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1 OF 2

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25 July 1980

USSR Report

MILITARY AFFAIRS

(FOUO 14/80)



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USSR REPORT
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ERRATUM: The pages in JPRS L/9055, 24 April 1980, (FOUO 11/80) of this series were inadvertently misnumbered. Please make the following corrections: page 23 should read 21; page 21 should read 22; page 22 should read 23.	

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GENERAL GRIGORENKO COMMENTS ON SOVIET INTENTIONS

Milan L'EUROPEO in Italian 13 May 80 pp 120-132

[Interview with former Soviet General Piotr G. Grigorenko by Jacques Lebeau: "There Will Be War Before the End of 1980"]

[Text] In this exclusive interview, Piotr G. Grigorenko, former general of the Red Army, warns Europe. The USSR is ready to attack: Afghanistan was also a full-scale exercise for the use of bacteriological weapons.

Piotr G. Grigorenko was a member of the Soviet Communist Party for 32 years, a general of the Red Army, assistant chief of staff during World War II, 73 years old, Ukrainian. His criticism of the Soviet regime began in 1964. He was often arrested and interned in mental hospitals. It was 1977 before he succeeded in being exiled. He was stripped of his Soviet citizenship by order of Brezhnev who said of him: "They released him from the mental hospital too soon." From New York where he lives with his wife and one of his five children, he loses no opportunity to grant interviews supporting dissidence.

[Question] Did your position in favor of the rights of man and your protests against the genocide of the Tartar people begin when you were still a general in the Red Army?

[Answer] Yes, I still held a position as a superior officer when I began to be aware of the reality of the regime and decided to protest. At that time, I talked in the Frunze Military Academy where despite considerable opposition I succeeded in creating a chair of military cybernetics. One day I said what I thought about the cult of personality. Immediately, I was cashiered from the army and sent to the eastern region where I struggled along as a truck driver under the permanent surveillance of two men and one woman of the KGB. However, I was able to continue my activities against the regime by drafting and distributing leaflets whenever I had the chance. I created an organization that I called "Union of the Struggle for the Rebirth of Leninism," and I was arrested. Yet, at that time, my activity was more anti-Stalinist than anticommunist.

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[Question] And today do you still have procommunist convictions?

[Answer] No, because the phenomena in Russia have not happened at all by chance. In reality, communism has no shadings whatever. In the future there will be only one type of communism whose model of reference will be that which reigns today as the enlightened despot at Moscow. My wife and I have belonged to the communist party for more than 30 years yet gradually the idea grew that unknowingly we were under the spell of a certain number of slogans. The greatest danger for the West does not come from the threat of nuclear war but from the real domination of the ideological weapon, a real cancer for the free world, which spreads its diseases throughout culture, the political class, the media, educational institutions, at times even through the police and the army. The greatest fraud of communism is to promote everything without having anything to pay off.

[Question] Do you know other cases of Red Army superior officers who might have tried challenges like yours?

[Answer] I can cite the case of Colonel Davidovic who taught at the Kharkov Military Academy and who was sentenced to 3 years at hard labor because he publicly criticized the regime. There is also the case of Lieutenant Colonel Yliev who, in 1967 tried to assassinate Leonid Brezhnev and who was imprisoned in Kazan Psychiatric Hospital where he was driven insane by repeated interrogations. More recently, in 1976, there was a mutiny aboard a missile-launching destroyer on patrol in the Baltic Sea. The mutineers tried to reach a port in Western Europe, but things ended badly: The officers and seamen were captured and executed by firing squad.

[Question] Do you consider the Afghanistan invasion a pure and simple military incident for the West or the beginning of a new serious crisis?

[Answer] It can be the detonator of a war with incalculable consequences for the free world. My theory is that the Soviets intervened directly in Afghanistan to test the capacity for reaction of the various Western nations in response to a military intervention conducted solely by Red Army troops. It was a successful operation: Disunity and weakness in the Western camp, ineffective "loud cries" from the more courageous. We know the results: The Soviet troops are 500 kilometers from the Persian Gulf.

[Question] What kind of war do you foresee?

[Answer] Obviously, it seems to me, the third world war. It is not always a good idea to make historical comparisons, but I find that the invasion of Afghanistan recalls the invasion of Czechoslovakia by Hitler. The West waited to react only after the invasion of Poland, but it was too late.

[Question] What do you think is the most credible hypothesis in case Soviet troops decide to intervene militarily against Western Europe?

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[Answer] It is very difficult to foresee the attacks and how they will take place. They will attack where they feel there is divisiveness and weakness. In Africa they have already occupied a certain number of key countries with the immediate effect of practically separating Europe from the United States. In order to gain total control of the sea routes, there are only three or four nations left to subdue: Zaire, Rhodesia, South Africa. The first objective will be Rhodesia. Parallel to this African action, they will try by every means to strengthen their positions in the Persian Gulf. I think that if the Soviets have been able to take so many risks with Afghanistan, this is due to the scorn with which they view Western public opinion and that of Europe particularly. This aggressive attitude cannot be changed by boycotting the Olympic Games in Moscow. I believe, however, that there will be a Soviet intervention in Europe in a very short time, before the end of 1980. Then there could be a verification of the theory that Soviet troops can cross Germany in 3 hours; Berlin could tempt the Soviets. Supporting my hypothesis, it seems that for several weeks very heavy troop movements have been observed in Czechoslovakia, the equivalent of six divisions, in addition to two divisions of artillery. All this was done by order of Army General Mikhailovich Maiorov. But the most significant fact in recent weeks was the visit of Admiral Gorchkov to the German Democratic Republic. He is the head of the Soviet Fleet and he went to oversee the joint maneuvers of the two military allies. The most important part of the exercise was the amphibious operation which could be the full-scale rehearsal for an attempt to reach the North Sea by forcing the Western belt defenses. For some weeks there also have been increasingly more specific threats by Soviet media directed toward Norway. Everywhere, in Poland, in Hungary, "something" is being prepared. I am crushed by Western public opinion which is indifferent, anesthetized.

[Question] Could you tell us what the army of a superpower like the USSR consists of and how it compares specifically with other armies of the world?

[Answer] I define the Soviet State as a "mystical, bureaucratic-military feudalism." It is not a question of dualism between the party which is its incarnation and the army which is its instrument. The Soviet Army is the work, the living strength of the party which is also that which differentiates it from the Nazi army which existed before the party. Created to defend socialist "conquests," that is to say the party's conquests, it then assumed the defense of the "socialist bastion" annexing to it, among other things, a certain number of populations whose armies were united under the Warsaw Pact.

The real commander in chief of the army is not just any marshal, the minister of defense, but the party leader, whether he be a dictator like Stalin or the spokesman for a group leadership like Brezhnev. The three supports of feudalism, the party apparatus, the army and the police complement one another.

[Question] Could you describe the organization of the Soviet Army from the highest position down to simple soldier?

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[Answer] Obviously, as in the past, it is the party's Central Committee Presidium which in effect is the head of the entire defense organization. Regarding this there is a real deception since if this task officially is entrusted to the Presidium of the Council of Ministers chaired by Brezhnev, the fictitious authority is conferred on the Presidium of the Supreme Soviet which is purely decorative. The present defense minister is not a member of the Presidium of the Council of Ministers and he is consulted only rarely and always for technical reasons. The same can be said for the ministries of industry and interior. Having said this, the true head of the Soviet Armed Forces is the defense minister. The minister is surrounded by an executive group consisting of the military council, whose subordinates are the general staff of the Soviet Army and Navy, the commanders in chief of the various forces; the general command staffs and individual commanders. In addition, the council controls the technical command of the Warsaw Pact forces, the political executive and counterespionage. The general staff of the Soviet Army and Navy is articulated in eight commands: The first two are named the principal commands. In order, their titles are as follows:

1. Glavnoye operativnoye upravlenie (GOU), which is an interarmy command responsible for handling all operational matters of the armed forces and to verify the work of the general staffs of the various forces. All this is in close liaison with the rear guard general staff and the civil air fleet.
2. Glavnoye razve dyvatelnoye upravlenie (GRU), which is the main command for information and which is also an interarmy command which is concerned with directly controlling all matters of research and administration of information.
3. The transmission command, which is at the head of monitoring services.
4. Mobilization and organization command and a general research office, which involves all the armed forces.
5. Communications command.
6. The code command, which is concerned with security for military secrets, encoding and decoding.
7. Topographical command.
8. Historical command, which has the task of synthesizing and organizing research and utilization of military history and which thus constitutes a center for interarmy documentation of prime importance. It also publishes a magazine: VIONNAIA MYSL [Military Thought].

The supreme commands of the land, air, naval and antiaircraft forces each has a chief of staff and eight divisions as well as a weapons and services command. The main ones are:

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1. The rear guard command, which is concerned with logistics and security of rear areas as well as a part of the national security on the domestic level, in liaison with counterespionage.
2. The general affairs command of the ministry which is concerned with administrative questions to which recently was added the central office for scientific research for military applications.
3. Personnel command, which technically comes under the party personnel office.
4. Military construction command, which uses special troops.
5. Military education command, which at the Voroshilov Academy oversees interarmy higher education.
6. Military justice command, which technically comes under the USSR Supreme Court and which has all the armed forces under its jurisdiction.
7. The special devices command executive.

[Question] What power does the Red Army Military Police have?

[Answer] The police and counterespionage are other aspects of party influence over the army. In the battalion, for example, there is a lieutenant who is not on the roster because he is assigned to the commander by his superiors. This lieutenant wears the same uniform as other officers even though he is not a military man. He is a member both of the KGB [State Security Committee] cadres as well as of the GUKR [Counterespionage General Command]. By habit they continue to call him Double O (abbreviation of Ossobyi Otdiel, Special Section) or also Ossobniak which in jargon means...private building. Double O is the most feared person in the battalion because he is the most powerful. His relations, which are secret, can bring about the worst punishment for soldiers and officers. The division's counterespionage section, of which Double O is an antenna, can at any moment carry out an incursion, facing the command with an accomplished fact. Actions of this kind, carried out with total impunity, often have caused death or deportation for many youths who opposed the regime. A network of secret informers, of Seksots, constantly reports even the smallest events in the battalion. The fate of every Soviet soldier is to ask himself constantly if his words will be reported to the Special Section by his best friend, to fear a report by a malevolent subordinate, to no longer trust anyone. Yet this system is losing effectiveness because by living for years in a permanent nightmare, the average Soviet soldier has become used to it.

[Question] Don't you have the impression that the problem facing the Soviets today is no longer to decide whether to make war, but rather where to make it?

[Answer] Believe me, the Soviets know where to make war. The entire universe is their battlefield. You Westerners are ingenuous if you believe that.

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Soviet expansionism will stop. Take for example what is happening right now in Zaire. Do you believe that it is by chance that the Soviets have sent an "armada" to the ex-Portuguese [sic] colony composed of 25,800 Cubans, 9,000 East Germans, Hungarians and Czechs, and more than 6,000 Soviet soldiers? To this impressive figure must be added 475 KGB agents and 720 officers, of whom 11 are Soviet generals. If Europe depends to a large degree on Africa for its raw materials, the USSR takes from the African continent almost all of its uranium, its cobalt and manganese, its oleaginous products, and coffee. Zaire, is therefore, the basic African outpost for the USSR. Perhaps the entire future of the West is being gambled down there. And you do not seem to be aware of it.

[Question] Can you cite other cases of attempts at destabilization tried by the USSR?

[Answer] For example, the USSR recently began negotiations to install a fleet of fishing boats on the Cook Islands. I have learned that about 50 Cubans recruited by the Soviets are training a popular revolutionary army on the island of Grenada; deliveries are being made of weapons to be installed near Saint Georges, the capital. It is not by chance that the Soviets have just completed a 440-kilometer-long railway between southern Yacoutia and the embarkation ports of the Pacific Coast. And again what is to be said of the Soviet nuclear submarines that patrol the waters around the Azores in large numbers? This is precisely where the Americans possess a military airbase for the defense of Europe. Furthermore, it is known that the Russians have every interest in Finlandizing Western Europe in order to gain the necessary time to reinforce their southern flank. The present 43 divisions that control the Amur, Mongolia and the Ussuri are insufficient in case of a classical war considering the 200 Chinese divisions concentrated along Siberia and in the Far East. Everything serves to check this temporary lack of military power. An example: Along the entire frontier with China, the USSR is erecting a true wall of iron and cement. The Red Army, not knowing what to do with the immense stock of old T34 and T10 tanks, has poured them into reinforced cement with only the turret emerging and they have tied this into a radar system to control the trajectory of weapons. This line of tanks, which is 3 kilometers inside Soviet territory, makes it possible to establish an actual barrier of fire in case of a Chinese attack.

In order to be ready in 1982, or 1983, the Soviets must be able to partially dismantle the western front, to build communication roads and to create new bases. However, the conventional Soviet Army is always three times more powerful than that of the West with its 40,000 assault tanks against the 10,000 of the United States. The deployment of new SS-24 missiles in the German Democratic Republic, which are added to the SS-21s and to the backfire bombers which have a flight range of 9,000 kilometers and the 2,500 inter-continental strategic weapons, permit the USSR to have 12,000 nuclear warheads. To this must be added the 60 atomic submarines, potential launchers of 740 MSBS atomic ballistic missiles. I will not even speak of the innumerable squadrons equipped with very recent MIG 25s or of the T-72 heavy armored

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units. From this can be deduced the incontestable numerical and qualitative superiority of the Soviet Army in case of a conflict.

[Question] The USSR also is faced by an atomic threat. In case of a nuclear war do they fear the consequences of what this would involve?

[Answer] I believe the Soviets fear these possible consequences increasingly less, both because of their power and because of the internal contradictions of the West. Their aim is only that of making the atomic advent a psychopolitical weapon. In order for this weapon to be useful, they need not only to have available an impressive stock of devices, but also armed forces who believe and are morally ready. From this point of view the Soviet Army is perfect.

[Question] What kind of research is now being done in the USSR that could constitute military variations on a classic or atomic war?

