fully operational.[13] The Northern Fleet destroyers *Rastoropniy* and the *Bezuprechniy* are derelict at Severniy Wharf in St. Petersburg, while the *Bezuprechiy* will soon follow, along with the laid-up *Gremiashiy* of the Northern Fleet.[14] The *Bezuderzhniy* is also kept in reserve in unsatisfactory condition. In the Pacific Fleet, the *Bystriy*, *Burniy*, *Bezboyaznniy* and the *Boyevoy* are all in a so-called "limited" condition of fitness, and the first two are the only ones that ever go to sea. As is well known, two additional Project 956 destroyers were built at Severniy Wharf for export to China.[15]

The fate of the *Udaloy*-class Project 1155 Large Anti-Submarine Ships (destroyers) has been somewhat more positive. Thus far only three ships have been stricken, soon to be joined by the *Marshal Vasiliyevskiy*.[16] The remaining eight ships are in fairly good condition, having undergone mid-life repairs over the past decade (repairs to the *Vice-Admiral Kulakov* were completed this year). In 2003 the *Admiral Vinogradov* and *Admiral Panteleev* of the Pacific fleet sailed in the Indian Ocean.[17] However, the operational condition of these ships depends on the use of replacement gas-turbine power plants taken from reserves on hand. Alas, very few new turbines have been purchased from the Ukrainian Zorya factory in Nikolayev.[18] The Black Sea Fleet maintains two old, large Anti-Submarine Ships of the Project 1134B Kara-class– the *Kerch* and *Ochakov*, and, although the former has recently undergone running repairs and the latter is expected to return to service after 16 years of mid-life repairs, the extreme age and wear of these ships make their battle-readiness entirely ephemeral.[19]

The electronics and armaments of the large Project 1155 destroyers are largely outdated. It was decided that the armaments were to be upgraded with Project 11551 (Udaloy-II class), but due to the crisis conditions and collapse of the USSR, only the *Admiral Chabanenko* was completed, and even then with great difficulty, in 1999. The second vessel of the class was cancelled and scrapped incomplete at the Yantar shipyard in 1993.[20]

The further development of large surface fighting ships in the Russian Fleet is tied to attempts to develop multipurpose destroyers, equipped with an integrated, multifunctional weapon and fire control system. The

system includes, "standardized launchers for practically all types of missiles and anti-aircraft missile systems that can ensure the destruction of aerial targets at any altitude and range extending to several dozen kilometers from the ship."[21] Plans are currently underway to develop vessels similar to American warships equipped with the AEGIS system. There are at present two known designs, one by the Number 1 Central Scientific Research Institute (TsNII-1), a counterpart to the American *Arleigh Burke* Flight IIA class ships, and another by the Northern Design Bureau.[22] Unfortunately, even the best-case scenario would put the construction of such a destroyer in the distant future only.

Only seven vessels of the Russian Navy's small fleet of 32 Project 1135 (Krivak class) anti-submarine frigates remain. They are the *Zadorniy* (Northern Fleet), *Pylkiy, Neukrotimiy* (Baltic Fleet), *Ladniy, Pytliviy* (Black Sea Fleet), *Letuchiy* and the *Revnostniy* (Pacific Ocean Fleet). We can expect even these to be decommissioned sooner than later - that of the *Letuchiy* is planned for this year. The frigate *Smetliviy*, a former Project 61 Kashin class large Anti-Submarine Ship built in 1969, preserved as a kind of museum piece, was upgraded in the first half of the 1990s to a Project 01090 test ship. In the 1980s the development of frigates ('guard ships') was connected with the mass production of new Project 11540 ships for the Soviet Fleet. However, this project of the Zelenodol'sk Design Bureau had a bad internal design and proved to be less than fully seaworthy. The project was declared obsolete in the face of an overall decrease in production. As a result, construction was limited to the first *Neustrashimiy* series that underwent testing only in the late 1990s.[23] Building of the second *Yaroslav Mudriy* (formerly the *Nepristupniy*) series dithered on for 16 years, breaking all records for delays. Construction was restarted in 2002 and, according to the "Armaments Program to 2010" the ship was supposed to have been released in 2004,[24] though this date has been postponed again for one year.[25] Construction of the third vessel *Tuman* was suspended at 30% complete in 1996, and laid up in 1998,[26] presumably redesignated as a Project 11541 Korsair and earmarked for export. In the 1980s, the Almaz design bureau made plans for a new generation Project 12441 Grom frigate to replace the ageing Project 11540. The project was revised after the collapse of the USSR and modified to use only Russian parts. The fist ship of the project, the *Novik*, was laid down on 27 July 1997 at the Yantar shipyard. Project 12441 is the first Russian ship to incorporate 'stealth' technology and requires some 30 new weapons and electronics systems, including the Oniks anti-ship missiles (SS-N-26) and the Poliment anti-aircraft missile system. Given the meager financing available, these high-tech requirements have doomed the ship's future. The project was suspended several times due to its "excessive complexity and technical risk," and was never more than 12% complete. In 2003 the project was reclassified as a simplified training vessel.[27]

The difficulties plaguing attempts to construct just the first ship of the 12441 series led Navy management to shift to the construction of a simpler and cheaper type of ship, nicknamed "corvette", but known officially as a "multifunctional littoral combat ship." The Almaz design bureau won the tender with their Project 20380 and consequently the hull of the first ship of this new type, the *Steregushchiy*, was laid down at Severnaya Wharf on 21 December 2001 and planned for release in 2005. The construction of a sister ship, the *Soobrazitel'niy*, began on May 20, 2003. The "Armaments Program to 2010" envisages the construction of four such corvettes. All in all a total of ten to twenty are planned.[28] Fully in line with the aim of cutting costs, the Project 20380 is equipped with a diesel power plant, has a moderate running speed and is armed with older, familiar systems like the Uran anti-ship missiles (SS-N-25). Unfortunately, as a result of this strategy, the Project 20380 suffers from limited air-defense capability. However, officials have said the next ships in the series will be equipped with new anti-ship and anti-aircraft missile systems, including the Vertical Launch Weapon System.[29] For all the hype surrounding this "Corvette of the 21st century," and in spite of its elements of 'stealth' technology, however, the ship is actually closer to the small European frigate of the 1980s. For a warship intended for closed theatres, the Project 20380 is oversized, with inadequate offensive capacity and superfluous anti-submarine components. Indeed, several specialists have criticized the manner of the ship's construction.[30]

Finally, the Project 11661 small frigate *Tatarstan* (code-named Gepard) has been completed and finally entered the Caspian Fleet. The first of four ships were laid down at the beginning of the 1990s at the Zelenodol'skiy Ship Building Dockyard and earmarked for export. As no buyers were found for these obviously obsolete ships, the unfinished hull of the first ship rusted in 1993. It is worth recalling that as early as the late 1980s, the Soviet Navy rejected an even more advanced version of this ship, Project 11660, offered as a replacement for the Project 1124 (Grisha class) corvettes.[31] In view of the above, the entry of the *Tatarstan* into the fleet makes little sense as there can be no adequate rationale for having a specialized anti-submarine ship in the Caspian Sea. Moreover, a second vessel called the *Dagestan* has recently been declared complete.[32] In all, the situation is actually quite absurd, considering that under conditions of dire financing, Russia is carrying on with the construction of four

types of patrol ship according to four different projects, none of which completely satisfies contemporary requirements.

It's worth noting that a decade ago, the Navy command had a much more sensible view of its requirements for patrol ships. Having declared the small patrol ship the priority ship of the littoral zone, they said it should be equipped with the same anti-ship and anti-submarine weapons as the new destroyers, though with a somewhat smaller armament."[33] The Number 1 Central Scientific Research Institute made a similar recommendation in the press.[34]

Nevertheless, the Navy announced plans for a tender for yet another "frigate" in 2001, specifying that the tender would be for just the first ship of a series of frigates. Navy Command will then make a decision concerning the construction of other ships of the same series after first taking into account its financial means, the results of the ship's testing (also to take place in 2004), its cost and construction time.[35]

Of the 68 Project 1124 Small Anti-Submarine Ships/corvettes (Grisha class) constructed in the Soviet period, about 28 Project 1124M (Grisha V class) remain in service.[36] The impossibility of replacing the afterburning gas turbines of their power plants was one of the main reasons for striking so many. The twelve diesel vessels of Project 1131M (Parchim II class) Baltic Small Anti-Submarine Ships/corvettes built in the German Democratic Republic fared much better, having entered German shipyards for medium repairs in the 1990s. Of the 38 Project 1234 (Nanuchka class) small missile corvettes, only half have been retained, particularly from Project 12341 (Nanuchka III class). At the same time, the mass expiration of the storage life of their main armament, the solid-fuel propelled Malakhite anti-ship missile system (SS-N-9), presents a serious problem for the remaining ships of this class. The newest littoral attack ships are armed with the Moskit (SS-N-22) anti-ship missiles, while the Bora and the Samum are Project 1239 (Dergach class) Black Sea guided missile corvettes — specially designated as "2nd rank air-cushion missile ships."[37] Given their design defects, however, the high cost of even one of these ships precludes their serial construction.

The "drying up" of the Russian naval surface forces is especially manifested in the sharp decline of missile boats. The mass decommissioning of every variant of the obsolete Project 205 (Osa class) and 206 (Shershen class) vessels did not coincide with an adequate replacement program. The number of Project 12411 (code-name Molnia, Tarantul class) missile boats stationed on the Black Sea (5) and in the Baltic Fleet (10) is clearly insufficient to sustain an offensive mission. In its own right, the Project 12411 boat is too large and expensive. At the same time it does not possess the required universality, with its weak air defense system and complete lack of antisubmarine and mine-laying capability. Its Termit (SS-N-2C) and Moskit (SS-N-22) missile systems are fit mainly for attacking large surface ships, while these boats will more likely square off with smaller enemy combatants. All in all there are about 28 missile vessels of Project 12411 in the Russian navy, while one boat of Project 12421 was built as an export prototype with Moskit (SS-N-22) missiles, as were five old Project 206MP (Matka class) missile hydrofoil craft, which form part of the Caspian Fleet.[38] According to this author's data, no more than half of the Project 12411 boats are in operational condition, especially in light of the service life of the "imported" (Ukrainian) gas-turbine engines.