[Answer] They are numerous, amazing and impressive. The Soviet Army is perfectly trained for this kind of conflict and the Western armies are beginning only now to become aware of it. In case of chemical warfare there is Sarin. The lethal dose is 0.01 milligrams per kilo of body weight. The adult dose can be absorbed in a few minutes if the concentration of Sarin is from 0.1 to 0.3 milligrams per liter of air. On this basis it is easy to realize that in order to achieve a lethal concentration in the atmosphere of a city like Rome, it would be necessary to disperse 200 tons of Sarin, which is possible if it is considered that this weight can be easily transported by about 20 bombers or by the equivalent in missiles. According to latest information available to me, it seems that the Soviet troops have available strategic weapons that can carry chemical or bacteriological warheads. The USSR is not concerned about international agreements banning this kind of weapon. Today, in Afghanistan, the Soviet troops do not hesitate to bombard the rebels and civilians with a vaporized chemical gas, Soman, which causes paralysis of the nervous system, insanity or death. Actually the USSR has available 350,000 tons of various chemical weapons compared with 40,000 tons possessed by the Americans...! Another field of research for Soviet laboratories involves psychomimetic drugs, for example derivatives of atropine or of tropane, as well as ethers composed of piperidyl such as Ditran. In short, these substances act like LSD25, that is, they cause a momentary state of schizophrenia. It is, therefore, possible to poison an entire country and to create a psychotic state, vaporizing psychomimetic compounds, and to put an army or a crowd into a momentary state of immobility or temporary or permanent mental incapacity. The money spent by the Soviets for this demential research is on the order of 30 billion [currency not given] per year.

In regard to biological research, the Soviets accentuate studies for the destruction of crops shortly before the harvest by explosion of hydrogen bombs at high altitude. But another "clean" possibility is gaining ground. The scientists are trying to create a "hole" in the ozone stratum of the atmosphere above enemy territory because this ozone stratum is necessary for the existence of life on earth.

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[Question] Does the appearance of China on the world military scene and preferential agreements that Chinese leaders seem to extend to Western nations depend on an opportunist strategy or are they a part of a long-term plan that could rebound against the West?

[Answer] Personally, I have become totally anticommunist and I have no faith of any kind in one communism rather than another. I find Chinese communism particularly dangerous. I consider that China, like the USSR, will in the future not respect the agreements that it signs today with the West. I am much more categorical in my judgments since I have the deep conviction that if the USSR fears the Chinese like a plague, there is the fact, however, that Chinese expansionism is directed to the south or to the west, but certainly not to the north.

[Question] If as a man and a military person, you had to give the West, or more specifically Europe, advice concerning Soviet expansionism, what would it be?

[Answer] Some years ago, thousands of persons screamed in the camps and mental institutions of the East. They asked for help and you remained silent. Even children were arrested. You knew it. We ran all kinds of risks to inform you of it. And you shamefully continued to remain silent. Today you continue not to react. As a military man, I consider it fundamental to prevent this war which is coming closer with great strides and which will be terrible for everyone. You must not content yourself with emitting simple criticism, or making threats that you will never carry out. Look at how the people are treated who live under communism. It is necessary that the nations of the free world demand of the USSR a general amnesty, the application of the Helsinki accords, the withdrawal of Soviet troops from Afghanistan, the revision of the agreements between Hitler and Stalin which, after 30 years from the end of World War II are still in effect and which make Moldavia, the Ukraine, and Ryeorussia the slaves of the Soviet Union. If a united front is presented to the USSR and if, on the level of the highest international representation, the USSR is presented with a demand to respect the agreements that the USSR signs, then war can still be avoided. In the opposite case, the least retreat, the least concession will become the detonator of a third world war that the USSR hopes for, since it will be the only means to mask the failure of communism in the nations that it grips in its talons.

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SOVIET AIRBORNE TROOP'S DEVELOPMENT DESCRIBED

Moscow KRYLATAYA GWARDIYA (The Winged Guard) in Russian 1978 signed to press 10 July 78 pp 2, 134, 3-16; 76-83, 91-94, 102-133

[Annotation, Table of Contents, Preface, and selected articles from book compiled by V. I. Ivonin, Izdatel'stvo DOSAAF SSSR, 100,000 copies, 136 pages (plus illustrations)]

[Text] This volume is a collection of documentary sketches and stories about the glorious fighting history of the Soviet Airborne Troops, their establishment and development, about the fearless fighting men, their daily life and combat training today.

The authors of this volume are prominent Soviet military commanders, officers and general officers, veterans of the Airborne Troops, writers and journalists.

This book is intended for the mass reader, especially young people preparing for military service.

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A Word About the Winged Guard

This book is about paratroopers, airborne assault troops, about the Airborne Troops, who are indeed the winged guard of the Soviet Armed Forces.

It is difficult for me to write about them without emotion, without deep feelings of delight, respect, and affection.

I have shared all the postwar years with the officers and men of the winged guard, their daily lives and routine, the joys and difficulties of field exercises, long marches, all that which is simply and sternly designated in military regulations as military service.

And each and every time the paratroopers have proven by deed that they are experts at their military profession, men of high military valor, courage and heroism. Marching shoulder to shoulder with the men of the other combat arms, the airborne stand vigilant guard over our homeland and the peaceful productive and constructive labor of the Soviet people. They are carrying out with honor and dignity their lofty military duty, which is profoundly and vividly expressed in the new Constitution of the Soviet State: "Defense of the socialist homeland is the sacred duty of each and every citizen of the USSR."

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We note with pride that the Soviet Union is the birthplace of the Airborne Troops. As early as the beginning of the 1930's the first steps were taken in our country to establish special-role parachute units, to improve and further develop these units. And from the very birth of the Airborne Troops, the Communist Party and Soviet Government devoted unremitting attention to them.

Lenin Komsomol also made a truly inestimable contribution to the development of the Airborne Troops. During those years, when the Soviet Air Force was just being formed, Komsomol assumed a patron role over aviation and the aviation sports. The airborne subunits which were being established at that time were components of aviation units, and therefore Komsomol's patron status extended to them as well.

Komsomol members -- both boys and girls -- enthusiastically learned to fly airplanes and gliders and to parachute jump. As a result our army received many excellently-trained paratroopers. In order more successfully to publicize parachute jumping, which involves boldness, risk and daring, Komsomol Central Committee secretaries and other high Komsomol officials -- A. Kosarev, P. Gorshenin, V. Prakhov, N. Pronin and others -- jumped themselves. Many Komsomol leaders served as political workers in the airborne brigades and corps established on the eve of the Great Patriotic War.

The outstanding traditions of Lenin Komsomol patronage over the Airborne Troops are continuing to develop and grow stronger today as well.

I must also mention at this point the enormous role played during the pre-war years by the public-membership Osoaviakhim Society in the extensive popularization of sport parachute jumping among Soviet young people. Fearless paratroopers joined our troops precisely from the flying clubs of the Defense Society.

Today many paratroopers, prior to military service, also take their first jumps at the sports schools and clubs of the twice-decorated USSR DOSAAF Society.

Things were tough on Soviet airborne troops in those early years. They were treading unexplored paths, for they were pioneers. It is also for this reason that we pay them the tribute of profound respect -- to all the commanders and enlisted men of the first airborne brigades, which established the fighting traditions of our troops.

And these traditions are truly outstanding! Boldness and fearlessness, mass heroism and total dedication to the homeland and the great cause of the Communist Party, excellent military skill and strong soldier friendship -- all these qualities are characteristic of paratroopers.

In our army, since the Great Patriotic War, one has heard the following quite correct statement: "The Guard is the pride and joy of the Soviet

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Armed Forces." This is recognition of the outstanding services by the Soviet Guard to the homeland. This evokes in all airborne troops a legitimate feeling of pride in belonging to the troops of the winged guard, as well as the endeavor to preserve and build upon the combat glory of their subunits and units.

And whoever now wears or ever wore the light-blue shoulder boards with the airborne emblems will his entire life state with pride the following words: "I am a paratrooper!"

And this pride is quite understandable, for it is a high honor to serve in the Airborne Troops.

This book is dedicated to the Winged Guard of the Soviet Armed Forces. In it the reader will find materials relating the birth and development of the Airborne Troops, the first steps taken by commanders and men along a difficult, unblazed trail, as well as the baptism of fire they received in their first battles with enemies of the homeland.

A large section deals with the heroic events of the Great Patriotic War in which paratroopers took active part. They boldly jumped by parachute behind enemy lines and fought there bravely, disdaining death. When the situation demanded, airborne units were converted into rifle units, which fought as genuine guardsmen on many fronts. Over the course of the war dozens of brigades, divisions and corps were formed on the basis of the Airborne Troops, and approximately half a million paratroopers fought boldly and courageously. More than 200 of them subsequently became Heroes of the Soviet Union. But it is impossible to relate in a single book all the events in which paratroopers participated, and therefore only a few of them are included here.

Famed military commanders Mars SU I. Kh. Bagramyan and V. I. Chuykov, Army Gen S. M. Shtemenko, Col Gen A. I. Rodimtsev, and others movingly relate the combat deeds of our paratroopers.

Today's activities of our Airborne Troops are related by writers and journalists -- A. Kuleshov, F. Khalturin, P. Studenikin, A. Sgibnev, and others. They have taken only certain episodes from the diversified paratrooper combat training, but they are typical for today's army and constitute persuasive evidence of their military skill.

The book "Winged Guard" will be interesting and useful for readers of different ages. Reading it will recall past days to veterans, while pre-inductees will become acquainted with the character and function of the Airborne Troops and the daily life of units and combined units. Those who already wear the light-blue shoulder boards with the airborne emblem will find needed information for study of the fighting history of the Airborne Troops. This book can help commanders and political workers in instilling in enlisted personnel, noncommissioned officers, warrant officers, and

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officers love of the Airborne Troops, pride in belonging to them, and the aspiration to make their own personal contribution to their development and improvement, toward increasing the combat might of our Armed Forces.

It is with great pleasure that I present this book to our readers, especially young people, those who will be standing under the glory-covered fighting banners of our Soviet Army.

Hero of the Soviet Union Army Gen
V. F. Margelov, Commanding General
of the Airborne Troops

At the Beginning of the Journey

First, Parachute....

By Col (Ret) L. G. Minov, Master of Sport, Honored Cultural Worker RSFSR

Our army's winged infantry was born on 2 August 1930. On that day the world's first parachute assault landing took place at an experimental-demonstration exercise at Voronezh by the air forces of the Moscow Military District. I, at that time a military pilot, had the honor of leading this assault landing. It was a small group -- only 12 men -- but they were the first to demonstrate in a practical manner the possibility of mounting a parachute assault behind enemy lines.

How was this experiment, accomplishment of which signaled the beginning of a totally new area of art of warfare, prepared for and executed?

...This country's first parachute exercise, including jumping from an aircraft, began on 26 July 1930 in Voronezh, at the airfield of the 11th Air Brigade. This city became the training site because at that time aviation units designated for participation in the Moscow Military District air forces experimental-demonstration exercise were assembled in Voronezh.

On the first day of the training exercises, which subsequently signaled the beginning of Soviet mass parachute activity, six jumps took place. Two days later our group totaled 30 paratroopers.

Receiving by phone my brief report on progress in the training activities, Petr Ionovich Baranov, Commander of Air Forces of the Workers' and Peasants' Red Army, asked: "Tell me, can you get ready in two or three days, let us say 10 or 15 men for a stick jump?"

Receiving an affirmative reply, Petr Ionovich explained what he had in mind: "It would be a very good thing if it were possible during the Voronezh exercise to demonstrate a drop of a group of armed parachutists for sabotage activities behind 'aggressor' lines."

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Suffice it to say that we accepted with great enthusiasm performance of this unique and interesting task. A drop of an armed paratrooper force behind 'aggressor' lines was incorporated into the exercise scenario.

It was decided to make the drop from the Farman-Goliath two-motor biplane from which the Voronezh practice jumps had been made. At the time it was the only aircraft we had which was set up for jumping. Its advantage over the TB-1 two-engine monoplane bombers in the 11th Air Brigade lay in the fact that jumps from this aircraft were made directly from the cabin through a side door, while jumps from the TB-1 could be made from the short ladder mounted on the side of the fuselage or from the wing. An important role was also played by the fact that on the Farman-Goliath aircraft all paratroopers were situated in a single cabin. This gave them a feeling of fellowship and made it easier for the instructor to observe the paratroopers and control them in the ready position.

There were only 12 sets of practice parachutes in Voronezh. This determined the size of the assault force. But in addition to dropping 12 military parachutists armed with Nagant revolvers, the airborne assault operations plan called for dropping from three R-1 aircraft six parachute-carried cargo containers with light machineguns, carbines, hand grenades, and cartridges.

We selected for participation in the operation 10 volunteers who had already made their first jump with a performance rating of good. These were all parachute enthusiasts: Mukhin, Filippov, Freyman, Yegorov, Cherkashin, Zakharov, Kukharenko, Kovalenkov, Peydus, and Povalyayev. They were all aircrew personnel of the 11th Aviation Brigade.

The paratroopers were divided into two groups. As commander of the assault detachment, I was placed in charge of one, while my assistant, aviation brigade aircraft commander Yakov Davidovich Moshkovskiy, led the other. Breaking up the detachment into groups of six men each was dictated by accommodation capacity of the aircraft cabin, which could hold at one time from six to seven men with practice parachutes. In addition, the fact that we had only one Farman-Goliath aircraft forced us to plan the drop in two separate groups, separated by the time interval required for the aircraft to return to the base airfield, take on board the second group and deliver it to the drop zone. The "dead" time between personnel drops was to be used for dropping weapons from R-1 aircraft.

The principal mission of the first experiment consisted not in demonstrating combat actions by airborne assault troops behind 'enemy' lines, but rather in demonstrating to the participants in the air exercise the technique of dropping a paratrooper assault force and requisite arms. Of course we intended to obtain as a result of the experiment a number of experimental data for utilization in planning, preparing and executing subsequent airborne assault operations. In particular, it was necessary to establish the amount of dispersion of a group of paratroopers leaving an aircraft at a

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given speed at minimum intervals; to determine the degree of detection of a drop from a given altitude with observation from various distances; to determine the time required for paratroopers to assemble after landing, for collection of the airdropped weapons and distribution to the paratroopers, that is, to bring the assault force into full readiness for combat action.

In order to expand the experiment, it was decided to drop the first group from a height of 500 meters, the arms from 150 meters, and the second group from 300 meters. If one considers the fact that in those years parachutes were opened manually and that the paratroopers had made only one jump apiece, one can understand the risk involved in a group jump from an altitude of 300 meters. A parachutist dropping from this altitude had only nine seconds at his disposal, and at 10 seconds he would hit the ground. Would he be able, in such a short period of time, in case his main chute failed, to assess the situation and actuate his reserve parachute, with at least 2 seconds of the total of 9 available required for the parachute to open and to decelerate from free-fall velocity? We were particularly concerned about this question.

A jump rehearsal was held at the airfield on 31 July, attended by participants in the Voronezh air exercise. In connection with the rehearsal, exercise scenario flight operations were temporarily suspended. After the continuous roar of engines, the ensuing silence seemed strange and solemn.

The awkward, cumbersome Farman-Goliath stood on the flight line, its huge wings spread. Alongside it stood three R-1 aircraft with cargo containers secured to underwing bomb racks. The paratroopers with their practice parachutes were assembled in a single rank in front of the aircraft. The aircrews stood on the right flank of the formation.