The Navy's dwindling light littoral warfare ships are not being adequately replaced. This is probably due to the Naval Command's lack of a firm view on their role and place within the structure of the fleet. Although on 5 June 2001 the Vympel Shipyard built a prototype for the new Project 12300 (code-named Skorpion) missile boat of the Almaz[39] variant, this boat is probably meant for export and to be released no sooner than 2005. It is said that project variants 12301 (equipped with Onyx anti-ship missiles) and 12302 (equipped with Uran missiles) have been commissioned by the Navy, though it would appear that serial production will not begin until after the prototype has finished testing.[40] The Skorpion continues the line of the Molnia-type, meaning they are fairly large (over 500 tons) boats: expensive, non-universal, and clearly inferior to the larger corvettes across a range of important parameters. The larger corvettes are, as a general rule, replacing missile boats in international shipbuilding. On 20 January 2004 the Almaz plant laid down a new Project 21630 small gunboat for the Caspian Fleet. A total of five vessels are planned with launches expected to start by the end of 2005.[41]

The development of minesweepers for the Russian Navy practically ceased after 1991. Only a small number of minesweepers designed in the 70s and 80s and laid down before the Soviet Union collapsed have been produced. These include the Project 12660 ocean minesweeper *Gumanenko* (this Gorya class vessel was the second ship in the series as further construction was suspended due to high costs and non-delivery of a number of important systems), three Project 266ME ocean minesweepers (Natya class) originally built for export, two Project 12650 coastal minesweepers (Sonya class), and six Project 10750 inshore minesweepers (Lida Class).[42] Further construction has been stopped due to a lack of resources and obsolete designs. Indeed, the Avangard shipyard has refitted two incomplete Project 12650 minesweepers as private yachts and marketed them to foreigners.[43] At the same time, there has been a significant reduction in minesweeping forces, as a result

of which the number of Project 226M and 12650 minesweepers has been halved and all older models have been decommissioned. All in all, the number of mine warfare boats in the Russian Navy has been reduced by a factor of three.

The greatest deficiency of Russian minesweepers is the lack of mine hunting capability and automated mine countermeasure control systems. Though plans have been developed for the modernization for several variants,[44] designs for a new generation of mine countermeasures ships are being drawn up at the same time. Some information is available concerning such work at Almaz, which recently advertised its prototype base minesweeper.[45] This said, current limits on financing make the realization of these projects in the foreseeable future extremely unlikely.

The fleet of landing forces has currently stabilized at 25 large landing ships, of which 21 are variants of Project 775 large landing ships of Polish construction (Ropucha class), and four old Soviet Project 1171 (Alligator class) ships.[46] All three of the even larger Project 1174 (Ivan Rogov class) ships, with helicopter hangars and docks, have already or will be soon been stricken. A large part of the midsize and small landing ships have been stricken due to wear. Relatively intense transport operations and the need to replace the ships of Polish construction, for which spare parts can no longer be obtained, has forced Navy command to consider the construction of new landing ships as a priority task. It is said that funding for this purpose was requested as long ago as 2001.[47] The relatively intensive use of large landing ships for transport and the need for replacing the ships of Polish construction as a result of problems with spare parts have forced the Naval command of Russia to consider the building of large landing ships of new generation as a priority task.

Russia's fleet of hydrofoil landing ships, once the largest in the world, has been virtually liquidated. Of the small air cushion landing ships, only three Project 12322 (code-named Zubr) on the Baltic and three old Project 12321 (code-named Dzheyran) on the Caspian remain.[48] Eight modern Project 12061 Amur air cushion boats (code-name Murena) were transferred to the Border Forces in 1994, only to be stricken in 2001.[49]

In summary, the Russian surface naval forces have undergone a tremendous change since the collapse of the Soviet Union. It is to be expected that cut backs on new projects and even maintenance have appeared as a regular feature in the management of the fleet. This process has not been managed rationally, however, possibly do to the uncertainly of funding levels and the expectation of better days that are unlikely to come. Mainly, the lack of provision seems to stem from a combined lack of vision and lack of rational assessment of the needs of the Navy on the part of Russian Naval command. The "Armaments Program to 2010" and the "Program for the Construction and Reequipping of the Fleet to 2015" would appear to have unrealistic goals considering budget limitations. In light of changes in Russia's strategic military orientation as well as changing standards in Naval architecture, the mass decommissioning of vessels could have been seen as an opportunity to revamp the Navy with a modernization program suited to these changes.

1 Interview with V. Kuroedov in *Gazeta*, 28.01.2004.
2 V. Kulikov. "Nevidimku uvidiat v Rossiiy." *Rossiyskaya Gazeta*, 14.02.2004.
3 *Tayfun*, No. 6, 1999. See also V.A. Khayminov, "Ot 'Kieva' k 'Kuznetsovu," *Tayfun*, No. 6, 2001.
4 A. Fomin. *Su-33. Korabel'naya epopeya*. Moscow, RA Intervestnik, 2003.
5 Ibid.
6 Ibid.
7 See V. Patrushev (Vice-Admiral). "Vozhdelenie avianostsy," *Nezavisimoe voennoe obozrenie*, 11.04.2003.
8 "Interview with V. Kuroyedov," *Gazeta*, 28.01.2004.
9 An example is provided in V.P. Kuzin, V.I. Nikol'skiy, *Voenno-morskoy flot SSSR 1945-1991*. Saint-Petersburg, 1996, 588-92.
10 Statement of V. Pospelova, *ITAR*-TASS 29.10.2002. The cost of repairs and modernization of one Project 1144 cruiser in 1999 was estimated at between 2 and 7 billion Rubles. *Nezavisimoe voennoe* obozrenie, 19.11.1999.
11 *ITAR-TASS*, 05.02.2003. The cruiser has not been to sea since 1997.
12 *RBK*, 25.01.2002.
13 A. Popov. "Perezhivali strashno, kak sdast zachet," *Besstrashniy, Severniy rabochiy*, 09.07.2003.
14 *INTERFAX*, 31.05.2004.
15 *Posledniy eskadrenniy minonosets VMF SSSR*. Saint-Petersburg., 2001.
16 *INTERFAX*, 31.05.2004.
17 The remaining active Project 1155 ships are as follows. Northern Fleet: Severomorsk, Admiral Levchenko, Admiral Karlamov; Pacific Fleet: Admiral Tributs, Marshal Shaposhnikov.

18 www.submarine.id.ru
19 *Tayfun*, No. 4, 2002, 44.
20 V.V. Osintsev. "BPK Admiral Chabanenko" *Tayfun*, No. 2, 2002.
21 V. Selivanov, "Problemy i napravleniya razvitiya VMF," *Morskoy Sbornik*, No. 8, 1993, 3. F. Gromov, "Flot Rosssiy: vchera, segodnya, zavtra," *Morskoy Sbornik*, No. 1, 1993, 7.
22 Both variants are published in the book: *Posledniy eskadrenniy minonosets VMF SSSR*. Saint Petersburg, 2001, 179081. For more detailed information on the TsNII-1 project see V. Kuzin, V.P. Nikol'skiy, *op. cit.*, 588-92.
23 V.P. Kuzin, D.Yu. Litinskiy, "Storozhevye korabli tipa 'Yasterb' proyekta 11540. Istoriya sozdania," *Tayfun*, No. 2, 1996; No. 1, 1997.
24 Interview with N. Bolov, general director of Yantar, www.foris.ru.
25 I. Balashov, "Baltflot zhdet novikh korabley," *Krasnaya Zvezda*, 21.04.2004.
26 www.wps.ru, 16.11.1998.
27 *INTERFAX*, 06.06.2003.
28 S. Putilov, I. Stepanova, "Slishkom 'nevidimiy' korabl'", *Vremya MN*, 15.06.2001. A. Mozgovoy, "Segodnya my nachinaem," *Voyeniy Parad*, No. 2, 2002.
29 A. Mozgovoy, "Segodnya my nachinaem," *Voyeniy Parad*, No. 2, 2002.
30 S. Krivko, "Noviy rossiskiy korvet," *Defense Express*, No. 6, 2003.
31 V.P. Kuzin, V.I. Nikol'skiy, *op. cit.*, 172.
32 Press conference with Yu. Startsev, 20.02.2003.
33 V. Selivanov, *op. cit.*, 3.
34 V.P. Kuzin, V.I. Nikol'skiy, *op. cit.*, 589-92.
35 Zayavlenie nachal'nika upravlenia korablestroeniya VMF A. Shlemova, *INTERFAX*, 20.02.2003.
36 S.S. Berezhnoy, "Malye protivolodochnye i malye raketnye korabli VMF SSSR i Rosii, *Morskaya Kollektsia*, No. 2, 2001.
37 *Ibid.*, 31-32.
38 A.S. Pavlov, *Voennye korabli Rossii 2001*. Yakutsk, 2001, 13. See also www8.brinkster.com/vad777. Yet one more Project 12411I boat remains incomplete in Khabarovsk.
39 *INTERFAX-AVN*, 05.06.2001.
40 M. Khodarenok, "Novaya produktsia rybinskikh korabelov," *Nezavisimoe voennoe obozrenie*, 09.06.2001.
41 *Sudostroenie*, No. 2, 2004, 3-4.
42 A.S. Pavlov, *Voennye korabli Rossii 2001*, Yakutsk, 2001, 18-9.
43 *Ekonomika i Vremya*, No. 23, 2001.
44 K. Ya. Abdulov, "Protivominniy korabl' reydovoy zony projekta 10750," *Tayfun*, No. 2, 1997.
45 O. Korobkov, Sh. Mustafin, "Napravlenia razvitia korabley protivominnoy oborony," *Voyenniy Parad*, No. 6, 2002, 54-6.
46 A.S. Pavlov, *Voennye korabli Rossii 2001*. Yakutsk, 2001, 20. See also www8.brinkster.com/vad777. One Project 775 and one Project 1171 large landing ships have been transferred to Ukraine, and eight of each type have been written off.
47 *Severnaya Nedelya*, 15.04.2002.
48 www8.brinkster.com/vad777.
49 *INTERFAX-AVN*, 30.07.2001.

The Russian-Chinese Arms Trade: an Attempt at Qualitative Analysis

Konstantin Makienko

Characteristics of Russian-Chinese Military Technical Cooperation

China constitutes the largest single importer of post-Soviet Russian arms and military equipment, with purchases ranging between 30% and 50% of Russia's entire annual deliveries. It was only in 2003, according to the Committee on Military-Technical Cooperation, that India overtook the PRC in volume of deliveries owing to the delivery of two Project 1135 frigates worth $600 million each and 12 Su-30MKI fighters with a nominal unit price of $450 million. Nevertheless, China will likely retain its leadership position in the medium term. Chinese purchases are distinguished by a number of open characteristics that present an opportunity to evaluate its global military position, defense objectives and possible strategy.

Chinese arms contracts with Russia are relatively large for today's market. The PRC's order for 76 Su-30MKK fighters for approximately $3.6 billion is comparable to the largest arms purchases of countries like Saudi Arabia and the UAE. The $2.2 billion contract for licensed production of 200 Su-27SK is remarkable and the purchase of eight diesel-powered submarines is a stunning display of buying power, if not a record in world practice. The significance of such orders to the Russian arms industry is clear. Chinese demand fueled the boom in Russian arms exports from 2001 and account for a significant share of the recent 14% annual growth of the military-industrial complex.