After giving final instructions on the rehearsal procedure, the commander of the paratrooper detachment turned to his assistant: "Do you have anything to add to my instructions?"

Moshkovskiy, an extremely cheerful and witty individual, an indefatigable joker and constantly on the move, could not resist the temptation to say a "couple of words" to cheer up the parachutists, whom he affectionately and jokingly dubbed "hoppers."

"Of course I do, with your permission," replied Moshkovskiy, and, turning to the paratroopers, stated with accentuated seriousness: "The main thing, comrades, is when you have jumped out of the airplane, don't forget to pull the rip cord! Bear in mind that we can remind you about that only after you reach the ground."

The lads got a big kick out of this ingenuous jest. It not only amused them, which of itself was an excellent means of overcoming nervousness and agitation, but also revived in their memory a recent incident which practically ended in the death of one absentminded "hopper." Tumbling in a

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free fall three fourths of the way to the ground, he finally got his wits about him and yanked the rip cord in a panic. The paratrooper got off with a good scare, a good solid shock in the air, and a dressing down on the ground....

The cheerful animation evoked by Moshkovskiy was interrupted by a command: "Aircrews, to your aircraft! First assault group, prepare to board!"

A few minutes later the Farman-Goliath took off with the first group of the parachute assault detachment. The flight of R-1 aircraft took off with a 10-minute interval.

We had absolutely no experience in stick jumping. Therefore as a precautionary measure we decided that the first time out the paratrooper group leaders should jump last. This would make it possible to watch the other men take the ready position and jump at equal and safe intervals.

The rehearsal was a total success, without any problems or foulups. But we were dissatisfied with the men's grouping on landing: distances between individuals were as much as 60 meters.

"Let's push the fat ones out first, and the skinny ones last," suggested Moshkovskiy at the rehearsal critique, causing general laughter.

His suggestion was correct, since a parachutist's rate of descent and consequently distance which the wind will carry him are directly dependent on the paratrooper's weight.

Of course the most effective means of ensuring a maximally dense paratrooper landing pattern was to reduce the time interval on leaving the aircraft. We were waiting too long between men, out of fear that the men might come together in the air. The jump interval averaged 2 seconds. But one must bear in mind that the men in the first parachute assault landing unfortunately lacked the skill of controlling their parachute, even a simple slip which could help the paratroopers avoid collision.

The landing pattern density could be increased somewhat by reducing the aircraft's ground speed to the slowest possible just prior to the jump.

We decided to utilize all these elements, including sequencing the jumping of "fat" and "skinny" paratroopers (following Moshkovskiy's advice) during the next airborne assault operation, for which preparations were being made.

On the eve of the important day the members of the assault team packed their parachutes and rigged the cargo containers. They were supervised by one of our country's first parachute riggers -- Valentin Baranov, a Red Armyman from the Air Force Scientific Research Institute, who was taking part, just as Moshkovskiy, in conduct of the Voronezh parachute training activities.

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They packed Lewis light machineguns with spare drum magazines in two containers, padded envelope-type sacks, while carbines, hand grenades and cartridge clips were placed in four rigid boxes designed by pilot Nikolay Blagin.

It was sunny on the morning of 2 August. Just as during the rehearsal, exercise-scenario flight operations were cancelled. Quiet reigned at the airfield. The paratroopers' elated spirits were somewhat dampened when they learned that the wind was gradually picking up and that gusts were already reaching velocities of 6-7 meters per second. They would have to hurry the departure.

Finally everything was ready. The command was issued: "Board your aircraft!"

The silence was broken by the roar of engines. The Farman-Goliath aircraft moved ponderously into its takeoff roll and lazily lifted off. It was carrying the first group of paratroopers, led by the detachment commander. Ya. D. Moshkovskiy was also on board, to refine calculations for the second group approach run and drop.

After circling the field, the aircraft headed out toward the drop zone, climbing en route to the designated altitude. It was quite a rough flight, caused by the strong, gusty winds. And judging by the dust being raised on the dirt roads, wind velocity was also considerable at ground level. Moshkovskiy communicated this fact to me from the cockpit, comically puffing out his cheeks and pointing downward.

A small farmstead surrounded by luxuriant greenery appeared ahead on the portside. Adjacent to the farmstead was an empty field measuring 600 by 800 meters. This was the drop zone we had selected. One of the outbuildings at the edge of the farmstead was the location where the paratroopers were to assemble and would be the starting point for their actions behind "aggressor" lines.

The aircraft banked left and began its run into the drop zone. It was now flying directly into the wind at an altitude of 500 meters, crossing the drop zone in the direction of the farmstead. The cabin door was open. The detachment commander was standing by the door. The paratroopers lined up by him, ready to jump. Moshkovskiy took up position in the gunner's turret, observing the timing of this stick jump in a situation which was totally new for us.

Under the packs of the paratroopers' backpack parachutes were pouches into which their parachutes were to be packed after landing. These parachute-containing pouches would remain at the landing point, to be guarded by specially-assigned personnel. This was due to the necessity of preserving practice parachutes, since there were only 20 sets in the entire Soviet Union.

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...The aircraft was approaching the farmstead. The paratroopers were becoming increasingly nervous. They were impatiently waiting the signal to jump.

When the last farmstead huts passed below the aircraft, I raised my arm and gave the command: "Prepare to jump!"

A few seconds later, shouting: "Geronimo!" I stepped through the door. The other paratroopers poured out after me.

Opening up with sharp smacking sounds, six snow-white parachutes deployed and hung suspended in the air (according to observers, it took slightly more than 5 seconds for the six paratroopers to leave the aircraft). This was approximately the timing we were seeking.

The group landed in a fairly close pattern, practically at the center of the drop zone. In spite of gusting winds, with velocities up to 8 meters per second, the jumpers suffered no mishaps.

By the time the paratroopers had gathered up their parachutes and assembled around the detachment commander, the flight of R-1 aircraft appeared on the horizon.

The cargo parachutes, dropped from a height of 150 meters, were drifting down close to the farmstead. The paratroopers ran over toward them. Quickly opening the containers and taking out the weapons and ammunition, they headed toward the farmstead.

In the meantime the Farman-Goliath aircraft had returned to the base airfield, had loaded the second airborne detachment group and taken off again. It approached the drop zone at a height of 300 meters.

Seeing that the first group was already at the assembly point, Moshkovskiy decided to drop his paratroopers as close to the farmstead as possible. Thanks to the low altitude, he was able precisely to calculate the moment to jump. His group landed without mishap right alongside the assault force assembly point.

The airborne assault detachment, 12 paratroopers armed with two light machineguns, carbines, revolvers and hand grenades, fell in at the start point, fully ready for combat actions behind "aggressor" lines....

This completed the scenario of this first experiment. The paratroopers, collecting up their parachutes and cargo containers, headed by truck back to their airfield.

En route we counted up our "losses." It seems that the first group had lost a rip cord, while the second group had lost a rip cord and parachute pouch, which had probably fallen out from under somebody's backpack in the air during the jerk which occurred as the parachute opened.

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When they reached the airfield the indefatigable Moshkovskiy, obviously caricaturing the Gallant Soldier Švejk, dashingy reported to parachute rigger Baranov: "I should like to report that the assault detachment sustained 'heavy losses' behind 'enemy' lines. A parachute pouch and two rip cords have failed to return to base!"

Our supply officer's anger soon changed to kindness. That afternoon two boys on bicycles turned in at the airfield front gate a parachute pouch and one rip cord. The loss of the second rip cord was no great tragedy.

...The Voronezh experiment attracted the attention of senior commanders. Having read the report on the results of the experimental-demonstration exercise, A. I. Kork, troop commander of the Moscow Military District, requested that P. I. Baranov, commander of Air Forces of the Workers' and Peasants' Red Army, organize the drop of an armed paratrooper assault force during the fall maneuvers of the Moscow Military District troops, scheduled for September 1930.

The air-force commander ordered to Moscow the veterans of the first jump together with Moshkovskiy, who was placed in command of the paratrooper detachment at the maneuvers. An interesting and memorable incident occurred.

On the day of departure from Voronezh Yakov Davidovich, in addition to the official notification, dispatched a telegram with the following message: "Thirteen 'hoppers' have departed." Evidently assuming that every telegram should bear a signature, the telegraph operator corrected the text. The telegram arrived in the following form: "Thirteen have departed" -- followed by the signature -- "Poprygunchikov." For a long time afterwards Moshkovskiy was nicknamed Yasha Poprygunchikov by his friends.

This time the paratrooper detachment was assigned a quite definite combat mission. It was to jump undetected behind 'aggressor' lines and, destroying the enemy's rifle division headquarters, to capture operational documents and deliver them to the friendly forces command. Obviously destruction of headquarters and capture of documents should be interpreted as simulated actions, to be executed by the appearance of the paratroopers at the headquarters location and their return to friendly lines. The paratrooper detachment, as Moshkovskiy later put it, accomplished this difficult mission "better than required."

...At dawn, practically in total darkness, 11 paratroopers, armed with carbines and smoke pots in place of hand grenades, secured to the parachute rigging, jumped from the cabin of an ANT-9 trimotor passenger aircraft from a height of 250 meters. They landed without mishap at the edge of a forest behind "Blue Force" lines, where they were met by two scouts, who had been dispatched to the area in advance by the "Red Force" command. Swiftly packing their parachutes into the pouches and leaving them in an improvised shelter in the forest prepared by the scouts, the paratroopers proceeded through the forest to a road and set up an ambush.

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A truck soon appeared. The paratroopers, brandishing carbines, jumped out onto the road. The vehicle screeched to a halt. It was running empty. As luck would have it, there was a tarpaulin in the back of the truck. Ordering the driver to lie down on the truck bed, the paratroopers lay down alongside him and covered themselves with the tarpaulin.

Moshkovskiy took the wheel. Following a route suggested by the scouts, he drove his detachment without challenge to a village on the outskirts of which was located "Blue Force" division headquarters, in a new, flag-adorned house. They had no difficulty taking the sentry who was guarding the headquarters.

The paratroopers caught the headquarters staff personnel literally in their beds. The only one up was the duty officer. Ordering the totally-uncomprehending staff personnel to stay where they were, Moshkovskiy introduced himself: "I am commander of the 'Red Force' paratrooper detachment. I want you to give me the keys to the safe, now."

The "prisoners" recovered from their shock.

"So that's it," replied one of them. "Well, I congratulate you. But there is nothing in the safe."

Guessing that the audacious "prisoner" was the chief of staff, Moshkovskiy, ignoring his protests, extracted keys from the pocket of trousers hanging on the head of his bed and opened the safe. Removing from the safe two file folders containing orders and directives of the commanding general of the "Blue Force," he stuffed them under his shirt.

Having cut the telephone and telegraph wires and marking "destruction" of the headquarters with ignited smoke pots, the bold paratroopers crawled back under the tarpaulin and drove the truck by dirt roads to a tract of forest which extended right up to the "battle" line. They abandoned the truck, having left the driver back at headquarters, on the road, and plunged into the forest.

Moshkovskiy and his paratroopers succeeded in crossing over to "Red Force" lines before onset of darkness. Within 24 hours after departure, his detachment returned to its home airfield, in full strength and good health.

To Moshkovskiy's real disappointment, the captured documents failed to evoke any particular enthusiasm on the part of the senior commanders. Maneuver supervision headquarters ordered that the file folders and operational documents be sent back immediately to their owners, in spite of the lateness of the hour. The absence of these documents could paralyze the operations of the "Blue Force" division for a certain time. But they had done their job....

On the following morning A. I. Kork, commanding general of the military district, arrived at the airfield and conducted a detailed critique of the airborne assault operation.

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Receiving Moshkovskiy's report, which was interspersed with jokes and amusing comparisons, the commanding general kept shaking his head, alternating between approval and reproach. Then, presenting his evaluation of the operation, he thanked all members of the assault force for their bold and resolute actions behind "aggressor" lines. Particularly noting the ingenuity and keenness of wit of the detachment commander, he then proceeded to chew him out for removing documents from the safe, for cutting communications, for the smoke "effect" at headquarters, and for other violations of the "games" rules adopted at the maneuvers.

This dressing down somewhat grieved Moshkovskiy, but in his heart he did not change his opinion about the "games" rules. Soon after the critique he walked over to his "hoppers" and, making an extremely funny face, shook his finger at them: "Don't you ever forget it: no good deed goes unpunished!"

The second experiment in employing parachutes in a military operation clearly demonstrated that airborne assaults could occupy an important place in contemporary warfare as a means of disorganizing enemy troop control and encircling enemy forward units with the element of surprise.

The USSR Revolutionary Military Council, attaching enormous significance to the development of airborne activities in the RKKA [Workers' and Peasants' Red Army], noted the first steps taken in this area at the experimental-demonstration exercise in Voronezh and at the Moscow Military District troop maneuvers near Moscow. In its decree on RKKA combat training results in the 1929/30 training year and tasks for 1931, it noted that these steps constituted important achievements of the Air Force. And the section entitled "Tasks for 1931" contained instructions that "airborne operations should be thoroughly studied from a technical and tactical standpoint by RKKA Headquarters, and the latter shall issue appropriate instructions to local headquarters."*

This historic document constitutes juridical evidence of the birth of the Soviet Army Airborne Troops, which, under the guidance of the Communist Party of the Soviet Union, soon became a mighty and potent force of our homeland.

Difficult Roads (From the Diary of a Veteran Paratrooper)

Col (Ret) M. V. Boytsov, Former Commander of the 1st Airborne Brigade

In the summer of 1930, at the initiative of the commanding general of the Leningrad Military District, M. N. Tukhacheskiy, an airborne service design office was established at Moscow's Central Airfield, under the direction of experienced pilot and gifted experimenter P. I. Grokhovskiy.

* Central State Archives of the Soviet Army, Fund 29, List 50, File 109, Sheet 19.

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I became well acquainted with Pavel Ignat'yevich. Thin, light-haired, of medium stature and with piercing blue eyes, of an impetuous nature, he combined boldness with profound thinking. Everybody loved and respected Grokhovskiy for his amazing initiative and persistence in attaining a goal. His field of creative activity was immense, while his practical resources were extremely limited. It was necessary to pinpoint the principal and essential in order, with the support of his work team, successfully to accomplish the assigned tasks.

...This time the design office was assigned the following task: to come up with a method of executing mass parachute jumps from the TB-1twin-engine bomber. Following thorough discussion of all pros and cons, and after numerous calculations, Grokhovskiy and his colleagues finally reached an original conclusion. Since it was impossible to accommodate a large number of paratroopers in the cabin of this aircraft, it was decided to place them in underwing cradles which could be inverted when desired by the pilot. The parachute would be automatically opened.

In order to demonstrate the safety of this method of dropping paratroopers, Grokhovskiy gave permission for design office draftsman Lida Kuleshova to make a jump on 9 July 1931 together with other paratroopers, with his own wife, Lida Grokhovskaya, to jump five days later. Kuleshova and Grokhovskaya became the Soviet Union's first female parachutists.

On 27 September of that same year, at a meeting of higher command personnel of the Leningrad Military District, attended by People's Commissar for Military and Naval Affairs K. Ye. Voroshilov, Air Force Commander Ya. I. Alksnis, and the new Commander of the Leningrad Military District, I. P. Belov, a drop employing this technique was made at Gatchina Airfield, the jump team consisting of 24 Red Army volunteers from Ye. D. Lukin's mechanized detachment.

The mechanized detachment, established earlier in the Leningrad Military District, was redesignated special airborne mechanized detachment, as a laboratory for training and indoctrination of a new combat arm -- winged infantry, to be based at Detskoye Selo.

I was named commander-commissar of this detachment, V. A. Tel'kunov was named deputy commander for political affairs, and I. P. Chernov was designated chief of staff. The airborne mechanized detachment consisted of a parachute battalion with independent reconnaissance and combat engineer platoons, a mechanized battalion, an artillery battalion, and two squadrons of TB-1 aircraft, one R-5 squadron, and several U-2s for liaison. The majority of command personnel of this detachment were young people lacking special training. But all of us were enthusiastic about this new and unconventional combat arm, and we worked hard to justify the trust which had been placed in us.

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An affiliate of Grokhovskiy's design office, under the direction of his assistant, I. V. Titov, was established in Leningrad on orders by I. P. Belov, for the purpose of conducting scientific research activities in the air detachment.

During the year of its existence the special-role air detachment, regularly performing practice jumps from a jump tower designed by Grokhovskiy and from aircraft, mastered utilization of a Grokhovskiy-designed parachute made of cotton fabric rather than silk. The paratroopers boldly and confidently jumped with this parachute in airborne assault operations day or night, year-round.

All personnel displayed considerable innovative initiative in developing new airborne assault techniques, new gear and equipment. At the suggestion of the air detachment's commanders and men, P. I. Grokhovskiy's design office designed and fabricated soft airborne sacks to be slung under the R-5 aircraft and designed to carry various arms. Each sack accommodated 3,000 rounds of ammunition, 25 hand grenades, a Maxim machine-gun, and other armament, as well as rations. The procedure of employment of the soft airborne assault sacks was specified in special provisional regulations.

In the summer of 1932 detachment headquarters drew up and conducted a number of experimental exercises, including on the topics: "Breaking Out of Encirclement" and "Capturing Enemy Military Installations and Holding Them Until the Arrival of Friendly Ground Troops." These actually formed the beginning of elaboration of airborne operation tactics.

The results of combat training of the special-role airborne mechanized detachment earned high marks from K. Ye. Voroshilov, People's Commissar for Military and Naval Affairs and Chairman of the USSR Revolutionary Military Council.

The order contained thanks to all enlisted men, commanders and political workers of the airborne detachment for the work they had accomplished and the success they had achieved in mastering the new combat resources, which strengthen the might of the Red Army. Thanks were also expressed to the detachment's commander-commissar and his deputy for political affairs, V. A. Tel'kunov, and to design office chief P. I. Grokhovskiy -- for organizational and technical assistance to the detachment in setting up training facilities, in parachute training methods and employment of airborne assault delivery and support equipment.

We should particularly like to mention that important role played in establishment of our Airborne Troops by outstanding Soviet military commander Mikhail Nikolayevich Tukhachevskiy.

In June 1931 he was named Deputy Chairman of the Republic Revolutionary Military Council for Armament Affairs. An innovator in developing and

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utilizing new equipment for the army and navy, Tukhachevskiy was distinguished by a resoluteness and farsightedness. These qualities were manifested in full measure in his work on development of the parachute troops at that time, to which he devoted constant attention.

This was a new and unconventional activity. Airborne equipment was in the incipient development stages, and it was necessary to seek out the best and safest forms and methods of its utilization. In addition, practical testing of bold innovative thought involved risk and responsibility for human lives and for the safety of airdropped new equipment.

Tukhachevskiy appreciated the inventive and the bold, and he always gave them concrete assistance. In particular, he strongly supported Grokhovskiy's initiative which involved dropping personnel and cargo from a TB-1 aircraft employing a totally new method -- without parachutes, on a specially designed airbus built in his design office, and he later was personally present at the testing of this new equipment -- an airbus with which Grokhovskiy himself and his assistant Titov made a successful jump.

Running ahead, let us note that the principle of dropping cargo from an aircraft without a parachute from low altitude was extensively employed in the Great Patriotic War, especially in assisting partisans.

Tukhachevskiy attached exceptional importance to paratrooper training in the RKKA and endeavored to make it a mass activity. At his suggestion Grokhovskiy's design office built a device to open a parachute automatically. This device was tested by Pilot A. D. Shirinkin at the Srednyaya Rogatka Airfield near Pulkovo, jumping from an U-2 aircraft from heights of 1,000 and 600 meters. The device performed perfectly.

Thus was born technical equipment for the winged infantry.

With establishment of the special-role airborne brigade (based on an airborne mechanized detachment), it was necessary to resolve a basic problem -- how to accomplish mass jumps. Because of its design and interior layout, the TB-1 aircraft accommodated only a two-man cockpit and a gunner's turret. Once again Grokhovskiy's design office came to the rescue. They designed and built a plywood cabin which was attached under the fuselage of the TB-1. The cabin was of weight and dimensions which did not disturb the aircraft's aerodynamic properties. It easily accommodated 13 men wearing two practice parachutes each. The paratroopers were positioned in two lines of six men each. The instructor was positioned in the forward part of the cabin.

At the designated altitude and at the designated location, the instructor would open the hatch and give the preliminary command: "Prepare to jump!" that is, place the right hand on the rip cord ring. Having checked that his men were in the ready position, the instructor would command: "Go!" One after the other, the men would drop through the hatch and pull the

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rip cord after a three count. The men easily memorized and precisely executed all these requirements and commands at the moment of the jump.

People's Commissar of Heavy Industry S. Ordzhonikidze, who displayed constant concern for strengthening our army's combat might, took an interest in this innovative airborne equipment. In the summer of 1932 he was present at a test of this cabin. Eleven paratroopers, led by Grokhovskiy, made a jump from this cabin at the Central Airfield. Sergo Ordzhonikidze warmly congratulated the paratroopers on their successful jump and, after inspecting the cabin, stated: "This is fine for a start!"

At the end of October 1932 I was sent to Moscow for the purpose of settling a number of matters at Grokhovskiy's design office. Pavel Ignat'yevich greeted me with a joyous cry: "Speak of the devil! I was just thinking about you. You have come just at the right time. We'll show you how we have carried out Comrade Voroshilov's assignment."

The task was as follows. In the past heavy loads dropped from an aircraft would tear the supply dropping parachutes as they deployed. Kliment Yefremovich requested that Grokhovskiy's design office make improvements in the design of the supply dropping parachutes they were then employing.

"Look," Grokhovskiy continued, "two airplanes are waiting for us on the field."

I guessed what it was all about, but nevertheless asked him to explain.

"We have solved the problem of dropping heavy loads by parachute without damaging the equipment," replied Grokhovskiy. "It is a very simple technique: in the past we have first released the load, which would drag out the parachute, ripping it with the dynamic impact effect. Now you will see exactly the reverse -- first we drop out the parachute which, opening, pulls out the load and smoothly carries it to the ground without impact. The main thing is that with this technique we can drop supplies from a height of 200 meters, and this is extremely valuable, since it increases the chances of a drop not being detected. We shall go with the R-5, which will fly a parallel course with the TB-1, from which the drop will be made on October Field by the banks of the Moscow River, and we shall see what happens."

Grokhovskiy's confidence was infectious, but nevertheless I asked him whether the parachute would not become entangled in the aircraft's stabilizer while opening?

"It can't," he replied, smiling. "As you see, the parachute is secured not in the forward part of the fuselage but in the middle. When it is dropped out of the aircraft the parachute plunges downward under its own weight, freeing the suspension lines, and parachute full deployment should take place aft of and below the stabilizer, when the aircraft is already outside its sphere of influence."

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"Do you have permission for this test from Alksnis?" I asked.

"No, but he advised us to talk to an aerodynamicist and check everything out carefully, but time is marching on. Particularly since Tikhachevskiy gave his approval of the supply drop method and gave his permission. We must test this method in action." And, taking me by the arm, he added: "It's time to get going!"

Swayed by his arguments, I followed him on board the aircraft.

At 1530 hours the aircraft were in the air. The autumn sun illuminated Serebryany Bor and the vast expanses around it. Beyond the woods, by the Moscow River, the aircraft circled and, at a height of 200 meters, headed out over the harvested fields. My heart palpitating, my gaze followed the TB-1.

A dark spot separated from it, swiftly, almost instantaneously transforming into the fluttering cloth of an opening parachute. In a semi-horizontal attitude to the rear of the aircraft, the parachute jerked out a sand-filled steel drum weighing 1,000 kilograms and, softly catching it, proceeded gradually swinging into a vertical position and smoothly descending groundward.

A vehicle carrying a team to inspect the load and parachute was hurrying out toward the point of landing.

Grokhovskiy, giving me a thumbs-up gesture, his face beaming, dove the aircraft, buzzed the field, pulled up sharply into a steep climb over the gilt cross on a church, and turned the aircraft back toward his home field.

The inspection team gave a favorable report on the new method of dropping heavy loads. Tikhachevskiy congratulated Pavel Ignat'yevich and his team on their triumph of innovation, while Alksnis had every intention of reprimanding the impatient inventor for his failure to follow orders, but Tikhachevskiy reminded him that "nobody judges the victor."

We utilized the new drop method in the special-role brigade when parachute-dropping equipment at our exercises and became convinced that the low drop height ensures concealment of the drop.

On 24 September 1933 M. N. Tikhachevskiy conducted an experimental-demonstration airborne assault on the Strugi Krasnyye artillery range near Luga, on the training topic "Attack Behind a Moving Barrage."

...In order to delay the withdrawal of a defending "aggressor" force from the first and second lines and to prevent the approach of reserves from the rear for a counterattack, a 30-man armed airborne assault force (two platoons) was dropped between the second and third defensive lines.

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Three TB-1 aircraft carrying three platoons of paratroopers armed with Tokarev light machineguns and one R-5 aircraft carrying PD-MM (airdrop flexible bags) carrying ammunition and hand grenades were redeployed to Karamyshenskiy Airfield from the special-role brigade to mount this operation.

The operation involved the participation of two TB-1 aircraft with two platoons of paratroopers, and the R-5 aircraft. The first, 14-man, platoon was led by V. A. Andreyev, chief of the headquarters operations section, while the second platoon, 16 men, was led by his assistant, M. F. Borisov. The third TB-1 aircraft was kept in reserve at Karamyshenskiy Airfield.

Andreyev and Borisov were briefed on the mission one hour before departure. During this time they thoroughly studied the situation by map and briefed the paratroopers on the mission. Both aircraft took off on schedule.

There was a low overcast, with strong, gusting winds. The paratroopers were to be dropped from a height of 700 meters into a very limited section of the "aggressor's" third defensive line. In addition, the area contained many tree stumps, making landing difficult for the paratroopers.

But even under these difficult conditions the paratroopers were helped by their proficiency, combined with calculated risk and boldness. Skillfully controlling their parachutes in the air, maneuvering with jeweler's precision between trees and stumps, they landed without injury. Swiftly taking up an attack position, the paratroopers opened volley fire from the rear on the "aggressor" second defensive line. Stunned by the unexpected appearance of the assault force and its devastating attack, the "aggressor" was forced to surrender....

The well-organized airborne assault landing and the force's smoothly-coordinated combat actions delighted all command personnel present at the operation.

Tukhachevskiy questioned the paratroopers in detail on how they felt and gave a detailed critique of the operation. He gave it a high mark and expressed thanks to the members of the assault team and the brigade command.

But the more we mastered airborne activities, the clearer it became that there was much we did not know.

The main difficulty lay in the fact that we had to work without any manuals or textbooks for working out airborne operation tactics. But the skills and experience we acquired suggested to us that the character of airborne assault force actions would depend in large measure on activeness, resoluteness, initiative and independence on the part of small subunit

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commanders and paratroopers. Toward this end we put out a paratrooper's guide, which was of interest to all personnel of the airborne brigade and which served as an important help in further paratrooper training.

Our daily activities, directed toward increasing the brigade's operational efficiency, influenced the attitude of the men and aroused in them creative initiative, courage, affection for their difficult calling, and resolve to crush any enemy who would encroach upon the freedom and independence of our homeland.

The experience of the first airborne units was extensively utilized during the Great Patriotic War against the fascist invaders and helped achieve our great victory. Paratrooper veterans are sincerely pleased that their difficult labors were not in vain. But life does not stand still -- it requires more and more new knowledge and new heights of expertise. The experience of the first airborne units and combined units, enriched by the experience of the last war and the postwar period, will promote further improvement of the combat proficiency of the fighting men of our glorious Airborne Troops -- an inseparable component part of the heroic Soviet Army.

On Guard

Heroism -- His Profession

Aleksandr Kuleshov, writer

I have met many heroes in the past, while looking for the most ordinary people (I later realized that there is no such thing as "the most ordinary people," that everybody is remarkable in some way). I have met a lad sick with pneumonia, a lad who, without thinking, ran outside barefoot and in freezing weather, and jumped into an icy stream to save somebody's life. I have met a man who fearlessly entered a blazing building to rescue others. I have met still another who, beaten and knife-slashed, ran his aircraft into the ground in order to kill himself and destroy the criminals who were attempting to skyjack his airplane....

All these people were heroes. They were all different persons, persons of different occupations. They were united by one thing -- a special flame, a flame of high sense of duty, was burning in the heart of each. Their lives could have gone on quietly and without incidents, without that flame flaring up brightly. But finding themselves face to face with a danger threatening other people's lives and society, they could not act otherwise, and they performed heroic deeds.

Honor and praise to these people, a deep bow to them!

But there are also other people. They are even more rare, very few in number. Heroism is their profession.

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They perform heroic deeds many times in their lives, every day, and if not every day -- every week, every month. Each and every month of their life. Such is their profession. They knew from the very outset where they were going, and they proceeded to do so with complete awareness.

There are surely few such professions. In this article we shall be discussing parachute testers. It is an amazing profession primarily because of its humanity, for the overwhelming majority of tests, perhaps all of them, pursue a single task -- saving human lives.