Interestingly, the technological level of sophistication of the weapon systems sold to China remains relatively low. This factor is exemplified by the choice of Su-30MKK fighters and the second installment of Project 956EM destroyers. The weapons control system of the Su-30MKK is built upon obsolete N-001 radar technology that had been upgraded but is still doesn't match contemporary standards. Russia was already offering weapons control systems based on a phased antenna array when the first contract for the Su-30MKKs was concluded. Likewise, the battle potential of the Project 956EM destroyers was only marginally superior to that of the standard destroyer: the air-defense capability was increased and the range of the missile system was doubled. With these minor upgrades, the destroyers still fall short of multirole capability. They do not carry the more versatile compact missiles that can be installed in vertical launch systems, the propulsion system is outdated and the ship's anti-submarine capacity does not seem to have been satisfactorily upgraded. Indeed, this last factor would appear to be the Achilles heel of the Project 956 destroyers.

It is clear that this situation follows at least partly from the conservative military-technical strategy of the Chinese leadership, but is also a natural consequence of the limits on arms transfers imposed by the Russian military. In either case, the net result is that China receives large deliveries of well-tested armaments with minimal risk for technological failures. Chinese orders are simpler and executed without the major delays and problems with quality control that have plagued Indian orders. By the end of 2003 China had already received about 150 Su-27SK/UBK and Su-30MKK fighters, not counting the 100 or so fighters acquired through licensed assembly. By that time India had received only 40 Su-30K/MKI fighters of dubious functionality. From this point of view, the PRC's conservative policy would appear more rational than the risky Indian strategy of accenting technologically advanced onboard systems.

On the whole, the Chinese aviation contracts have a much shorter order-to-delivery cycle than the Indian deals. The delivery of 32 Su-30MKI fighters to India dragged on for over three years and was executed in three installments of 10-12 aircraft each. The contract itself was concluded in 1996, but deliveries continued into 2004, 8 years after the signing of the initial agreement. Production under license will continue for 12 or 17 years, according to various sources. Comparatively, the Chinese contract signed in 1999 was fully executed by 2001, with deliveries of 10 and then 28 units. The second order in 2001 was fulfilled with deliveries of 19 units two years in a row. This high production rate keeps the Komsomolsk-on-Amur Aviation Production Plant (KnAAPO) well tuned at high capacity, but at the same time does not allow for the development of long-term financial and corporate strategy for change.

Chinese contracts concluded after 1999 involve high volume serial production and make relatively few demands for modernization of base models. Such terms are well suited to the Russian military-industrial complex in its present state. By the mid 1990s, barter payments with low-quality goods were replaced by hard currency or forgiveness of Russian state debt. The high profit margins

of the Chinese contracts allow Russian industry to meet the more technologically and financially complex Indian orders. In this respect one could speak of a certain synergy between the Chinese and Indian aviation contracts, insofar as the former keep the existing industrial capacity in fit operation and infused with much-needed finances, while the latter stimulate innovation and lead to the development of more high-tech, market-ready weapons systems. The Su-30MKK contract of 1999 very likely contributed to the acceleration of work on the lagging Su-30MKI project.

Another aspect of this interrelation is that large Chinese purchases stimulate Indian demand for high-tech systems. Indian imports also influence Chinese procurement policy, but are not a decisive factor.

In military-political terms, Russian arms transfers to the PRC are presently classified as relatively high-risk compared with those to India. This would appear to be an overcautious position that has served its purpose but may be an obstacle to the further development of military-technical cooperation with China, in particular concerning raising the technological level of the armaments on offer. However, the growing gap between Russian and Chinese financial means and especially military expenditures is forcing the Russian military to tread carefully and to continue to set limits on the scale and quality of sales to China.

Yet another aspect of Russian transfers to the PRC, admittedly of oblique consequence, relates how the PRC is displacing Russia as the principal military rival of the United States. After all, growing Chinese military might is of concern not only to Russia. The reorientation of American military planning towards China would undoubtedly be a positive factor for Russia.

Current trends

The principal current trends in Russian-Chinese military-technical cooperation as of the second half of 2003 are as follows:

- Intensifying of Chinese demands to lift the ceiling on high tech arms transfers
- Beginning of the process of lifting the EU embargo on arms transfers to China
- Strong Chinese emphasis on acquiring maritime weapons systems over the past two years

Clearly, given its phenomenal economic growth over the past quarter century, China will not remain satisfied with the decade-long practice of purchasing armaments with mid 1980s level technology. The Chinese military is well aware of the technological profile of fighters and ships delivered to India. Russia will preserve its present leading position on the Chinese market only on condition that it offers more modern armaments, as opposed to fighters with parabolic radar and ships with boiler-turbine power plants that were already outdated when they began serial production.

The natural completion of the most recent technological cycle of arms transfers between Russia and China (first initiated with the sale of the Su-27 in 1999, then with the transfer of the Su-30) coincides in fortuitous concert with the incipient process of lifting the European Union arms embargo on China. It is likely that France, which has already executed a remarkable shift from the Pakistani to the Indian market, is behind this process. The majority of arms trade experts agree that, in general, EU expansion into the Chinese market poses only a very minor threat to Russia's position. The Europeans are positioned only for those sectors where Russia has nothing of significance to offer, namely communications, optical-electronic and laser-based systems. There are some who believe the newly opened opportunities for EU producers might bring about a restoration of French positions in the Chinese helicopter construction market. French arms traders are arguably more commercially adept than the Russians, but such an optimistic prediction is still quite premature at this point.

Additionally, the possibility of competition from Israel should not be overlooked. Israel is set to replace Russia in a few years as the leading exporter of arms to India. This purchasing trend in India, namely the diversification of sources for arms imports, has begun the marginalization of Russia as a military technical partner. Russia's response to this has been a repositioning to the niche market of low-end platforms that constitute no more than 10-30% of weapons systems complexes. This pattern is likely to repeat itself in China in the absence of Russia's repositioning itself on the Chinese market with at least a wider range of products, if not more competitive products.

Emphasis on Maritime Warfare

The majority of large contracts made public after 2002 involve the provision of weapons and military equipment to the Chinese Navy. This includes orders for Project 956EM destroyers, Project 636 submarines and several naval missile-equipped Su-30MK2 fighters. Moreover, there were indications in late September that an order for another group of Su-30MK2 fighters might be in the works. It is worth mentioning that all of these orders are due to be fulfilled before 2007. The emphasis on naval warfare armament bears clear witness to the centrality of Taiwan in Chinese military-political planning. The relatively tight deadlines for delivery suggest that Beijing expects the Taiwan issue to become aggravated in 2006-2007, perhaps

in response to a declaration of independence or the adoption of a new constitution for Taiwan.

The only large deal outside of the naval sector was the transfer of eight batteries of the *Favorit* anti-missile system S-300PMU-2, the use of which could also be related to scenarios involving Taiwan. Air defense systems will probably be distributed along the straight to provide antimissile cover for troops and to limit the freedom of action of Taiwanese aviation over the straight. The 2007 deadline for delivery of the *Favorit* speaks again to Chinese efforts to secure for its Armed Forces advanced systems on time for an expected escalation of tensions.

Russia's Strategy

There are two ways in which Russia might respond to the challenge of the emerging changes in the Chinese arms market. First, it can attempt to restore normative levels of domestic arms purchases for the Russian Armed Forces. Second, it can raise the technological level of arms offered to China. The first option, while obvious given the deplorable state of Russian conventional forces, is no small matter given tremendous budgetary limitations of the Russian state. To invigorate the internal demand for arms would require a range of economic and bureaucratic changes that are frankly unlikely in the short run. Taking up the second option, the third technological cycle of arms transfers to China might include a new level of trade and cooperation:

- Fighters equipped with phased antenna array radar, which match the effectiveness of the Indian Su-30MKI fighters
- Multirole destroyers and frigates with gas-turbine propulsion systems, the latest compact missiles that can be used in vertical launch systems, equipped with high-tech anti-aircraft defenses also compatible with vertical launch systems
- Conventional submarines of the next generation and open negotiations seeking Chinese financing for the development of submarines with air independent propulsion systems

Admitting the provocative nature of this policy choice, a further suggestion might include that the military political and commercial interests would be served even with the sale to China of such powerful and valuable armaments as the only Project 1144 TARK remaining in the Russian Navy, the Tu-22M3 naval bomber, and the Project 949 and 971 nuclear powered submarines, each with a modified array of missiles. Further still, it is worth considering the possibility of Russian-Chinese military-technical cooperation moving on past licensed production to a co-production scheme for armaments.

The consensus opinion that China is not a suitable partner for joint ventures would appear to need revising. The core foundation of such a policy is the acute fear that China might pose a military threat to Russia. While the strength of China's conventional forces are already beyond parity, the diverse military capacity of the two nations is only one side of the question. The military threat from China as seen from a sociological and political point of view is, however, unfounded. There are, on the contrary, many reasons to believe that China has enough trouble of its own to bother with any such military expansion regarding Russia.

Estimation of Military Political Risk

Despite China's economic, military and scientific-technical growth, the sociopolitical and socioeconomic situation remains tense. These tensions are not only the result of long-standing demographic pressures of a highly structured, socially immobile society frustrated with growing awareness of the world outside China, but from other pressures as well. The ecological situation in overpopulated areas and the widening gap between rich and poor in the interior provinces are only exacerbated by slow bureaucratic approaches, or the lack of response altogether. The gradual erosion of the Communist Party and the lack of resources in the face of an otherwise growing Chinese economy also present the Chinese with new challenges. Observers are presented with a picture of a nation focused on orienting itself within its new role in the global paradigm. The stability of the regime and the system as a whole is secured largely by high rates of economic growth. While these trends have garnered some momentum for China's lethargic but stalwart nationalism, under such conditions it is unlikely that Chinese leadership will venture to risk indulging in any sort of military adventures without a direct threat to their national security.

It may be appropriate to draw an analogy with the situation in Russia at the beginning of the last century, when intensive growth appeared in tandem with similar extreme social tensions. These tensions led to the national catastrophe of 1917, and the nation was thrown into a senseless civil war. As a result, the twentieth century, which promised to be a century of triumph, turned into a century of disaster. This comparison is not intended to suggest that China is headed for an implosion, but in the way that Russia withdrew from external military participation of the First World War to attend to its own internal dynamic, China, while expanding, is at the same time feeling pressure to focus inward. There are significant differences between

contemporary China and imperial Russia, however, which give reason to hope that catastrophe may be avoided, especially in that the PRC has a responsible, loyal and effective elite. Nevertheless, since the demonstrations of Tiananmen Square in 1989 there has been unrest that even general economic prosperity hasn't been able to resolve and this continues to hold the attention of China's ruling class.

The principal military-political task facing the Chinese people remains the reunification of the rebel province of Taiwan. This can hardly be achieved by military means, but the point is that China's military planning and expansion is directed precisely towards the resolution of the Taiwan question and not in preparation of an expansion towards Russia.

The threats that China may truly present are of a demographic and economic nature, not military. In this respect, any exports, including armaments, which help to close the resource gap between the two countries and to reduce the demographic and economic pressures from China on the Russian Far East and Siberia would be welcome. It is important to note that the Komsomolsk factory, one of the key exporters of fighters to China, is located precisely in one of the most threatened regions. Chinese armament orders appreciably assist in the reduction of the threats listed above. In general, the main threats to Russia's security lie in the deterioration of its own bureaucracy and weak economic performance.