In the air a person -- be he pilot, cosmonaut, paratrooper, firefighter, or athlete -- will encounter conditions where he must jump with a parachute. This jump must be as safe as possible, regardless of the conditions under which it begins and ends. The finest engineering-design minds are working on improving the parachute, this rescue device which keeps a person from smashing into the ground.

All new parachutes, safety, parachute deployment, fastening and control systems are tested, for the purpose of saving people's lives. And when a new parachute leaves the drawing board, workshop, and plant shop, the tester comes and gives his determining word. His principal task is to discover a shortcoming, a design error, which could cause failure, for in this business, failure means a person's death. And the tester discovers and establishes such a defect or error on himself, through his own experience, during his own jumps. Essentially his success, performance of his mission is discovery of mistakes. If he fails to discover a mistake in time, that is at the moment of testing, people will die. By discovering a mistake, he averts this danger.

But at what price? After all, he himself may become the first victim of a mistake. This is why the tester examines and studies a new device for a long time and painstakingly, beginning practically with the blueprints, and the device itself is tested hundreds if not thousands of times before the tester tries it himself.

The tester is like a scientist who inoculates himself with a deadly disease in order to test a newly-discovered serum. No matter how many tests were performed prior to this, the scientist deliberately takes a risk for the sake of the benefit of mankind.

But a plague vaccine is born once in a century, while parachutes are tested hundreds of times....

Take Yevgeniy Nikolayevich Andreyev, for example, whom I was visiting in his apartment, in a picturesque area outside of Moscow, where the air is heavy with the aroma of evergreens in the summer, while in the winter ski trails, glistening in the sun, track through the snowy whiteness. Andreyev has tested approximately 200 parachute models, has jumped from more than 50 different types of aircraft, and has made almost 3,000 jumps.

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Three thousand times! I cluck my tongue in admiration but, noting a fleeting smile on Andreyev's face, I realize that in the final analysis it is not a question of quantity. There is a difference between jumps. It is one thing to jump as a novice out of a fat AN-2 from a height of 800 meters, and it is another thing altogether to jump from the stratosphere. And yet "one jump" is still recorded in the log.

We talked about the job of parachute tester. We engaged in a heated debate. I argued that it is more dangerous than the profession of (this is becoming a profession in our time) cosmonaut -- after all, a cosmonaut performs his deed periodically, only one or two times, while the parachute tester jumps hundreds of times. Andreyev disagreed. I asserted that his profession was more dangerous than that of a test pilot, because when it becomes obvious that the plane being tested is going down, the pilot will eject, and for him a jump with a reliable parachute which has been tested a hundred times is a guarantee of safety. But it was precisely Andreyev who tested that reliable, hundred-time tested parachute. He tested it when it was premature to talk of reliability! But Andreyev again objected.

An old story! No matter how much you talk with a person who has performed a deed, he will always argue and, it seems, fails to comprehend the significance of what he has done. I must admit that I once suspected that this was more for show, the magnanimous winner appraising his victory. I later realized that I had been in error. And I decided that it was modesty, the plain modesty of a person who has been generously endowed with talents and good qualities. That is a fact.

...Andreyev views his job as quite commonplace. It contains, just as any other job, remarkable, attractive aspects, and of course it also contains deficiencies. Everything does.

Several times Andreyev began talking about how wonderful it is to be in the outdoors: fishing, the smell of the forest and warm rain, birds at dawn.... He changed entirely at such a moment -- beaming, gesticulating, enthusiastic. This is really interesting! This is great!

I had difficulty returning him to talk about his profession. Well, of course it is an interesting job, but every job is interesting; take his wife, Valentina Vladimirovna, for example. She is an accountant. I cautiously explained that at the moment I was interested in the job of tester, which did not mean that accountants are less useful to society. By no means.

With a sigh, Andreyev returned to his profession. He compared it with medicine. The tasks are the same -- to save lives. I agreed, while adding to myself the thought that those doctors and nurses in the medical profession usually do not risk their lives.

As is fitting, although I had different objectives, I asked the "interviewee" for "brief biographical highlights." On the whole I was well

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acquainted with them -- much has been written about Andreyev. But no matter how much you read, a person will always relate something that he had forgotten to relate to others or about which for some reason they have not written.

He is in his fifties. An age at which even the most durable athletes and ballet soloists have long been in retirement. But he is still working. He is just as strong, powerful, magnificently built as he was when he was playing soccer, hockey, and skating. Even today he will spend hours playing volleyball or table tennis.

Years... And yet he must withstand physical, force loads which would be beyond the comprehension of a left wing for Pakhtakor. And he withstands them, although he has had experiences following which many would end up in a wheelchair. But he keeps jumping.

How about his reflexes, his reaction speed? Andreyev grins. His reflexes have not let him down yet. And later, when they begin to weaken, they will be compensated by amassed experience and constant merciless practice....

According to official records he was born in Novosibirsk. But his mother claimed that he was born in Berdsk. Berdsk? Where is that? "On the bottom of a reservoir," he laughed. Indeed, there was a town called Berdsk not far from Novosibirsk. Today it is covered by the Ob' Reservoir -- a town under water. It is true that a new Berdsk has sprung up on the shore, but he was born in the old one.

He spent time in a children's home, attended a trade school, and worked as a lathe operator at a Urals defense plant. The war came. He tried to get to the... front. En route he was removed from the train and sent back. But then he was conscripted into the army in 1944. Initially the future parachutist served in the infantry, and later went to flight school.

Andreyev did not become a pilot, but it was there where he first became acquainted with a parachute (in his youth he had built model gliders and airplanes). Together with the other first-year men, he serviced "ducklet"-airplanes, as they called the UTK-4. Once a lieutenant came to the airplane and ~~d~~asked the new men who wanted to fly. Andreyev volunteered, while the others were sure that the lieutenant was joking. Andreyev himself up to the last minute did not believe his good fortune. But it was true. They put a parachute on him and ordered him to climb into the cockpit -- it was a little two-seater, open-cockpit. They strapped him in. And off they went!

The lieutenant had a job to do -- he was testing out the "ducklet." He flew all kinds of fancy maneuvers! When they returned to the field, the lieutenant clapped Andreyev on the shoulder -- "Nice going, lad." Andreyev, a bit pale, after all, it was his first time up -- broke into a wide smile. He then removed his parachute, on which he had sat during the entire flight.

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This was their first meeting -- the neatly-folded silk canopy and the lad from maintenance, who was to become in the future one of the world's outstanding parachute testers.

Later their second acquaintance took place. Andreyev was jumping from a small Po-2, from 800 meters. Spellbound, he stared at the earth as it sped toward him, an unusual sight from this perspective. Entranced, he forgot to turn into the wind, and plopped down into a plowed field.

Andreyev became a parachute rigger, and did more jumping than the others. He especially liked to delay opening his parachute, although in those days the free fall did not last long. But even today, he confessed to me, skydiving is his favorite exercise. He used the word "exercise," as if he were talking about doing knee bends or pullups during physical training.

It would be appropriate at this point to state just what a parachute rigger is. To be quite honest, I thought that it was a conscientious, reliable soldier or grumpy reenlistee -- pedantic, careful -- who will not let you down, knows what to secure where and how to fold what, for packing a parachute is a most important job, on which the life of one's comrade depends.

As it turns out, he is not quite what I had imagined. The parachute rigger is an energetic young fellow, who is thoroughly knowledgeable not only about the parachute, its design and construction, packing procedures, etc, knows not only how to handle it on the ground but also what to do in the air. As it turns out, riggers are frequently aspiring tester candidates. They do a lot of jumping, ask a lot of questions, and love their job. Working at their jobs, it would seem that they are going through a tester probation period. When the time comes, they become testers, taking the place of the retiring veterans. Such was the case with Andreyev. At flying school he made 29 jumps, for those times and conditions a fair number. He had no desire for a pilot's career, for he had been bitten by the incurable "parachute bug," and already had experienced the rapture of free flight, about which man had dreamed for centuries and which we mere mortals experience mostly in our dreams....

And later, when times changed and Andreyev was once again summoned to school and given the opportunity to graduate, he turned them down. At that time he was already employed at the establishment with which he had linked his future career. A colonel, surrounded by honor and respect....

This was now. But at the time he was 22 years old, in 1948, when he made his first real test jump and his hundredth overall jump. We shall consider this the third acquaintance, because Andreyev was encountering for the first time a real test jump. All subsequent jumps, no matter how complex, were a continuation of the acquaintance.

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There is no reason for or possibility of relating all the test jumps which Yevgeniy Nikolayevich has made. Particularly since many are widely known and have been described. And not only as scientific experiments but also as examples of boundless courage, heroism, amazing composure and iron tenacity.

I shall mention only a few of them, those which will help me illustrate what I have in mind, to prove the statement contained in the title of this sketch.

The first test jump.... Today many pilots could not tell you what the Tu-4 aircraft looked like, but at the time it was a new model, and it was necessary to determine how the aircrew should abandon the aircraft in case of emergency.

It was time to jump. Emerging from a side hatch was also unusual. And at an airspeed of 300 kilometers per hour, fairly fast for a jump in those days. The signal was given, and Andreyev proceeded with the experiment. It turned out that it was impossible to get through the narrow hatch with both parachutes -- the main and reserve. It was necessary to put the reserve chute -- it was on the chest -- out first, and then tumble out with the main chute on his back. Andreyev proceeded to do this, and... got stuck. The airstream was bending the tester's body, pressing his trunk against the fuselage, while his legs and the main chute remained inside the aircraft. Not a pleasant predicament. And the outside air temperature was minus 30 degrees Celsius, violent wind, that is, the airstream, and no longer an open field below, but forest....

Andreyev extricated himself from his predicament with honor, or rather scrambled out. It was difficult, requiring not only strength, agility, and body flexibility, but also firmness, mental confidence, required composure and quickness of wit, and the ability instantly to make decisions and instantly to execute them.

Anyway, it was impossible to jump in this manner. Something had to be changed, like widening the hatch, for example. The designers down on the ground must be given the data, the information which will enable them to refine the design, making it possible for a wounded pilot, for example, to abandon ship, and reach the ground alive. Therefore all these minutes of struggle with the icy wind above the yawning abyss, when muscles were straining to the breaking point and veins popping, when one's ears were filled with ringing and infernal noise, with stars before one's eyes, a single thought beat in his brain: how to avoid the fatal danger, how to overcome the difficulties which had arisen during testing, for the sake of the lives of others, on behalf of whom he was performing the test. And therefore at the most critical moment the tester's brain, just like a finely-tuned instrument, works particularly intensively, swiftly and innovatively, records problems and miscalculations, mapping out ways to correct them.

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At this point I should like to speak about what in my opinion is the main thing which makes the profession of tester such a highly humanitarian profession, a profession so infinitely permeated by love of man and a profession so essential for mankind.

No matter how brave, skillful or able a parachutist a parachute tester may be (and of course any tester in his field), he is first and foremost a scientist. No skill can take the place of an analytical mind, keenness of observation, and logical thought process. No matter how remarkably a test may be conducted, it is useless if it has given nothing to others, does not help improve, confirm or, on the contrary, even eliminate a design which was previously produced at the cost of such labor and effort.

The tester is a scientist.... But he does not sit at a microscope in a white smock; he does not bend over a drawing board, nor does he put his ear to the trembling body of a machine. He does not sit in his laboratory until the first light of dawn, wreathed in tobacco smoke, analyzing for the thousandth time the results of an experiment, without concern for his own life and health if the experiment proves negative.

The parachute tester has seconds, and sometimes only fractions of a second for evaluation and analysis of his experiment. Of course there are instruments, photographs, records, visual observation, and subsequent tests. Of course a large part of his experiments does not involve substantial risk (although any new development, when we are dealing with flight, be it an aircraft or parachute, always contains a certain degree of risk). Of course long and thorough preparations are made. But nevertheless the tester has the deciding word.

"Yes, it is a complex profession," stated Andreyev. "But you become accustomed to everything."

Accustomed? To what? To anxious days and nights? To constant risk? To the silent anxiety of loved ones?

I shall mention the following incident. A mishap occurred during a routine test: Andreyev broke his leg. The accident occurred in the air. In spite of the excruciating pain, he was able to complete the test and to land. At this point he lost consciousness. From the medical standpoint the wisest course of action in this situation was amputation. But it seems that there are people for whom the medical point of view is powerless. A great deal of work was done on the leg. An operation which lasted 20 hours, 40 shattered bone fragments removed from the leg, long months of immobility with the leg in traction, and more months of immobility in a cast, followed by crutches, learning to move, learning to walk, and the first, most elementary athletic exercises.... A great deal of work was done.

But when the amazed doctors of the medical determination board saw before them the "patient" performing exercises on gymnastic apparatus

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which are within the capability only of masters of sport, performing somersaults and flips... there was nothing they could do but shrug their shoulders and sign the jump approval document.

They saw with their own eyes that the "Story About a Real Man" was written not about just one individual....

And Andreyev continued jumping and performing wonders, became a hero, although that which we have described above was also a miracle, and to be able to take all this it was necessary to be not only courageous but also to possess endless love of his job.

"You become accustomed to everything," Andreyev says. Perhaps one can become accustomed to everything -- to danger, and to risk. But one must really love one's profession!

"For me," said Andreyev, "there is no greater happiness than to see a person accomplish a mission, make a safe jump, save his life with the aid of devices which I have tested. It is for the sake of this that you are working and living!"

And now briefly on a few tests, simply for the sake of illustration.

...Andreyev (he was the first, incidentally) was testing ejection from an aircraft flying at supersonic speed. He pulled on the lever, and the complex system actuated. During the ejection procedure everything was calculated with incredible precision. Each and every action, each and every motion. Everything took place within an instant. The canopy was ejected, followed by the pilot's seat, to which the pilot was firmly and flexibly secured. The seat was now in the air, continuing by inertia to fly at an enormous speed; the stabilizer actuated, and the seat assumed an attitude which protected the pilot against an excessive G-load. Then the pilot pressed a control, releasing the bindings. The seat separated, he jerked the rip cord, his parachute opened, and the pilot descended to the ground unharmed.

No problems. But this is when everything operates flawlessly, when no equipment failures can occur, and all unexpected surprises have been provided for. In order for this to come to pass, it is necessary not only to design and build a device but also to test it. Only when it has been thoroughly tested time and again can one be sure that everything will work. The pilot knows this, has total confidence in the device and, in case of emergency, has no hesitation about pushing the ejection lever. He unhesitatingly places his life in the hands of the inventors, designers, and testers.

...The heavy seat, weighing 200 kilograms, to which Andreyev is secured, cuts through the air with a shrill whistle. This part of the test has been successful; the next part is to descend to an altitude of 5,000 meters and press the handle, after which he will open his parachute.