The difference in Russian and Chinese military potential is so significant that only thermonuclear force could restrain the PRC. It would appear that those aspiring to the role of the Russian "elite" should at long last come to the frank realization that Russia lacks any pretense to a modern and effective conventional armed forces. The Russian Army, to say nothing of its anecdotal Navy, corresponds to the armed forces of middling military powers, like Trubetskiy's strelets compared to guardsmen of Charles XII at the first battle of the Narva. In this respect, any obstacles which the military place in the way of further exports of weapons and military equipment to China will lead to the collapse of the only living part of the nation's defense capacity, that is its military-industrial complex, which has preserved its relative effectiveness precisely because of Chinese contracts for arms.

Deliveries and contracts for deliveries of Russian weapons and military equipment to the PRC from 1992 to 2002

Armament Type	Designation	Producer	Contract Date	Delivery Date	Quantity	Remarks
Weapons and Military Equipment for Air Forces						
Fighter	Su-27SK	Komsomolsk on Amur Aviation Production Plant	N/A	1992	20	
Trainer-Fighter	Su-27UBK	NPK Irkut		1992	6	
Fighter	Su-27SK	Komsomolsk on Amur Aviation Production Plant	1995	1996	16	
Trainer-Fighter	Su-27UBK	NPK Irkut	1995	1996	6	
Fighter	Su-27SK	Sukhoy Design Bureau, Komsomolsk on Amur Aviation Production Plant	1996	1996-to present	200	Organization of licensed production at the factory in Shenyan. As of May 2004, 95 kits for assembly of the Su-27 were transferred
Trainer-Fighter	Su-27UBK	NPK Irkut	December 1999	2000-2002	28	8 units in 2000, 10 in 2001, 10 in 2002
Multirole Fighter	Su-30MKK	Komsomolsk on Amur Aviation Production Plant	August 1999	2000-2001	38	Delivery of 10 units in 2000, 28 in 2001
Multirole Fighter	Su-30MKK	Komsomolsk on Amur Aviation Production Plant	July 2001	2002-2003	38	Delivery of 19 units in 2002, the remaining 19 in 2003

Deliveries and contracts for deliveries of Russian weapons and military equipment to the PRC from 1992 to 2002

Armament Type	Designation	Producer	Contract Date	Delivery Date	Quantity	Remarks
Weapons and Military Equipment for Naval Forces						
Diesel-Electric Submarine	Project 877EKM	Central Design Bureau for Marine Engineering Rubin, Admiralty Shipyard	N/A	1994-1995	2	
Diesel-Electric Submarine	Project 636	Central Design Bureau for Marine Engineering Rubin, Admiralty Shipyard	N/A	1996, 1995	2	
Diesel-Electric Submarine	Project 636	Central Design Bureau for Marine Engineering Rubin, Admiralty Shipyard, Krasnoe Sormovo, SIV Mash Plant	2002	N/A	8	All units are to be equipped with Club-S Anti-Ship Missile System
Destroyer	Project 956EM	Severnoe PKB, Severnaya Shipyard	1997	1999, 2000	2	
Destroyer	Project 956EM	Severnoe PKB, Severnaya Shipyard	2002	N/A	2	Modernization of the destroyer with strengthened anti-air defenses and missile armaments
Multirole Naval Fighter	Su-30MK2	Defense Construction Bureau Sukhoy, Komsomolsk on Amur Aviation Production Plant	2002	2004	24	An order for a second batch is probable for 2005-2006
Onboard Surface To Air Missile System	S-300F Rif	NPO Al'tair Design Bureau	2002	N/A	2	Probably for a Project 052B destroyer
Onboard Surface To Air Missile System	Shtil'-1	NPO Al'tair Design Bureau, Concern PVO-Almas Antey	Probably 2001 or 2002	Probably 2003	Probably 2	For a Project 052B destroyer (deck-based tactical number 168 or 169)
Diesel-Electric Submarine	Project 877EKM and 636	Severodvinsk Shipyard 'Zvezdochka'	Probably 2002 or 2003	N/A	2 or 3	Repair and modernization, including integration of Club-S Anti-Ship Missile System
Weapons and Military Equipment for Anti-Air Defense						
Long-Range Surface To Air Missile System	S-300P/PMU-1	Financial Industrial Group Defense Systems	N/A	Before 1999	6-8 batteries	
Long-Range Surface To Air Missile System	S-300P/PMU-1	Concern PVO	2001	2003-2004	4 batteries	In exchange for state debt forgiveness
Long-Range Surface To Air Missile System	S-300PMU-2	Concern PVO	Probably August 2004	Before 2007	8 batteries	
Short-Range Surface To Air Missile System	Tor-M1	Concern Antey, State Enterprise Kupol Izhevsk	N/A		27 Surface to air missile systems	

Will China Repeat Stalin's Success?

Vasiliy Kashin

The current state of Chinese military might is well known to Western analysts. In terms of hardware and technology, it is estimated to lag from 20 to 30 years behind Western nations. Moreover, the vast majority of these weapons are technically deficient and near obsolete, consisting mainly of licensed-production or reverse engineered reproductions of various Russian and Western prototypes. It is becoming more and more apparent, however, that China's leadership is changing its attitude towards the importance of the modernization of their military forces and especially on self-reliance in producing modern arms. To date, most of China's rearmament programs crucial to this goal are entirely dependant on continued collaboration with foreign companies and governments. This therefore begs the question: can China achieve the seemingly unattainable goal of catching up with Western nations, and, possibly more important, is such a goal really feasible?

Already flexing its muscles as one of the world's greatest economies, China has ambitious plans to reveal itself as a leading global power in the 21st century. As these plans will in turn play an integral role in the shaping of Western foreign policy, it is noteworthy to understand that this is not just hollow sloganeering on the part of the Chinese Communist Party. China is not jockeying for position as an integrated partner in the self styled 'New World Order' dominated by Western nations, but, instead pursuing a unique vision of itself as an independent center of power on the global stage. This is not a seasonal notion. It is, indeed, at the very core of the Chinese Communist Party's ideology – that the "century of shame", referring to China's domination and humiliation by foreign powers - will never happen again. The American inspired policy which hoped that economic development and openness to the outer world would axiomatically lead to the 'Westernization' of the Chinese political system appears to have run its course without the desired effect. Its naiveté stands naked before China's growing strength and determination to go her own way. To be sure, China has adopted much of what the West has had to offer and the first fruits of investment and the mushrooming partnerships with Western based companies has given a kick start to China's own brand of state run capitalism. However, the Chinese state has not deviated from it's core philosophy in any fundamental sense and its outward success in the sphere of economic development has not pushed Chinese society as a whole any closer to democracy. On the contrary, it has strengthened the faith of the Chinese people in the current Chinese leadership and in turn amplified nationalistic sentiments. As this process has gained momentum, it has enabled China to push forward with its ambitious plans, both on an economic and military basis.

> Can China become a great, modern and self-reliant military power in the foreseeable future?

As economic growth continues, China's dependence on imported raw materials follows in tandem. In response to this, China has been asserting herself abroad to meet these needs in unprecedented ways. Since the 1990's, China has made numerous attempts to secure access to mineral resources for the future. The joint plans of Russian oil giant Yukos and China hammered out this year for the construction of an oil pipeline to Daquing only exemplify the new level of diplomacy – and economic muscle flexing - with which China is reaching outside her borders. Even though the deal was inconclusive, Chinese oil imports for 2004 are expected to exceed those of Japan. In Central Asia these attempts have already resulted in growing competition with the US for regional influence.

At a certain moment the stable momentum of the developing Chinese economy will become impossible without corresponding growth of Chinese political influence in Asia and perhaps other parts of the globe as the Chinese try to ensure access to local natural resources. This process will require not only the soft diplomacy of negotiation but also the creation of a truly modern armed force capable of projecting power well beyond Chinese borders.

According to some analysts, China will not be able to realistically compete with the US in terms of military force for decades to come. The gap between the economies of the two countries is still huge and while China could rapidly become the greatest national economy in the world, its per capita indicators still show that the Peoples Republic of China is and will probably remain a backwater country that cannot compare with the US in its overall industrial and technological potential. The growth rate and sheer mass of an economy can hardly make up for efficiency or technological development. Therefore, from these facts the conclusion is often drawn that a direct military threat to the US from China is unlikely to emerge in the near future.

From another point of view, however, such a conclusion would be very premature. The economic

history of Russia provides an example of the rapid construction of a world-class military industrial complex that in turn enabled Russia to defeat an economically and technologically superior enemy as well as to launch itself onto the international stage as a global superpower. Many of the same factors that allowed Stalin's Soviet Union to achieve these goals exist today in China. The central factors are:

- Rapid industrial growth and modernization of major industries
- Concentrated government efforts on the modernization of defense and defense structures
- Reliable and diversified sources for acquiring necessary technologies and training essential personnel abroad

Like the Soviet Union in the 1920's and 30's, China has not only achieved a high rate of industrial growth – she is also constantly improving the technological level of civilian production. The price of Chinese hi-tech production remains its main competitive advantage, but there are cases where the Chinese have proven their ability to produce sophisticated hi-tech equipment and consumer goods of competitive quality. The Chinese have a considerable share of the world market and in many cases are pushing their American and Japanese rivals aside. This is especially visible on the Russian market where telecommunications equipment produced by Huawei Technologies, Inc., for instance, is gaining popularity as a viable alternative to other Western brands. The Chinese presence is increasing on both the American and European hi-tech markets as well. China's leading PC maker, Legend Group, is steadily expanding its market share, a feat based not only on economies of scale, but savvy marketing and palpable quality. The most important condition for development of a world-class military industry – the rapid growth of an industrial infrastructure and civilian hi-tech enterprises – is clearly already present in China.

> Russia has been selling her great military power status to China.

While it is true that the nature of the current economic growth in China is markedly different from that of Soviet industrial development of the 1920's and 30's, especially considering the diversity of investment capital flowing into China and the more unpredictable nature of the global economy, the key factors in the comparison remain the same. The pressing nature of many of China's internal problems notwithstanding, its thrust toward realizing concrete military goals has set the gears in motion for military modernization all the same.

During the 1980's, military modernization had the lowest priority among the 'four modernizations' proposed by Deng Xaioping. Much more importance was attached to the needs of social and economic development. Since the second half of the 1990's, however, there has been an obvious shift in the Chinese government's approach to defense problems. During the 1980's the official statistics on government expenditure showed defense budget allocations fell from more than 30% of Central Government expenditures to approximately 18.8% in 1990. The decline in the share of the budget did not reflect actual overlays as the Chinese economy expanded at a record rate in the 1980's. Of course, the official defense Chinese budget is just as small part of total spending on defense, but still the changes in these numbers may represent long-term trends in the changes in the actual defense budget. The PLA has enjoyed yearly double-digit increases in the military budget since the beginning of the 1990's. Until 1995, this growth was just barely sufficient to cover the losses caused by inflation. Since 1995, however, inflation in China has more or less stabilized but military spending has continued to grow. During this period of time the yearly growth of the defense budget only once fell under the 10% mark in 2003.