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Andreyev is seized in a swirling rotation. Everything around him is transformed into a whistling, flashing merry-go-round. His body becomes leaden, and his head is about to burst.... He could push the release handle and separate from the ejection seat, and all this would instantly come to an end. But the altitude was 12,000 meters, and the ejection seat must be released 7,000 meters lower. That is the point of the experiment. And if he now fails to conduct the experiment to the end, how are they to find out where the problem lies, whether it is random and correctable? And if he does not run the test to the end now, what will happen to somebody later, perhaps in total trust, who pushes the lever? The test must be conducted to completion, and if necessary, repeated time and time again. Herein lies an astounding, ever-amazing feature of the tester's job! Whistling, noise, thundering din around him, or dead silence, an extremely high rate of rotation, fall, a body which weighs a ton, and arms and legs ready to tear off. And only the mind of the scientist-experimenter is operating with precision. It alone is calm, flawless, and clear. It records and analyzes everything.

Andreyev reaches the predetermined altitude, releases the ejection seat, opens his parachute, and lands. He reports his observations and conclusions. The designers immediately set to work, correcting and adjusting....

Here is another test. It took place long ago, to be sure. The question to determine was whether, with greater aircraft speeds, they should employ the same ejection system described above. They jumped at airspeeds of 500 and 550 km/h. It worked, although the airstream tended to press the pilot against the fuselage. They jumped at a speed of 600-650 km/h. It was like jumping into an onrushing wave coming at an immense velocity. We ground people cannot really picture air which becomes dense, solid matter. But it does indeed. The aircraft was flying at a speed of 670 km/h! Andreyev jumped. Successfully. And how can one say how many lives he has saved with this testing? Seemingly a small experiment, but so important!

One more experiment, which will go down in the history of flying as unique and into the history of mankind as a great feat.

It was an unusual test, but the people conducting it were also unusual. It was to be performed by Andreyev and his friend and colleague, famous tester Petr Andreyevich Dolgov.

Everything on this flight was unusual. Each and every phase. If only because it was taking place not on an airplane, not on board a balloon, but on a stratosphere balloon. The fact that they were to ascend to an inconceivable altitude, where a person would not last a second without a special suit, an experience which lay in store for the testers. The fact that they were wearing such special suits: Andreyev -- one model, and Dolgov -- another. The fact that Andreyev would be free-falling a full 25 kilometers at a velocity of 900 kilometers per hour! And he would not open his parachute until reaching a height of 800 meters from the ground. Dolgov would descend these 25 kilometers by parachute in his

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isolating suit. A temperature of -61 degrees and a pressure of 18 mm Hg.

They ascended on board the stratosphere balloon "Volga." And they were given a sendoff by the golden light of dawn, the distant morning mists, and the silvery expanse of the great Russian river for which their stratosphere balloon was named.

Also present were businesslike sports commissars, engineers, designers, as well as Colonel Romanyuk, himself a living legend of Soviet parachute sport.

The ascent took 2 hours and 20 minutes. And during all this time the people on the ground knew what was taking place. The testers reported all observations, all details which were important for those on the ground to know, and these reports were entered as impassive lines on white sheets of paper.

What is a VKK? It is a pressure suit. You have seen such a suit on television, worn by high-altitude pilots. At extremely rarefied-atmosphere altitude, when oxygen is fed from a device under considerable pressure into the lungs, the suit's function is to apply firm pressure to the body, for otherwise the body's internal pressure, which is immeasurably greater than external pressure, would simply burst the pilot's lungs. In such an environment everything is backwards -- we exert an effort to breathe in, while we breathe out without effort, while in a pressure suit an effort is required to expel air from the lungs. One must spend a long time training and learning to do this. And add to that the long, thorough preparations by Andreyev and Dolgov for this jump. Andreyev was jumping in a VKK. He ejected, in order to create a G-load, in extremely rarefied air.

Thus began this amazing parachute jump, which nobody has since repeated. It was the 1500th jump for Andreyev. Except he was in free fall almost 3 minutes in the environment where the suit "was operating." Three minutes -- bear in mind that this is an entire round in a boxing match! Is that a long or short time? Ask a boxer. Three minutes is longer than a record will take to play your favorite song. It is as long as it takes a subway train to travel between two stations. During this time one can read three or four pages of a book. Boxers "work," a song flows, and pages rustle.... While Andreyev is still dropping, still dropping practically from the threshold of space. And finally, as he himself put it, he arrives "home," that is, to an altitude of 11 kilometers (the maximum altitude which you and I would reach if we were to fly an IL-62 on vacation or a business trip). At this altitude the VKK suit "releases" him, pressure is normal, and he continues falling swiftly, but now under accustomed conditions, of course accustomed for him.

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And then, less than 1,000 meters from the ground, his parachute deploys, and he floats to earth, admiring the landscape. There is a freshness, a smell of earth in the air. It smells like Earth. It has its own characteristic smell, just as the sky does.

He lay on his back and gazed up into that same sky, out of which Dolgov was slowly descending on his parachute. Swaying back and forth under the white canopy, he was ending his endless celestial journey.

The last one he was ever to take....

He died up there in the stratosphere, On the outside of a balloon gondola from which he had just exited. It was a trivial happenstance, a hole in his pressure suit the size of a pinhead, through which all his oxygen rushed instantaneously, as if sucked out by a giant leech....

I saw the ukase of the Presidium of the Supreme Soviet awarding the title Hero of the Soviet Union to Andreyev and Dolgov. An ukase specifying award of this lofty title to Andreyev "with award of the Order of Lenin and the Gold Star medal," with merely announcement of the title for Dolgov. There was nobody to whom it could be physically awarded, for the hero was no longer among the living.

But the cause of his death is known; it has been studied and has made it possible to ensure that the tragedy is not repeated. And others are continuing his work. And his memory has not faded and never will be erased. It also continues to live on in that large portrait which always occupies a place of honor on Andreyev's desk. In his personal gear -- a stopwatch, an altimeter, and Dolgov's pressure suit, which will be preserved forever at the Airborne Troops Museum. In the Armed Forces Championship challenge cup named after him. In the memory of pilots, who are better aware than anybody else what Dolgov had given his life for, Dolgov who had been awarded the Order of Lenin even prior to his last jump.

And finally, in his son Igor', who finished Airborne School after his father's death and who is now serving in the same unit in which his father had served....

What about Andreyev's son? He has a son, Vladimir, who attended Ryazan' Airborne Command School. And I was not surprised to see him there. I would have been surprised if he were not.

He and I were sitting in my hotel room and talking. Volodya was attempting to give his biography. But he had none. Where would he get it from? He was so young, and it was peacetime! But I am not worried. He will have a biography, and what a biography. It could be no other way with the son of such a father. But this will come later. Of course it is no simple matter to become a great parachute tester, seven-time world record holder, an honored master of sports, a colonel, and Hero of the Soviet Union, such as Yevgeniy Andreyev. But for Vladimir Andreyev, his father is a lodestar. He has someone to emulate, to live up to.

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How does his biography begin? Perhaps with his books. Volodya has read a great many books. About the war, about the Soviet Army, about airborne troops, paratroopers, including his father. Or perhaps it should begin with what he saw around him every day. They lived on an air base, where the roar of engines and a white canopy in the sky were just as familiar as the roar of the sea and the rustling of a trolleybus is for others. Or perhaps from his first job? Volodya worked as an electrician in a hangar, rubbing elbows with airplanes....

In short, Volodya Andreyev became accustomed to the sky at a time when the fifth floor of his apartment building was the highest point he had ever been. His father's example was another thing altogether. Therefore why should one be surprised that Vladimir Yevgen'yevich Andreyev decided to become a paratrooper?

Volodya is still young. And looking at him, talking with him, in his words, in his glance, and in the subtle features I recognize his father. And of course the example of the father influenced the son's choice.

It is impossible to live alongside such men as Andreyev without feeling his influence, the strength of his character, without becoming infected by the example of his remarkable life.

I became acquainted with the Andreyev family's rich collection of photographs -- it contains many highly interesting pictures. Here are some of them.

The Kremlin. Leonid Il'ich Brezhnev, Chairman of the Presidium of the USSR Supreme Soviet, awards parachute tester Maj Ye. N. Andreyev the Hero of Soviet Union Gold Star. Every person has in life a summit toward which he strives for many long years. It is good when this occasion can be recorded for posterity in a photograph. But the main thing is that it is good when a person, having reached the summit, does not begin descending the back slope.

Here is another photograph. An amusing recollection is connected with it. When Yevgeniy Nikolayevich came to the Kremlin to receive this high honor, and Andreyev was summoned to the pass office, he walked up to the window. But it seems that a different Andreyev, a Boris Andreyev, was being summoned, who was to be presented a certificate certifying bestowal of the title People's Actor of the USSR. The two of them went together and engaged in conversation, and later they had a photograph taken together.

Now Yevgeniy Andreyev, proudly displaying this photograph, says: "Look what kind of a person I had my picture taken with." And I am absolutely sure that Boris Andreyev, showing the same snapshot, says exactly the same thing: "What kind of person I had my picture taken with!" And there is profound meaning in this -- outstanding individuals, known throughout the country, beloved of the people, surrounded by honor and respect, forget about themselves and admire a comrade, taking sincere pride in friendship with "such a person"....

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There are more photographs. Ye. N. Andreyev in a group of DOSAAF members. "One cannot overemphasize the role of DOSAAF in our business," Andreyev told me. "DOSAAF is doing a truly immense job. Just think, today it is rare for conscripts to enter the airborne troops without previous jumping experience. They all receive training at schools and flying clubs. And athletes? You bet! Many testers took the first steps of their career in DOSAAF: Valentin Danilovich was a very famous tester, but he began in a Moscow DOSAAF flying club. Or take Nikolay Danil'chenko, who made 700 jumps while still in DOSAAF...."

We sat in silence for quite some time, looking at the photographs of Yuriy Gagarin. I had not seen these photographs in the newspapers and magazines, although I had seen thousands. And precisely because these photographs were unique, because they linked the master of this house with the first cosmonaut, you feel special emotions. Andreyev's work is closely linked with the work of test pilots; he could tell us a lot about them, but that is the subject of another conversation.

I was about to take my leave when the doorbell rang -- neighbors were dropping in. There were two of them -- one was 7 years old, and the other was somewhat younger. On business? No, they had just come to visit. They were offered pastry, but they tactfully declined. They stayed and chatted for about five minutes, for the sake of propriety, and then politely departed. What was going on? Valentina Vladimirovna, hiding a smile, explained that it was the elevator. They were embarrassed to come over and just ride the elevator, without a solid reason. And here they could pay a courtesy visit, which required taking the elevator to the fifth floor....

Well, Andreyev Senior climbs to an altitude of many kilometers and then jumps. Andreyev Junior measures his altitude in thousands of meters. And these little boys.... For the time being their ceiling is the fifth floor....

That is alright. In time the boundless blue skies will also open up before them, sparkling canopies will flash overhead, and the distant green expanses will await them below. They will experience danger, risk, and difficulties, and they will experience the unspoken joy of accomplishment, of achieving something new.

It will be a great happiness to serve one's fellow man, to advance science, to blaze a new, broad trail for it.

Jump in the Pamirs

Lt Col A. Petrichenko, Honored Master of Sport USSR

In August 1967 a six-man team of sport parachutists, led by Honored Master of Sport USSR A. Petrichenko, made a jump in the Pamirs. This bold and unusually difficult experiment was being performed for the first time in the history of world sport parachute jumping.

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In the summer of 1968 an expedition of parachutists and mountain climbers mounted a second assault on the Pamirs. The climbers reached a 6,700 meter peak which had never before been conquered.

At the highest point on Communism Peak (elevation 7,495 meters), mountain climbers placed a titanium capsule containing a message to 21st-century youth. One of the difficult objectives of the expedition was to conquer the Pamirs from the air. Thirty-six sport parachutists landed on a slope of Lenin Peak. Ten of them attacked from the air a 7,100 meter elevation, choosing for their landing site an area close to the very peak. This group of parachutists, just as the first time, was led by A. Petrichenko.

The names of the 10 heroes, as well as that of mountain climber V. Suloyev, are recorded on the Komsomol Central Committee Honor Roll.

It was not mere happenstance that I became acquainted with mountain climbers. They are brought to us parachutists by a practical need: to acquire the suspension lines from old parachutes which have been retired from service. You could not think of better rope for rigging packs!

But this time both Valentins -- Bozhukov and Suloyev -- also requested an entire parachute -- with suspension lines and canopy. They were going to be climbing two peaks -- Lenin and Communism; as usual, the base camps would be located at an elevation of approximately 4,000 meters, and it was difficult to haul equipment and food supplies to the base camp site. Our well-worn parachute could perform this task much more simply and with little risk -- if it and the canned goods it was carrying happened to drift off the drop site, it would merely be necessary for the mountain climbers to take a little stroll into some crevasse.

But while we were discussing this new act of philanthropy, a rather crazy idea came to me: how about parachutists jumping into the base camp?

I shall tell you why this idea seemed more amusing than practical. A parachutist who jumps in the mountains, must upon landing instantly become a mountain climber. And if you consider that our acquaintance with the mountains was from songs and movies, and we had never actually seen the "roof of the world," it will become quite clear.

They embraced the idea with enthusiasm, however. That would be great! To jump into the Pamirs by parachute! In a single breath: no halts or overnights, no fatigue, simply jump in....

I should like to make a digression at this point and say that the idea of assaulting mountains from the air was extremely new at that time -- doubts

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and questions arose, the most important of which was the following: is it after all necessary to jump onto mountains with a parachute? Is there an essential need of such a risky experiment? The reply to this question could be any mountain climbing mishap. A helicopter cannot always land at the altitude at which an accident has occurred. Rescue teams of mountain climbers are not always able to reach the site in time to give help -- the trek is long and difficult.

For example, shortly before our jump in the Pamirs a group of mountain climbers was hit by an avalanche. Prompt help could not reach them -- the elevation was too great. By the time rescuers reached the site it was too late.... Mountain climber-parachutists, however, would have only taken an hour or so to reach them!

...Not only mountain climbers but also geologists are climbing higher and higher into the mountains: the riches hidden in the mountains are of interest to all. Glaciologists and meteorologists are working at high altitudes, at remote locations among the ice-covered summits. Our experiment would also be of interest to them....

And one more thing.... Once mountain climber Valya Bozhukov stated: "Man is traveling into space, to the ice-covered poles of the earth, and it is certainly not worthy of man that there are places on the Earth where no human has yet set foot."

A striving toward the unknown is part of man's very nature.... Yes, the first mountain jump was a reconnaissance in force.

Communism Peak rises above the entire Pamirs like the blade of a knife. Its northwest face, with a unique firn plateau, covered with snow which had lain until it had acquired the hardness of rock, definitely drew our attention. It is true that we could not demand of the plateau all the facilities and conveniences of a Vnukovo Airport: it was surrounded on all sides by 2,000-meter sheer dropoff or sheer cliffs. And it is one thing to know that if you do not land precisely on the "dime," you will at least land on a quite acceptable spot, while it is quite a different thing altogether to jump with the realization that you simply cannot be off your mark.

Even the air of the Pamirs contained danger. Its density is only two thirds that of sea level, and speed at touchdown with a guided parachute is 50 percent greater: 6 meters per second would become 9. A parachutist's legs obviously could not withstand a collision with firn....

And what if the main chute fails? Then the velocity of the reserve chute will increase at mountain elevations to 10-12 meters per second. It is like jumping without a reserve parachute....

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However, the jump had also attracted the interest of parachute designers. The PA-1 controllable parachute (mountain climber's parachute -- first version) and the ZPA-1 (mountain climber's reserve parachute) were designed and built on a priority basis. But both still had to be air-tested.

...I pulled the rip cord and immediately realized that something had not happened, namely that which was supposed to happen. The green field of Tushino, turning and careening jerkily, was swooping upward -- toward me. The canopy was not filling with air, and instead of the customary rounded shape, resilient even in appearance, I saw two stretched bubbles. It was fouled by the suspension lines!

I was being twisted like a top. If I opened my reserve chute, it could get tangled with the main chute. I pulled out my knife -- two severed suspension lines shot upward.

No! The canopy was still failing to fill. The two bubbles were swinging about above and to the side....

"Get free of it!"

I did not need Sevost'yanov, who had jumped right behind me, to shout instructions -- it was perfectly clear. I had to get rid of the canopy of the main chute, and then the reserve chute could take over.

...I came down at the edge of the airfield, where the smooth ground suddenly became a clutter of various-size holes and logs -- a perfect simulation of a high-elevation plateau. But one good thing had come out of this experience: a defect of this parachute had been revealed, which in the mountains would have been too late.

We took several more jumps -- everything went right. We landed precisely in a circle 25 meters in diameter. If we could only have equal precision in the mountains!

Ala-Archa camp. A gorge at an elevation of 2,100 meters.

It was here we began our transformation into mountain climbers. This process was guided by two instructors, both a master of sports. Neither became disheartened, but worked with almost heroic zeal. We offered no resistance and did not grumble, although even morning calisthenics at such an altitude at first makes you tired rather than putting you in good spirits. After calisthenics, if guided by one's wishes rather than necessity, one would lie down and take a rest. But we rather energetically ran over to Ak-Su Creek and plunged into its icy water.

The day's further agenda was filled with items which initially evoke bewilderment, then confusion, followed by surprise, and finally joy. Some fun! We even discovered that there are many things in common between our

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sport and mountain climbing: just as in parachute jumping, there were no trivial items. Everything was important -- from shoelace to parachute canopy. There is a long list of possible calamities in the mountains: avalanches, storms, rockfalls, bad teamwork! This was the only point in the list of potential disasters which did not involve the elements. But it should perhaps lead the list.

At times we would forget that we had once been parachutists.

Practice on the ice.... Rock-climbing practice.... Practice on snow....

We climbed to an elevation of 4,000 meters for the first time, to work on climbing and descent techniques. The last descent method was particularly fine -- the "bobsled." It was a good thing that we were wearing foul-weather trousers of very tough cloth, for nothing else could have survived this "bobsled"....

Just before training ended we climbed a few peaks, for "dessert." It must have been to have us gain a better understanding of why mountain climbers are drawn to the mountains and expend so much time and energy with one single objective: to gaze at the world from the top of a sheer-wall rock. And also so that on the 10th day the instructors could solemnly announce to us: "You are ready to assault the Pamirs.... From above."

We took off early in the morning and, climbing to an altitude of 9,000 meters, headed toward the Pamirs. The Altai Ridge, the Altai Valley, Lenin Peak. Snow-covered mountains spread out to the south as far as the eye could see.

After circling Lenin Peak several times, we headed southwestward, where we could see Communism Peak. We immediately spotted the drop zone. It extended from west to east in a narrow ribbon. We circled once, again. Even from our altitude we could see huge crevasses, which the mountain climbers had strongly recommended we avoid....

The best approach for the jump was along the plateau -- it extended almost 12 kilometers, but Communism Peak jutted skyward where the plateau began. We decided to make the approach crosswise: from south to north, with Communism Peak on the right and Kirov Peak on the left. It was as if the aircraft were flying up a gorge: the width of the plateau ranged from 300 to 500 meters.

This was "our" plateau. We ran several approaches with the door open, with all of us standing at the edge looking down....

...We would be jumping later, on 12 August.

In the meantime we busied ourselves readying gear, boots, packing parachutes and individual containers. We also prepared supplies to drop onto

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the plateau: provisions, tents, a gasoline drum, oxygen tanks -- a total of about 1,000 kilograms. In addition to all these supplies, the parachutists would be carrying supplies, for there was always the possibility that someone would land not on the plateau but somewhere at the bottom of a sheer cliff or on a peak. The unfortunate individual would be compelled to sit it out on his own for several days, without the assistance of the mountain climbers, who were awaiting us on the plateau.

We examined and probed each and every item as if we were not about to pack it away in a container but would be utilizing it immediately to save someone's life: sleeping bag, ice ax, tent, 40 meters of nylon rope, crampons, ice and rock pitons, signal flares and two days emergency rations -- everything we could need!

The flight to the drop zone would be at an altitude of 8,000 meters, while the jump proper would be from 7,200 meters. Therefore the parachutists would need to use oxygen practically from takeoff. During the jump this problem would be resolved in a simple manner -- while on board the aircraft, the jumpers would take oxygen directly from the aircraft oxygen system, while upon leaving the aircraft they would automatically switch to their individual oxygen supply -- which would hold them until they landed.

But the jumpers might also need oxygen on the "ground" -- our "ground" was at an elevation of 6,100 meters.

Mountain climbers undergo special acclimation in order to function normally at such an altitude: they gradually increase the altitude, and the system becomes accustomed to an oxygen deficiency.

We had to take along with us an oxygen tank and mask in a container. Nevertheless we had only a 30-minute breathing supply. Therefore it was decided to drop by supply parachute four large oxygen tanks of 6,000 liters each. We had a special device to charge our individual oxygen tanks from the larger tanks. Thus we settled the "breathing" problem.

It was 11 August. Preparations were completed! We waited impatiently. Tomorrow we would be jumping!

At 0800 hours on 12 August we were at the airfield, ready to jump. We most likely loaded the aircraft faster than anyone ever had before.

The temperature was 30 degrees Celsius. It was stifling in the airplane. And we had put on down-lined mountain-climbing gear. We were soaking wet. We donned our parachutes.... Takeoff!

We quickly climbed to 8,000 meters. Shortly we were able to see the drop zone. But... there were no markers down there!

What could this mean? Where were the mountain climbers?

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They radioed from the ground: "Available landing area 600 by 600. Crevasses beyond. Up to several dozen meters deep."

The aircraft had already crossed the drop zone. It had taken 4 seconds!

I again requested that the mountain climbers be contacted by radio. It turned out that the climb to the plateau had been very difficult. They had not yet had time properly to check the descent route and could not receive us. What a blow!

All six of us stood by the open doorway, ready to jump. It was doubly annoying because the weather was excellent! Not a cloud in the sky, wind calm at the landing site, and this was a rather rare occurrence. It seemed a shame to waste both the day and the flight. We decided at least to drop the supplies.

We took another approach run. All the supplies landed in the drop zone, except for one container, which landed on the face of the mountain and rolled downward. But it also ultimately ended up on the plateau. The only casualties were a bag of biscuits which ripped open.

We circled the plateau one last time. There would be no jump that day.

It was the following day, 13 August. We discussed the previous day's flight. We would consider it a dress rehearsal. It was so nice to think that it had not been a total loss. In addition, we had learned something: for example, we decided that the next time we would put on our warm clothing after we were in the air; we would not have to suffer so long in the heat.

That evening we were all taken to the movies, to see "Vertical." The mountain climbers felt that the film would boost our morale. It did not. There was a nice little song in the film: "These are our mountains -- they will help us."

Would they?

We rose early on 14 August and ate a big breakfast, for there was no way of knowing where and when we would eat the day's main meal.

At 0900 hours the pilot assembled the crew. We stood and listened to the ready reports: "Aircraft power supply checked!" "Radio communications checked!"

And finally the navigator reported: "Here is the mission. Drop six parachutists onto the plateau where the supplies were dropped earlier. Execute the drop upon confirmation from the mountain climbers that the site is ready."

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Now I gave my report, as the parachute team leader: "Parachutists ready to perform the jump." What could I add? I added the routine formula: "Everybody is in excellent spirits!"

Just as we were about to take off the solicitous Viktor Galkin, our instructor, brought from the market an entire parachute pack filled with melons, apples and pears -- the mountain climbers would appreciate it, as they had been living on dry rations for an entire week now. We stuff the already full containers with fruit. We can hardly shut them. But more than half still remains -- after all, each melon weighs 10 kilograms. It is a pity to leave the rest of the fruit behind. Somebody suggested substituting a sack of fruit for the weight on one of the drift test parachutes. This we did.

We entered the aircraft, and the cabin door was shut. We presented a rather unusual sight: the huge fuselage of an AN-12, containing six parachutists wearing nothing but bathing trunks....

We began to dress at an altitude of 5,000 meters. Everything was quite normal, except that in place of jump boots we were wearing hobnailed mountain climbing boots. The ground-crew mechanic had scowled when he saw them -- they would ruin the floor of the aircraft. But what could we do?

Half an hour later, just as the first time, we were over the Pamirs. They were flooded with sunlight! A thrilling sight! Lenin peak.... Communism Peak.... The plateau! And in the middle of it a circle with a bright-red cross in the middle, a symbol familiar to every parachutist. We made our first approach run and, as we were over the center of the plateau, dropped the first test parachute.

"The test chute has fallen beyond the precipice to the south of the drop zone!" the climbers radioed from the ground.

Another approach. We dropped a second test parachute with a release correction.

"Landed 300 meters from the center of the circle...."

A third test chute -- carrying the fruit.

Good job, navigator! Even a parachutist could envy such accuracy. The melons fell right into the circle!

"Prepare to jump!" the yellow light flashed on above the open doorway -- one minute to jump....

All of us had logged many jumps.... For some this was the 1,300th, and for some the 2,000th. But this... this would be a first.

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We could not see the plateau; it was far ahead -- 9 kilometers. Deep chasms far down below floated past the open doorway.

"Go!"

Bessonov... Prokopov... Sevost'yanov... Chizhik... Tomarovich... me....

An impact. Followed by total silence. Somewhere off in the distance the drone of aircraft engines was becoming fainter, and I could hear the hissing of oxygen in my mask. And around me I saw five opened parachutes. And the peak. I could see every little stone and pebble on it -- the air was incredibly pure and cool!

A minute of flight.... It was silly, but I wanted to shout: "How do you feel, fellows? We've won!" Too bad I was wearing an oxygen mask.

But it was time to think about the ground, as it was looming closer. I dropped my reserve chute -- it was no longer needed. I detached the container....

I touched down:

We had jumped into the Pamirs!

Training Days

Amidst Cliffs and Ice

P. Studenikin, Journalist

A sea of rock, frozen forever in a stormy froth, spread out below the aircraft. Faceted mountain peaks rose up in silent grandeur, like the tombs of pharaohs. Mighty glaciers lay in slumber. The crenellated edges of rocky cirques were already stained by the blood-red dawn at this early hour, while the gloom of night had not yet dissipated in the deep gorges, as we could clearly see from the altitude of 5,000 meters at which the AN-12 was approaching the drop zone. We, a company of paratroopers, would be dropped somewhere in this area onto a small mountain plateau at an elevation of more than 3,000 meters. I, a journalist, would be making this unusual jump together with the paratroopers, although it was no simple matter to receive permission.

...A jump into mountains. It is not easy to abandon what has suddenly become such a nice, cozy airplane cabin when you cannot forget for a single instant that it is not a smooth, flat athletic field which awaits you below.

"Your chute will open, look around, choose a place to land and 'roll out'.... We will have enough available altitude even for complicated maneuvering.


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The parachute is easy to control, obedient -- just don't forget to release the straps...." I was being given final instructions by the company commander, Guards Senior Lieutenant Mikhaylovskiy.

We were thoroughly familiar with all this: we had assimilated it at practice drills -- the company had managed to log 14 additional jumps in preparation for this exercise. And we had been able properly to evaluate the D-5 parachute, Series 4 -- really lightweight and extremely steerable. But the company commander was repeating all these items we knew thoroughly only because he had noted that I and some of the younger men were nervous -- he was trying to boost our spirits a bit.

Mikhaylovskiy himself was quite calm: he had made more than 130 jumps. He was tied to the sky by firm bonds. Having studied for 2 years at MADI (Moscow Highway Institute), he left school and, contrary to the advice of his professor, who had seen in him the brilliant inclinations of an engineer, enrolled at the Ryazan' Higher Airborne School. While a cadet he made a daring jump from a height of 100 meters together with a group of sport parachutists, for which he received a personally-inscribed watch from the commanding general of the Airborne Troops. The lieutenant had jumped during the day and at night, from high and low altitudes. He had jumped in the mountains, into woods and swamps, and into the searing desert....

Just prior to the exercise, the deputy company commander for political affairs, Guards Lieutenant Gurinov, acquainted me with the glorious deeds book which is maintained in this subunit. I copied some excerpts from it.

1968: "...The men of the company were dropped onto a high-elevation area in the Pamirs in winter. In the spring a mass jump was made in oxygen masks from an altitude of 8,000 meters, with a 150-second free fall. The men dedicated to the 23rd CPSU Congress the national record they set on this occasion. At a demonstration exercise the company made a jump from a height of 3,000 meters with 50 second stabilization and firing from the air at ground targets. Personnel took part in testing a new parachute...."

1970: "...Two men of the company were awarded the 'For Combat Merit' medal, while five were awarded the 'For Rescue of Drowning Persons' medal for courage and bravery displayed in rescuing lives and valuable property during a flood. All personnel earned the title 'USSR Mountaineer.' An assault jump was successfully accomplished onto a high-mountain plateau in the Pamirs. A mass jump in oxygen masks was successfully made from an altitude of 7,000 meters, with a 130-second free fall. The company earned a rating of excellent on the basis of performance marks. Personnel took part in testing a new parachute...."