As did the USSR in the 1920's and 30's, China today has a reliable partner willing to provide almost any weapon and technical expertise the Chinese are willing to pay for. Germany played this role for Stalin's Russia and today Russia acts as China's major partner in defense technology and arms supplies. It is not a coincidence that in both cases, the supplier countries were former superpowers reduced by catastrophic defeats and who saw exports as the only way to save their military industrial complexes after internal demand for modern weapons shrank dramatically.

Sending engineers to the Soviet Union to help establish new factories and design institutes and to train Soviet technical personnel, the Germans probably suspected what the possible consequences of this collaboration would be. It is logical to assume, however, that as they faced difficult choices, they were ready to take this risk. They reasonably envisioned the alternative as the loss of their whole military industry and therefore a complete inability to produce modern weapons or defend itself in the future. In addition, the Germans had justifiable reasons for greatly underestimating their Soviet partners. The Soviet ability to reproduce German designs on their own in the 1920's and 30's remained low. For example, the first Soviet automatic AA gun was put into mass production only in 1939 after several unsuccessful attempts, even though the Germans had provided full documentation for their 37mm AA gun at the end of the 1920's. In the beginning of the 1930's the Soviet military industry, with the exception of the aviation sector, produced mainly upgraded versions of weapons used in WWI (i.e. guns, howitzers, machine guns, light weapons, etc.) or low quality copies of various Western designs (i.e. Vickers and Christie tanks, a German 37 mm

antitank gun.) It took time and experience before the Soviets gained the ability to independently design and produce world-class weapons and the Germans took the many failures that marked this path as future indicators.

The turnaround in Soviet military potential happened rather unexpectedly at the end of the 1930's. It was swift and went largely unnoticed by observers abroad. As a result of long, concentrated efforts and the rational use of foreign expertise, the Soviet Union, which at the beginning of WWII was still rather poor and underdeveloped by Western standards, was capable of producing weapons in greater numbers and in some instances of higher quality than the Germans. As a result of both German aid and then of the war effort, Russia emerged from WWII as an undisputed global superpower.

In a similar fashion, Russia, China's main partner in military technical cooperation, is in much the same position today as Germany was after WWI. Russia has had no choice but to rely on export to keep its military industrial complex alive. The massive transfer of all kinds of technical knowledge to China started in the beginning of the 90's. The many agreements on licensed production of various Russian weapons in China (i.e. the Su-27, Nona gun-mortar systems, BMP–3 turrets and others) is quite limited in one respect, but in the long run these technical transfers do not constitute the most viable part of this cooperation. Of much more importance is the experience Chinese engineers and technicians are receiving as a result of the joint projects with the Russians and the huge numbers of Chinese students that have already received technical educations in Russian universities. Also, there have been many civil and dual use technologies purchased by China very cheaply from impoverished Russian science centers. The main outcome of the current military technical cooperation between Russia and China will not only be the amassing of a Russian based weapons arsenal and its relevant technology coupled with the ability to reproduce some Russian designs, but the creation of a new, powerful Chinese weapons industry capable of designing and producing modern weapons without foreign help. In fact, throughout the 1990's and continuing to the present, Russia has been selling her great military power status to China piece by piece. Since weapon systems production cycles are now generally several times longer than they were in the years before WWII, a sudden "know-how" independent and fully armed China is unlikely soon, but it can be reasonably expected that in as little as 15 years and certainly not much more than 20, the world will be forced to confront the enormous geopolitical consequences of this process.

Today, the Chinese military industry is metaphorically at the same stage of development as the Soviets were in 1932-33: though progress is indeed obvious, there are still too many obstacles to permit overall competition with leading producers. China continues to depend almost entirely on foreign technical assistance. As US global military strategy occupies most of the worlds attention and the globalist pundits concentrate on the positive side of China's revitalizing economy, this distracts our attention from some of the more successful Chinese weapon systems, like the type 98gai MBT, the type 89 155 mm towed howitzer and the PLZ-45, its self propelled version, the DF-31 ICBM and the type 95 assault weapon family, all of which are quickly approaching modern standards.

The parallels between the Russian-Chinese and the German-Soviet cooperation mentioned above do not necessarily mean that the current Russian partnership with China in the military technical area is dangerous for Russia. A military encounter between Russian and China seems unlikely as China allocates the largest part of its defensive resources on its Navy and is concentrating its most capable forces in the Nanjing Military District near Taiwan. Taking into consideration the vector of development in Chinese society and the Chinese economy, there are no immediate political or economic reasons for a military confrontation with China in the near future. But like the era between the world wars, there is a power vacuum today that serves as the wild card for the forces of history and opens doors for the ambitions of such a nation as China. We will have many forces straining for our attention in the years to come, but it is important not to miss the quiet but portentous birth of a new and great military power in Asia within the next two or three decades.

Russian Space Programs: A Critical Analysis

Andrey Ionin

The US led war in Iraq has provided convincing evidence concerning the overwhelming superiority of ground forces armed with advanced technological support, even over an adversary with superior numbers on their home territory. The superior advantage of coalition forces was obtained through a wide range of new systems and applications based on space technologies. These technologies substantially increased the effectiveness of both strategic military planning and weapons deployment.

During the war campaign almost 90% of intelligence was received from a satellite constellation of more than one hundred spacecraft (S/C). These advanced orbital relays provided troops with vital military information, weather reports and global communication services including mobile communication, navigation and other information. [1,2]

It was no coincidence that in April, 2004 US Defense Secretary Donald Rumsfeld unveiled the new US strategic military target "10-30-30," a radically accelerated troop deployment strategy in which US troops would, following a political green light, be deployed to any location worldwide within 10 days, defeat an enemy within 30 days and then regroup and be ready for another campaign elsewhere in the world within another 30 days.[3] Due to their global character and permanent operational readiness, space systems would play an integral role in this strategy, ensuring full informational support for any theatre of operations. The space-based infrastructure would constitute a core element of the new deployment concept, which would otherwise not be feasible.

From this it is possible to deduce the confidence that US politicians and ranking military personnel place in space technology. It is only a short step from here to inferring the overriding foreign policy assumption that the one who controls outer space and access to spaced based information channels will also be in control of the sea, air and land. This is already true to a great extent, as we can see from the results of the Iraq war, where space-based systems have provided combat support information. It will be even clearer if and when such systems are directly committed to combat and other uses which would radically shift the gravity of global power even closer to the US.

How can Russia, uneasily maintaining its number two position as a space power, respond to this? Many domestic military and technical experts regretfully agree that in the field of military technology Russia lags not one, but several generations behind the United States in terms of weapon systems. This is especially the case in the area of hi-tech space based applications. Even so, a preliminary overview of the current in-orbit constellation of Russian military satellites appears quite impressive: as of January 21, 2003, it included a total of 61 spacecraft.[4,5] In other words, at the time the Iraqi campaign was launched, Russian orbital infrastructure was equal to approximately half the capacity of the coalition constellation. This seems to imply that at the time Russia's space based capacity was half that of the US, but a closer review of the issue presents a dramatically different picture, even without a comparative analysis of the technical capabilities of Russian and American satellites. For example, since the Russian Don Class broadband photographic reconnaissance satellite ceased operations on December 9 2003, Russia has no longer had any spy satellites. Meteor-3M, the last surviving Russian weather satellite has been all but non-operational since December 2003 and the Russian GLONASS navigation system is also not fully operational due to technical problems. In short, the functional capability of the Russian constellation leaves much to be desired. Technical reasons for these problems aside, the lack of funding is the leading menace to the continued function of the Russian satellite system.[6,7]

At the same time, results of public opinion polls have indicated that an overwhelming majority of Russian citizens would support funding for the maintenance and development of the space program. The enhancement of defense capability and the development of pragmatic applications in the sphere of science and technology are the most appealing programs to Russians, according to surveys.[8] This is also the prevalent opinion in circles at the Federal government level. Meeting with top managers of Russia's space industry on April 27, 2004, President Putin said "the geographical and geopolitical peculiarities of such a vast territory as Russia, our extensive borders and rich natural resources, all require the efficient use and increased development of our space potential."[9]

Military and civil officials responsible for space programs have always had a ready reply to rebuff criticism, namely "give us as much money as the United States spends

for space programs and we will do the same." Given the once prestigious and impressive state of the Russian space program, this claim shouldn't be relegated to the status of an idle boast out of hand, but the multiplicity of non-budgetary factors that have contributed to the decline of the space program nevertheless make such claims speculative and not predictive.

At first glance, Russian bureaucrats have a point. NASA's budget is about 30 times larger than the Russian Federal Space Agency (FSA) even though the relative US and Russian military budgets are roughly proportional to the federal budget.[10,11] In terms of purchasing power of the ruble, however, this adjusted difference is two or three times less.[12] Moreover, a comparison of the US and Russia's GDP makes it clear that current spending for space programs is not much different from the real limit of what Russia can actually afford given the current state of its economy.

Obviously, spending optimization becomes even more important in conditions of low financing. This would also seem to imply that money wouldn't be channeled into exorbitant or global-strategic programs, but spent only for orbital and land based infrastructure deemed absolutely essential. This is the basic pattern followed by all nations aspiring to join the limited ranks of nations possessing space based surveillance technologies capable of monitoring their own territories and the territories of neighbor states. Russia, however, has chosen its own way. Currently there are no functioning reconnaissance or weather satellites in the Russian orbital constellation.[13] This seems to be very unusual for a country with many high-risk agricultural areas, extensive forests plagued by continual fires and large urban areas susceptible to seasonal floods. At the same time huge sums are allocated for a number of very expensive programs. The reasons for this are not clear. With an eye to expediency and the efficient use of funding, we shall select and analyze three such programs generally considered to be prestigious and politically important. We will see that the chief function of these programs is to preserve Russia's status, not only as a "great space power", but also the status of a "superpower". These key programs include:

- The International Space Station (ISS)
- The GLONASS Global Navigation System
- The Early Warning Missile Defense System (SPRN)

Since these programs are intended for civilian, dual-purpose and military use, respectively, they present an opportunity to make a general analysis of the spectrum of Russia's space based infrastructure and the effectiveness of its use for these various purposes. We will look at these programs in order.

The International Space Station

About a third of the 2004 FSA budget, or half of the Federal Space Program budget, will be allocated for maintenance of the ISS and related launches of supply spacecraft.[14,15] (see Diag.1 & 2) Similar scenarios following this pattern have been the norm over the past few years.

NASA is in a different situation. In the 2004 Budget Process, the deepest cuts were made to the human space flight program, specifically a $200 million cut for the ISS, even though its share in the total space budget amounted

Diagramm 1. FSA Budget 2004

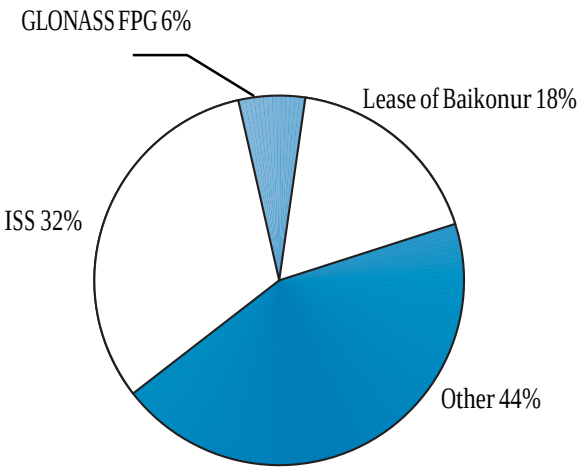
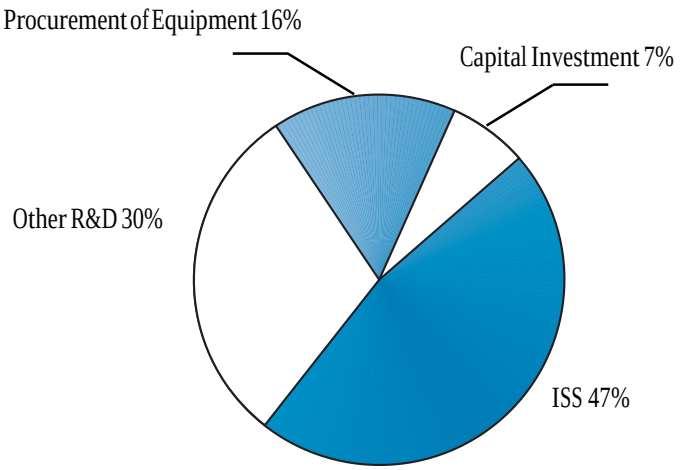


Diagramm 2. Russian Federal Space Program - Budget 2004

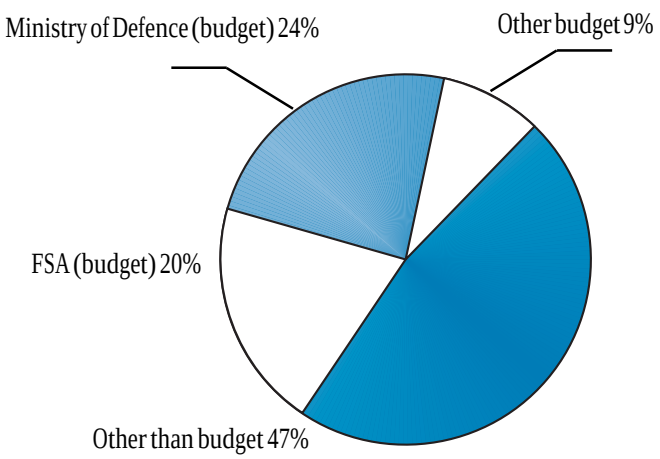


to less than 10%. Meanwhile the US Congress didn't even attempt to raise the issue of reimbursing Russia for at least a portion of the costs in has born in connection with the upkeep of the ISS, which increased after the grounding of US space shuttles following the Columbia disaster. As a result Russia has incurred expenses almost single handedly for the second consecutive year. Another major effect of the unilateral pullout of the US is that the ISS can now only receive crews of two. Such small crews can't devote more than 8% of their time in the station to scientific research, the rest being spent on maintaining themselves and keeping the station in working condition.[16] Thus, the only new knowledge obtained through the ISS recently is the experience of extended length space flight, benefiting US and European partners primarily as Russia already has this experience. And, ironically, the over taxed Russian Space program has paid the bill.

The GLOSNASS Global Navigation System

The GLONASS global navigation satellite system (GNSS) has also suffered greatly. The first GLONASS satellite was orbited in 1982 and a total of 80 replenishment satellites have been launched since. By 1995 the system was fully deployed with a total of 24 spacecraft in orbit, but the constellation soon deteriorated. Inadequate program funding put a halt to launches for three years, from December 1995 to December 1998. To a greater extent, the deterioration of the system resulted from the low reliability of the navigation satellites themselves. The short lifespan of the satellites led to the need for launching no less than 8 to10 satellites each year to maintain the constellation with properly functioning satellites. The three-year gap in launches has resulted in the complete breakdown in the constellation. Today, the Russian satellite launch schedule puts 3 satellites per year into orbit, the same rate as before GLOSNASS deployment. For comparison, as of December 31, 2003, 15 out of the 29 operational satellites of the US GPS navigation system were put into orbit before 1994, that is to say, more than ten years ago.[17]

Diagramm 3. Sources of GLONASS FGP Funding



As a reaction to this, in 2001 the Russian government adopted a dedicated Federal Guide Program (FGP) for 2002-2011, the only such guide program in the FSA. The specific task of this program is to support the restoration and the further development of the GLONASS system.[18] (Diag.3) The priority put on spaced based navigation systems is explained by the broad range and significance of the fields application of navigational information – aircraft and ship navigation, rail and motor transport control, map-making, geological surveying, law enforcement support, search and rescue and other uses. As of 2007, for instance, it is expected that every cellular phone in the US will have an integrated GPS receiver.[19] The military applications of GNSS range from monitoring global weather conditions around the clock to precise weapons navigation and guidance for strategic missiles and the ability to track aircraft, ships or submarines as well as other spacecraft. Thus, the importance of such a system is hard to underestimate.

It would appear that the need for these applications is sufficient for the Russian government to regard the absence of a domestic GNSS as an indicator of the country's dependence on good relations with the US and the European Union as well, assuming the success of the future deployment of the Galileo GNSS. These concerns are indeed well grounded, even without taking other geopolitical and military technological aspects into account. The US and European systems are not only capable of blocking the reception of precise navigation signals from undesirable receivers for strategic military purposes, they also provide control over civilian use of precision navigational information for commercial purposes anywhere in the world.

The decision to maintain and develop a national GNSS carries with it obvious political and military risks as well as advantages, but the continual operation and further development of such space systems are extremely expensive.[20] It is no accident that today such programs are only affordable for the US and EU, whose GDPs amount to over 20% of world production each. Russia, whose GDP is as much as ten times smaller, should have concentrated on the commercial applications of the GNSS to make up for at least some of the costs.

The GLONASS FGP contains provisions for restoration of the Russian system by 2006-07. The restoration plan calls for the development of a modified satellite, the GLONASS-M, with a service life of seven years and a new satellite, the GLONASS-K, with an expected12-year serviceability.[21] It was presumed that GLONASS, together with the existing GPS and the future Galileo systems, would jointly provide global navigation service. The program also presumed financial support from other nations, primarily from China who has an obvious interest in the system.[22]

This was the plan, at least. Achieving it, however, has been another matter. Now three years after adopting the FGP, a review of the initial results is less than impressive. There have been significant delays in the GLONASS capacity restoration schedule. The estimated date of the systems operational capacity has shifted forward to somewhere between 2009-2011[23] (Diag.4), after the expected completion date of the Galileo system in 2008. Typical of Federal ministries behinds schedule, the FSA and the Russian defense ministry attribute this delay to low funding, even for recently adopted programs. In 2002, government financing amounted to 440 million roubles (just 22% of the planed amount) and in 2003 the amount was 660 million roubles (30% of the planed amount).[24] The status of 48% the funding for the FGP (or almost 750 million roubles in 2002-03), originally intended to come from other than government sources, has yet to be raised.[25] Almost all FGP funds are being directed towards developing and launching new spacecraft. Meanwhile, the issue of the commercial market for the potential services available through the GNSS remains as yet unresolved. Stimulating a market for civilian use of the potential navigational applications should be a top priority as it will not only offset current budgetary problems but also provide a stable source of financing from the private sector in the future and indeed this seems to have been part of the original FGP plan. The reasons for this budgeting diversion remain unclear.[26] (Diag.5)

This is not the only crisis facing the FGP, however. Perhaps more crucial to the overall success of the project, expectations of broad international support for the development of the Russian space based navigation system have not yet materialized. Due to either the weak position of Russia during negotiations with China or for other unknown political reasons, China has chosen to support the European Galileo system. On September 18, 2003 China signed a partnership agreement with the EU under which it would both contribute funding for the Galileo project and actively participate in the technological development, manufacture, certification and sales of satellite equipment to be used in the project.[27] Today final hopes for international cooperation on the GLONASS program are pinned on India.[28]

Diagramm 4. GLONASS satellite constellation

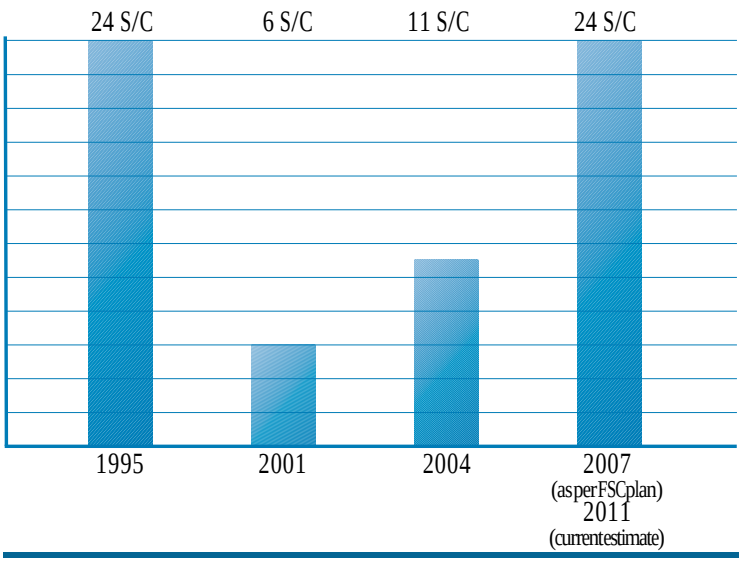
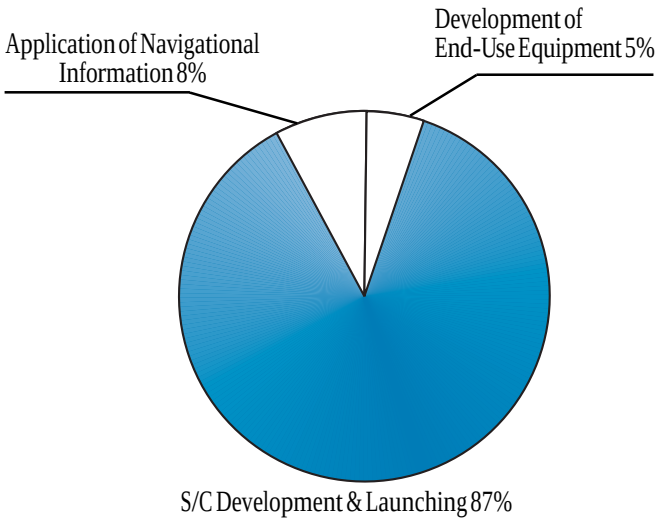


Diagramm 5. FGP GLONASS - Budget 2004



The agreement in February of this year between the US and European Commission for the adoption of a unified frequency for an open signal between the GPS and Galileo systems will enable users all over the world to benefit from the capabilities of both systems with the use of a single receiver.[29] If implemented, this will more or less put an end to any plans for creating a competitive Russian GNSS, regardless of its performance characteristics and capacity to satisfy the demands of the private sector. The development of a unified GPS-GLONASS receiver is not

feasible because of differing principles in signal modulation. It should be noted that, at the request of the US, a decision allowing for the damping of Galileo signals in war zones was amended to the agreement in June 2004.[30] These facts further emphasize the urgency of the rationalization of the Russian project.

The joint GPS-Galileo system will be sufficient due to its horizontal positioning accuracy of 2-3 meters.[31] As such, this capability will render the Russian system obsolete on the market in terms of compatibility. Moreover, since commercial equipment manufacturers will provide financing for both GPS and Galileo systems through license fees, the opportunity for making GLONASS commercially effective is virtually lost. Its only application will be navigation service support for Russian troops.

Concerning this situation, Russia has three different options to choose from. The first is to proceed with the adopted FGP program relying solely on the Russian budget as a source of financing and to turn a blind eye to the obvious deficiencies in order to create a global satellite infrastructure despite incompatibility and commercial unattractiveness. The second choice is to follow China and secure a share in the European program (there is no room for Russia or any other partner in the American project). The third option is to revise the mission of independent space based support navigation services on the basis of the real interests and capabilities of Russia and to complete the project at a lesser expense, for example by abandoning the idea of having a global system and to make a system for covering Russia's territory only.

The Early Warning Missile Defense System

The third Russian space program devoted to the support and development of the Early Warning Missile Defense System has a distinct military character. It is designed to enable detection of ballistic missile launches, nuclear testing and assessment.

Like any other global satellite system, an early warning missile defense system is a costly thing. Although maintenance and development costs of the Russian system's space segment are classified information, nevertheless it is known that launching just one US Defense Support Program (DSP) satellite costs the US as much as $763 million. Given the high cost, the question of whether the possession of such a system is an indispensable and effective means of ensuring national security of any given state will always be relevant. Current geopolitical and military priorities make the choice of the United States clear, and that is the choice for a missile warning system. Currently the US system includes 8 DSP geo stationary satellites, a key element of the national missile defense system design.[32]

For Russia, the necessity of a space based segment of a missile warning system remains in doubt. The American strategy does not fit Russia's needs. Russia's original purpose to maintain a space based system, as an integral element of the preventative "reciprocal strike" strategy is also questionable today. Indeed, ballistic missiles may be launched by a potential enemy not only from their territory, but by land, sea or air positions from anywhere in the world. This being the case in today's world, any minimally effective missile warning system must of necessity provide continuous global coverage. Since the space based component of the Russian missile warning system has operated in an incomplete state for years, its overall design efficiency inclines closer and closer to zero. Despite this, the renewal of the Early Warning System is repeatedly designated as a priority in the continuing development of Russian Space Forces.[33, 34]

The space based components of US and Russian missile warning systems differ not only in combat readiness, but also in fields of application. DSP satellites perform a number of civil functions and as such are truly dual-purpose spacecraft. An independent, non-military center has been set up in the US to handle information relating to the detection and monitoring of fires, volcano eruptions and other natural phenomena. The response time for a fire warning signal, even for densely populated areas in the US, is as little as 15 minutes, comparable to 911 services. In contrast, there is no evidence that data received from Russian Early Warning satellites is used by anyone other than the Russian military. Whether the specifics of the Russian Early Warning System are even broad enough for civilian use remains unknown as such information is classified.

Despite the budget debacle and the claims that if there had only been more money, these systems and others would be the jewels of the Russian space program, the prevalence of archaic decision-making in Russian bureaucracies leads one to speculate that there would have only been more (and perhaps more dangerous) waste had there been more money. The current bureaucratic mindset, based largely on damaged national pride and the desire to recapture Russian super power status, seems incapable of confronting the obvious barriers to their irrational plans for Russian aggrandizement. Not only are the barriers financial, but the practical needs of Russia have also changed, creating a prognostic barrier perhaps only negotiable by a new generation of bureaucrats. The automatic assumption that the collapse of the Soviet Union has rendered Russia incapable of progress other than by returning to her former status as a superpower is at odds with the opportunities presented by her new status and potential. Today, given the availability of know-how and technology and the changes in the nature of global security,

it is not unrealistic to say for Russia that essential space-based infrastructure is an attainable goal worthy of national pride. The problem, it would seem, is as much with the thinking of the bureaucrats as with the budget.

Conclusion

It is clear that whatever the potential of Russian space based infrastructure, the main problems of funding and the adequate management of that funding continue to handicap the Russian space program. The problems that plague the above mentioned space programs would appear to be symptomatic of the entire program, especially regarding the irrational allocation of budget resources and delays which prevent competitiveness and taking advantage of opportunities on the international market. If the present course is allowed to continue, these problems threaten to render the Russian space program completely cut off from much needed civilian applications, many of which could potentially generate financing independent of the federal budget. Further, it would be only a matter of time before systems vital for purposes of national security became dangerously obsolete.

There is little doubt that Russia could have made different choices regarding spending and managed a different outcome. Along with demand for increased government funding for space-based projects, there has been no increased demand for accountability. The lack of appropriate mechanisms for this could be blamed on many reasons, but there is also a certain amount of willful ignorance about the necessity for a correlation between cost-effective analysis and the various levels of urgency among national priorities. Comparatively, large US space budgets –both military and civilian – are subject to strict public control over the development concepts, arms development programs and budget requests. These mechanisms are utterly transparent, including those relating to military information. US space policy is formulated with active participation of Congress and independent non-governmental research centers. From this comparison we can see clearly the merit of the two systems. It is clear that in bureaucratic systems where military and civil space programs are regularly subject to the scrutiny of various government and private organs for such things as cost-effectiveness, expediency and rational conformity with advanced technologies and military concepts, there is a higher overall level of efficiency. Only when the budget allocation process is subject to analysis and criticism from regulatory organs, be they governmental or private, can there be a shift towards real accountability and a real correlation between needs and responses to those needs. Not only does a minimum concept of adequacy in respect to real threats to national security and conformity with national economic capacity require this, but a consequent element of such transparency is also the increased confidence in such programs and, it follows, investment. When people understand what the money is being spent on and results are visible, this has the domino effect of encouraging further public support for the space program.

It should be noted that all three programs discussed (ISS, GLONASS and SPRN) are budget priorities now just as they were during the Soviet era. As almost everything has changed since that time, why should these outdated space priorities continue to go unchallenged? The new Russian state has different geopolitical and therefore military objectives and a considerably decreased economic capacity. Despite the entopic nature of the situation, which is bound to reach a more critical state soon, the response is rather inert thinking and reluctance to realistically review the country's new global role.

Finally, it should be realized that Russia's main task in the field of both military and civil space based programs is not to maintain an appearance of parity with the United States in the number of rockets launched and satellites in orbit at any cost, but rather to close the widening gap in space based technologies. Without serious efforts to this end, the result will axiomatically be the low competitive value of the Russian space industry, its further displacement from world markets and the complete loss of design effectiveness relating to Russian military space systems.

Meanwhile, the US is intensively developing a number of new space systems and technologies. Foremost among these are offensive systems aimed at disabling the space-based assets of a given enemy and preventing their use in the relay of information and defensive systems targeted at the rapid detection and warning of missile attacks.[35] Should such projects ultimately be successful, the US will have de facto control over the ability of Russia or any other nation to use satellites or satellite information and will gain substantial political and military advantages.

Consequently the highest priority in the near future must be assigned not to ISS, GLONASS or missile warning programs, but to a comprehensive program for closing the technological gap between Russia and the US, including the gap in military technologies. This would require a radical revision of defense procurement policy. The rapid commercialization of all space programs, including military ones with viable civil applications, is essential for concentrating resources on the development of new advanced technologies. In connection with this it would therefore be more than reasonable to adopt a number of practical policy measures, such as:

- The immediate abandonment of all programs aimed at maintaining out-of-date or obsolete military space systems inherited from the USSR

- The incorporation of the dual-use principle for all new space systems and satellites, even those intended exclusively for military use
- The priority development of new dual-purpose spacecraft and the revision of plans proposing to maintain the relative number of dual-purpose S/C at 25% of the total [36]
- The assigning of maximum attention to the formation of joint ventures for promoting Russian satellites to foreign markets based on the successful pattern of joint ventures promoting Russian launch vehicles

The 'space race' is no longer propelled by the cold war, but the experience of the cold war could teach us many things concerning the advantages of competition and innovation in offsetting any imbalance of global power. We are freer to observe the successes of other nations and to criticize our own institutions as well. At the same time, the stakes are just as high in terms of national security and the internal development of Russia as a nation and self-sufficient military power. We can no longer afford the luxury of indignation as a motivating force; rather we need to view the reality of lagging behind others as a natural incentive to propel Russia into the future using her natural technical talents and resources.

1 *Space News* (*SN*) No 10/2003, I. Cherny "US Worried About Chinese Plans"
2 *Kommersant* 25.05.1999, I. Safonov "Outcome of Balkan War Decided In Space"
3 *Defense News* 12.04.2004
4 *Independent Military Review* No 15/2004, A. Gorshkov "US Build Up Military Power"
5 *SN* No 4/2003, A. Kopik "Russian Space Forces"
6 *SN* No 2/2004, V. Mokhov "Don Completes the Flight"
7 *Izvestiya* 3.04.2004, S. Leskov "Russia has no more weather satellites"
8 *Izvestiya* 12.04.2004, G. Ilyichev "We Don't Spare Money For Space"
9 *ITAR-TASS* 27.04.2004 "Putin Spoke For Build-Up of Russian Space Potential as a Driver of the Whole Economy"
10 *SN* No 4/2004, P. Paveltsev "About NASA 2004 Budget"
11 *SN* No 2/2004, I. Lisov "Russian Space Budget for 2004"
12 *Strategic Stability* No 3/2003, A. Arbatov "Iraqi Crisis in World Politics: Background and the Future"
13 *ITAR-TASS* 27.04.2004 Op. Cit.
14 *SN* No 2/2004, I. Lisov "Russian Space Budget for 2004"
15 V. Shutov, FSA, Head of Department. Internet briefing (www.federalspace.ru).
16 *SN* No 4/2004, Op. Cit.
17 *SN* No 2/2004 , A. Kopik "Another Orbital Navigator"
18 *SN* No 11/2001 I. Lisov "Global Navigation System – Federal Guide Program"
19 *SN* No 4/2004, A. Kopik "Current State and the Future of Internal Markets for Remote Sensing and Navigation"
20 *SN* No 4/2004, P. Paveltsev "About the US Defense Budget Statement"
21 *SN* No 11/2001, Op. Cit.
22 *Arms Export* No 5/2003, K. Lantratov "Russian Trace in Chinese Cosmonautics"
23 A. Perminov, FSA, Head of. 28.06.2004 Internet briefing (www.federalspace.ru)
24 *SN* No 2/2004, Op. Cit.
25 *SN* No 11/2001, Op. Cit.
26 V. Shutov, Op. Cit.
27 *Arms Export* No 5/2003, Op. Cit.
28 Yu. Koptev, Rosaviakosmos, Head of. Press-conference with "MK" newspaper on 29.01.2004
29 *SN* No 4/2004, A. Kopik "Galileo and GPS Will Share Frequencies"
30 *Lenta.ru* 19:06 27.06.04 "Europe and USA Agree Not To Impede"
31 *SN* No 4/2004, Op. Cit.
32 *SN* No 4/2004, V. Agapov, "Eagle Eye"
33 *SN* No 4/2004. I. Mokhov, "Kosmos-2397 Gone Over the Horizon"
34 *SN* No 6/2003. A. Kopik, "Vladimir Putin Visits Space Forces HQ"
35 *SN* No 5/2003. P. Paveltsev, "Preparing to Defend and to Attack"
36 *SN* No 4/2003, A. Kopik, Op. Cit.

Identified contracts for the delivery of Russian arms signed in the first half of 2004

Exporter	Importer	Date	Event Transcription	Estimated Value	Notes
Russia	India	20.01.2004	Signing of a package of contracts for delivery to the Indian Naval Forces the aircraft-carrier Admiral Gorshkov.[1]	1,6 bln	Sevmash Plant has been subcontracted to make repairs and modernize the vessel, while RAC MiG will contribute twelve MiG -29K fighters and four MiG- 29KUB training jets, bringing the carriers aviation wing to a total of 16 aircraft for a sum of about $700 million.[2]
Russia	Belarus	March 2004	Within the framework of military-technical cooperation, the Russian and Belarusian Ministries of Defense arranged for the transfer to Belarus of a few batteries of S-300 (SA-10).[3]		The S-300 are being transferred to Belarus gratuitously, however all their pre- export preparation will be made by Russian experts at the expense of Belarus.
Russia	UN (Afghanistan)	09.04.2004	An announcement from UAZ on the conclusion of an agreement with the United Nations for delivery of several thousand jeeps to Afghanistan.[4]		The volume of delivery will be approximately 1000 off-road vehicles a month. At the present moment, UAZ has concluded contracts with "Programs of Development of the UN" for a sum of $3,3 million
Russia	India	April 2004	The Ufa Engine-Building Production Association (ÓÌÏÎ) has won the Indian tender for delivery of Scarlet – 55 aircraft engines for the HJT-36 training jet.[5]	$200 mln	Delivery of 200 engines is planned.
Russia	China	12.05.2004	The Komsomolskaya Amur Industrial Aviation Association (ÊíÀÀÏÎ) has signed a contract for delivery to China of 20 amphibious aircraft B-103.[6]	$20 mln	
Russia	Finland	27.05.2004	The Logistics Administration of the Armed Forces of Finland has concluded a contract for $10 million with Rosoboronexport for delivery of spare parts.[7]	$10 mln	The spare parts are being used to write off Russian State Debt to Finland. In 2004 Russia will deliver spare parts for "BUK – M1" missile systems (SA-11), BMP-2, SAM 2S5, and also ammunition for the BMP-2.
Russia	Columbia	14.06.2004	The Columbian Ministry of Defense announced the The Kazan Helicopter Plant as the winner of a tender to refit 10 Mi-17.[8]		
Russia	India	17.06.2004	Baltiysky Zavod concluded with Sevmash Plant a contract for the manufacturing of nine main ship boilers for the heavy aircraft- carrier "Admiral Gorshkov".[9]		

1 Aleksei Nikolskiy “Strategic Sales”“Âåäîìîñòè” 21.01.2004.
2 “MiG signs a contract for delivery to India of 16 MiG -29K fighters for $700 mln.”,ÐÈÀ“ÐîñÁèçíåñÊîíñàëòèíã”,21.01.2004.
3 “Russia to deliver the zenit-rocket system S-300 to Belarus within 6 months”,“ÐÈÀ “ Í îâîñòè”,02.03.2004.
4 Simon Otrovskiy.“UAZ Seals Afghan Jeep Deal”,“The Moscow Times”,07.04.2004.
5 Nikolskiy A.“Russia will deliver engines to India”,“Âåäîìîñòè”,26.04.2004.
6 “ÊíÀÀÏÎ to deliver to China 20 amphibious aircraft B-103”,“ITAR-TASS”,12.05.2004.
7 “Russia will repay part of its Soviet-era debt to Finland with military spare parts.”,“ÐîñÁàëò”,28.05.2004.
8 “Kazan enters the fight against the Columbian drug cartel”,“Èçâåñòèÿ”,16.06.2004.
9 “Baltiysky Zavod prepares boilers for the aircraft-carrier“Admiral Gorshkov”,“Regions.Ru”,17.06.2004.

Identified contracts for the delivery of Russian armssigned in the first half of 2004

Identified transfers of Russian arms in the first half of 2004

Exporter	Importer	Date	Event Description	Sum	Notes
Russia	India	29.01.2004	Irkut, in accordance with a license contract, has transferred to Hindustan Aeronautics Limited (HAL), in electronic form, documentation for the manufacture of Su -30 MKI fighters.[1]		
Russia	India	09.03.2004	The official ceremony of the transfer of the aircraft carrier "Admiral Gorshkov" to India.[2]		
Russia	Iraq	March 2004	UAZ sent to Iraq 421 off-road Hunter vehicles.[3]	$2,5 mln.	Up to the end of 2004, UAZ expects to send a few thousand vehicles to Iraq.
Russia	Vietnam	March 2004	The Vietnamese Air Force received two multi-purpose Mi-17 helicopters from the Kazan helicopter plant.[4]	Approximately $10 mln	Presently, the Vietnamese Air Force possesses 55 Mi-8/17 transport helicopters.
Russia	India	02.04.2004	Rosoboronexport has officially declared the fulfilment of contractual obligations concerning the delivery to India of T-90S tanks and kits for licensed assembly.[5]	$800 mln	A contract for $800 mln. was signed in 2001 stipulating delivery to India of 124 completed T-90S tanks from the "Ural Carriage-Building Plant", and also for delivery of kits for the licensed assembly in India of 186 more tanks.
Russia	India	19.04.2004	Baltiysky Zavod transferred to the Indian Ministry of Defence the third of three Project 11356 frigates - "Tabar".[6]	$300 mln	A contract for construction of three Project 11356 frigates between Rosvooruzhenie and the Indian Ministry of Defence was signed at the end of November, 1997. Total cost of the contract is around $1bln The first two vessels in this series- Talwar and Trishal, were delivered in June of 2003.
Russia	Armenia	20.05.2004	Armenia purchased two Il-76 military transport aircraft.[7]		The planes are purchased at domestic Russian prices in accordance with existing mechanisms defined by the Organization of Collective Security.
Russia	Hungary	03.06.2004	Russian delivered five engines for the MiG -29 fighter to the Hungarian Air Forces.[8]		Under the terms of the contract, Russia should deliver 9 more engines
Russia	India	07.06.2004	Russia began deliveries of completed components to HAL for licensed assembly of multi-purpose Su-30MKI fighters.		
Russia	Pakistan	June 2004	Pakistan received 13 Mi-17 helicopters of Russian manufacture for the sum of $50,7 mln.[9]	$50,7 mln	The last segment of four machines were delivered by the Kazan helicopter plant in the beginning of June.
Russia	South Korea	June 2004	RAC MiG shipped the first two of a planned twenty Il-103 to South Korea in accordance with a contract between Russia and South Korea.		These two aircraft are a write off of Russian State Debt while the remaining will be purchased on a commercial basis. Implementation of all contractual obligations is planned by 2006.
Russia	Iraq		GAZ sent to Iraq the second segment of 143 "Sadko" dual-purpose vehicles.[10]		The first segment of the order (140 vehicles), was delivered in the beginning of June. By the end of September 2004, another 360 vehicles should be sent.

1 Siberian Information Agency (ÑÈÀ, Èðêóòñê), 29.01.2004.
2 "Aircraft-carrier "Admiral Gorshkov" a gift for India, is transferred to Severodvinsk for subsequent refurbishing", "ITAR-TASS – Saint Petersburg", 09.03.2004.
3 Ekaterina Cafarova. "UAZ has renewed deliveries to Iraq", "Êîììåðñàíòú", 04.03.2004.
4 "The Vietnamese Air Force receives two Mi-17 helicopters" ITAR-TASS 04.03.2004.
5 Konstantine Lantratov "Ahead of schedule, Russia overstocks India with tanks" "Êîììåðñàíòú" 03.04.2004.
6 Maxim Pyadushkin. "Money from the sea". "Êîììåðñàíòú (Ñ-Ïåòåðáóðã)", 20.04.2004.
7 "Armenia takes delivery of two II'76 military-transport planes" "ÐÈÀ " Íîâîñòè", 20.05.2004.
8 "Russia delivers to Hungary engines for MiG – 29 fighters" "ÀâèàÏîðò.Ðó", 03.06.2004.
9 "Pakistan receives 13 helicopters of Russian manufacture for 50.7 million dollars" ITARR-TASS 07.06.2004.
10 "GAZ has sent to Iraq 283 dual-purpose machines" "Metallurgical Business News of Russia" 21.06.2004.

Our Authors

Mikhail S. Barabanov. Graduated from the Moscow State University of Culture. Currently employed by the Moscow city government. Independent expert on naval history and armaments.

Andrei G. Ionin is a graduate of the Mozhaisky Institute of Military Engineering. He served as a researcher at the Baikonur Aeronautical Facility from 1983 to 1988. Since 1988 he occupied different scientific positions within the Ministry of Defense Scientific Research Institute. He received his PhD in 1995. His contributions to MDB in the capacity of an independent expert.

Vassily B. Kashin is a graduate of the Institute of Asian and African Studies at Moscow State University and has held various posts in the government. He is currently a senior analyst at the Russian Institute of the Far East.

Vladimir R. Legoyda. Associate Professor at Moscow State Institute for International Relations (MGIMO – University), department of World Literature and Culture. Chief Editor of Orthodox periodical "Foma". Executive Director of Research Center "Church and International Relations". Graduated from MGIMO-University in 1996 (School of Journalism). PhD degree in 2000 (Political Science). Professional and academic interests: religion and politics, Church and state relations, concept of "civil religion". Author of more than 30 articles on religio-political and philosophical problems.

Konstantin V. Makienko. Graduated from the Oriental Department at the Moscow State Institute for International Relations in 1995 and the French-Russian Masters' School of Political Science and International Relations in 1996. Head of a project on conventional armaments at the Center for Policy Studies in Russia (PIR-Center), 1996-1997. Since September 1997, Deputy Director of CAST. Author of numerous articles on Russia's military-technical cooperation with other countries.

Centre for Analysis of Strategies and Technologies

Leninsky prospect 45, suite 480, Moscow 119334
Russia

Phone: +7 095 135 1378,
Fax: +7 095 775 0418,
http://www.mdb.cast.ru/