1972: "...Lt A. Kachanov, Sgt G. D'yakonov, Pfc M. Kornev, and Pvt G. Glukhov placed high at the Airborne Troops Spartakiada. Personnel successfully accomplished a climb with the highest difficulty rating. Approximately 800 jumps were made from low altitudes without a reserve parachute. An

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airborne assault jump from low altitude directly onto an airfield and its capture were accomplished. Seventy percent of company personnel received combat and political training marks of excellent. Personnel participated in testing a new parachute...."

And so it goes, year after year....

The horn sounded, warning one minute to jump. I grasped my rip cord more tightly. The door clanged open, and through the open doorway I could see snow-covered granite cliffs and masses of ice, quite close by. The air was cold, and yet as we were waiting on the airfield to climb on board, we were wilting in a 35-degree heat. At the jumpmaster's command, we stepped through the doorway at half-second intervals -- the frosty air cut into our face like a knife blade. The few seconds of free fall seemed an eternity. When the parachute finally opened, a painful sense of alarm was replaced by a gripping feeling of joy and triumph. The cliffs parted: the snow-covered peaks receded upward. In the blueish haze of the advancing morning the paratroopers seemed angels descending from the clouds which wreathed the peaks of the mountain giants.

Be particularly alert just before touchdown. Weather in the mountains is extremely changeable: conditions are calm and still one minute, and then suddenly wind gusts burst out of the mouth of a gorge.... During the last practice jump, for example, when I was not more than 15 meters from touchdown, the wind suddenly shifted direction 180 degrees -- many of us experienced all the discomfort of landing "on the back of our heads." Today, however, the weather was absolutely perfect: both warm and wind-still.... A few minutes later the slopes of the plateau were covered with giant white flowers -- the paratroopers, releasing their parachutes, made hastily for the rocks....

The sun was blindingly bright. Trudging up narrow granite canyons, between high, sheer precipices (like at the bottom of a deep well), we were climbing higher and deeper into the mountains -- into the lifeless kingdom of granite, ice and eternal snows. Every step was taken with difficulty. The blood pounded in one's temples -- a symptom of oxygen deficiency. I had it easier than the others -- I was carrying only a camera, while the paratroopers were carrying 20-25 kilograms of supplies on their backs and their weapon slung across their chest.

...The heat was oppressive, and the altitude was causing a splitting headache. Icy gusts of wind, thirst, swift marches, brief halts. Dizzying climbs up and down steep slopes, deep chasms, and treacherous scree slopes.... Each and every one of us would without question long remember every experience during this long, exhausting hike along a mountain trail.

It was not until late that evening, when unusually large silver-glistening stars had ignited against the black, velvet backdrop of the sky, that we, totally exhausted, reached our destination, where the exercise director, officer Igor' Grigor'yevich Pantyushenko, was waiting for us.

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"The main engagement will begin tomorrow at dawn," he stated, giving me a situation briefing. "The subunits will be dropped several dozen kilometers from here, with the mission of seizing and holding a mountain pass until the advancing forces reach them. The success of this mission will depend in large measure on the actions of the men of Senior Lieutenant Mikhaylovskiy, who has been ordered to cut the only road through the mountains and to delay a potential breakout by the 'aggressor' force to the airborne main forces.

"I shall not deny," Igor' Grigor'yevich shared his doubts, "that it is a very difficult mission. Such a mission can be accomplished only by one who is daring and bold, who possesses a total mastery of mountaineering skills, who is a demolition expert and who also knows many other things which a paratrooper operating in mountain terrain must know."

At dawn Guards Lieutenant Shubin returned with a scouting party, bringing valuable information. This was followed by events which are best related by those who directly participated in them.

Gds Lt O. Kornev: "We were ordered to guard this rugged mountain gorge, through which the only road runs. The place was made to order for defense: stretching dozens of kilometers to the right and left are mountain ridges with sheer rock walls, bottomless abysses, and glaciers which are impassible even in summer. A rushing mountain torrent, pinned between cliffs, rages down the floor of the gorge. The approaches to the gorge entrance and exit are exposed to fire to a range of 500-700 meters. Here we set up machineguns and rocket launcher positions. We sent out listening posts and prowling armored personnel carriers to the far approaches.

"'Aggressor' transport aircraft flew over in the morning at high altitude, and soon we were informed that an assault force had been dropped in our area, with orders to hold the gorge at all costs in case of an attack. We reinforced the guard: two platoons took up a defensive position at the gorge entrance and exit. Quite honestly, I do not envy anybody who is ordered to assault our 'fortress': it is doubtful whether the attacking force would have much success."

Gds Sr Lt Yu. Mikhaylovskiy: "The scouts confirmed that this gorge was the best point where we could stop the advance of even substantially superior 'aggressor' forces, thus ensuring the requisite conditions for accomplishing the principal mission. But we also realized that it would be very difficult to dislodge from the gorge dug-in 'aggressor' troops. We put everything on the line -- we were counting on the excellent physical condition of the paratroopers and the ability of personnel to operate efficiently in the mountains. The timetable was also rather tight.

"I decided that I would engage with part of my forces at the exit from the gorge, seeking with vigorous actions to convince the 'aggressor' to concentrate his main forces there. Two other groups, led by Senior Lieutenant Kachanov and Lieutenant Shubin, crossing the almost impassible ridge, would

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have the mission of capturing prowling 'aggressor' armored personnel carriers. Then, posing as friendly troops, Senior Lieutenant Kachanov's team would penetrate the gorge from the rear, while Lieutenant Shubin and his men would proceed to carry out a special mission...."

Gds Sr Lt A. Kachanov: "I shall not enumerate those dangers -- quite real ones -- which lay in wait for us as we were crossing the ridge by wild goat trails. That was perhaps the most difficult part of the entire difficult exercise. But it was also the most pleasing: it was as if each of us saw one another anew and once again satisfied ourselves as to the total dedication of our comrades. And we also became aware that we can fearlessly entrust our lives to one another -- naturally one does not forget such a thing.

"At noon we finally came in sight of the paved road and the 'aggressor' armored personnel carriers, the crews of which were peacefully eating breakfast on the side of the road under the shade of some nut trees. It was a very convenient moment: we approached to a distance of about 300 meters without being spotted. Patrol members Privates Asadov and Timoshenko quickly disguised themselves as local inhabitants and, looking for all the world like old men, carrying shepherd's staffs but with assault rifles and grenades under their clothing, walked out onto the dirt road.

"The 'aggressor' displayed total unconcern -- nobody paid any attention to the 'old men.' As soon as the scouts reached the vehicles, however, they tore off the antennas, threw their grenades and opened fire with their assault rifles. That was our signal to attack: it was all over in a minute or two. Lieutenant Shubin's team headed out on board the armored personnel carriers toward the 'aggressor' subunits which were advancing to engage the assault force, with the mission of halting the advancing subunit and enabling the company commander to capture the gorge and set up a defense there."

Guards Senior Lieutenant Mikhaylovskiy: "At noon we approached the gorge without being spotted. Demolition experts from the platoon led by Lieutenant Zemlyanukhin were able to rig explosives to trigger a landslide. Senior Sergeant Postolatiy, Junior Sergeant Khristoforov and Private Logvinov scaled sheer cliffs onto one of the summits and set up a machinegun there. Everything was ready for the attack, but no signal came from the paratroopers. I wondered why. Had the group been unable to get through, or had the radio failed? Such moments of uncertainty and tedious waiting are very unpleasant for a commander! Doubts creep in: have I considered every factor, or have I overlooked some trivial item which at the decisive moment will determine the outcome of battle? Have I placed my men correctly? I know Anatoliy well: he is a graduate of the Suvorov School, an excellent multiple-competition athlete, bold and innovative. The other commander is just as good -- the platoon he leads is in first place in the company. But nevertheless....

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"Finally the signal came. Lieutenant Khabarov's platoon opened fire. Senior Sergeant Postolatiy supported it with machinegun fire. Lieutenant Zemlyanukhin's paratroopers set off a landslide. Smoke, dust, and a terrible racket. I commanded: 'Forward by bounds -- go!'"

Gds Lt O. Kornev: "The situation had become clear: we had to hold out for an hour and a half to two hours, until the approach of the subunits sent to engage the airborne assault force. Under our conditions this would not be so difficult to accomplish. It is true that the 'enemy' succeeded in utilizing the confusion caused by the landslide to press us back. To restore the situation it was necessary to remove part of the platoon defending the entrance to the gorge. The battle became intensified -- the paratroopers retreated.

"Soon, however, the unforeseen occurred: by some miracle the paratroopers succeeded in capturing our prowling armored personnel carriers. Giving the appearance of friendly forces, they entered the gorge, pitched grenades at the troops defending the entrance and hit us with machineguns from the rear. They also succeeded in capturing the mined section which was prepared in case of an advance by the 'enemy' troops.

"...We were surrounded. If we could only hold out another 40 minutes!"

The outcome of the battle was already predetermined, however. Lieutenant Kornev waited in vain for help: by this time the other paratrooper team had successfully engaged the advancing "enemy" subunits.

It would seem that a small group of scouts could not accomplish much. But the 12 paratroopers were able not only to delay the "enemy" advance by the required amount of time but also to inflict considerable casualties.

The guards lieutenant relates how this happened: "Of course there were no miracles; we paratroopers are taught to fight not by numbers but by skill. And there are especially favorable conditions for this in the mountains.

"We were able to move out on two armored personnel carriers toward the 'enemy' and to take an unguarded pass. Here we set up a first surprise: Private 1st Class Kochevanskiy and Private Morozov, who are demolition experts, planted two landmines 30 meters from one another on a switchback section of road. When everything was ready, part of the platoon took up an ambush position, while a team led by Junior Sergeant Geryliv headed down the mountain to prepare another surprise.

"We did not have to wait long: soon we spotted an 'aggressor' column with tanks and artillery approaching the pass at a fair speed. We let the scout vehicles pass -- they would be blown up by privates Marakhov and Yupus from Junior Sergeant Geryliv's team, but when the main forces approached, we detonated the charges. The explosion was real, although what we actually blew was a switchback stretch on an old road which had

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fallen into disuse (the umpires later calculated that it took the 'aggressor' 5 hours to repair the road). We then proceeded to deliver heavy fire from the cliffs -- the vehicles were forced to back up beyond the pass. Without losing a single man, we rode out of the deep gorge on the armored personnel carrier.

"Junior Sergeant Geryliv's team also accomplished its mission well: it captured the scout vehicles and blew up a bridge.

"So we fell back toward the gorge: we planted mines in the most unexpected places, 'blew up' bridges, and set up road blocks... in short, we were gaining time."

When the 'aggressor' finally approached the mountain gorge, he was met with heavy artillery fire -- the airborne force's principal firepower. Thus the mission was accomplished. The performance of the men in the company under the command of Guards Senior Lieutenant Mikhaylovskiy was given a mark of excellent.

This difficult and unusual exercise had come to an end. We spent the final night in the mountains in some comfort -- in cozy insulated tents. In spite of the relative comfort and extreme fatigue, for some reason nobody was able to sleep.

It was long after midnight when, startled by a noise, Senior Lieutenant Mikhaylovskiy and I rushed out of the tent. All around us was frozen silence in the primeval beauty of sparkling moonlight, the looming blackness of cliffs and gorges, with pyramid-shaped peaks soaring into the bottomless sky. Silent paratroopers stood about on the rock fragments, stunned by the marvellous beauty.

"Look!" the company commander suddenly uttered.

I turned around: an enormous moon hung between sharp peaks, and in the gorge, stretching from one slope to the other in a fantastic arch... was a night rainbow. It was not like the rainbow which occurs in summer during heavy rain, but its colors still could be distinguished.

The mountain people say that only very brave people are ever fortunate enough to see this most rare phenomenon of nature.

Across the Dunes

"A merry-go-round!" the sergeant cursed, and squinted -- his lips were parched, and his palate and throat were covered with a dry crust.

"We are playing cat and mouse," somebody muttered under his breath.

For several hours we had been walking around these strange sand hills, which looked like Egyptian pyramids. The desert, as if veiled by a

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yashmak, was stifling hot: 51 degrees Celsius in the shade of a soldier's ground sheet, while one could fry an egg on the sand. We were moving in a circle, as if turning a windlass: we were pushing one side, and the "aggressor" the other. Therefore nobody was overtaking anybody.

A scouting party had been dropped by aircraft into this inferno. They had marched dozens of exhausting kilometers. Sand. Thirst. Intense heat. Attacks. Withdrawals. Raids, rapid marches. Halts among steaming dunes, once again raids, and withdrawals. Yesterday finally all training tasks had been accomplished and things relaxed. Suddenly a radio message: "...Proceed to grid square, establish contact with 'Mercury' and 'Falcon.' Objective -- joint raid on 'aggressor' rear area base headquarters...."

After a night march they settled down to rest in "tombs" -- as it turned out, practically cheek to jowl with their long-time rivals, who were presently playing the role of "aggressor." We could not accept battle -- we were extremely short of ammunition. Nor could we get away from the "tombs," for a featureless, clear annular strip separated us from the safety of the dunes. We had to withdraw in a circle, with the "aggressor" following behind us -- this is how the "merry-go-round" began.

A blindingly-white sun stood high in the sky, and a hot "Afghan wind" ruffled the dune ridges, throwing up handfuls of stinging sand particles. The commander -- Gds Lt Leonid Khabarov -- eyes red, moustache disheveled, holding a stopwatch (why a stopwatch?), would stop from time to time and order: "Do not fall behind!"

And although all the men were now proceeding in silence, he would warn: "Don't make a sound!"

As I trudged along the trail, I recalled how I had first met Khabarov. Now he was a commander of volition, efficient, leading his men with calmness and composure. At that time he had just completed service school and been placed in command of a subunit.

Capt S. Gusarov, who still remembered well those paratrooper-athletes who had assaulted Lenin Peak from the sky, by parachute, noticed the lieutenant: "This new fellow should get somewhere...." And he added for the benefit of those who did not take a great fancy to this young officer at first glance: "We shall give him a practical test...."

"I was extremely lucky to be assigned to this unit," stated Khabarov. "Every man is a living legend...."

There are indeed many bright pages in the history of the subunit.

"At first," Khabarov later confessed, "I was simply lost. It seems the reconnaissance paratrooper must possess such knowledge as the fact that of the 2,500 known species of snakes in the world, 400 are dangerous to

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man; that the venom of the mature female karakurt spider is 15 times more powerful than snake venom; that in summer a crow will call before rain and in winter before a blizzard; that an edible porridge can be made from spruce cones, soup can be prepared from water lilies, etc.

"In addition, you are a jack-of-all-trades -- a truck driver and unarmed combat specialist, radio operator and meteorologist, doctor and demolition expert, machinegunner and tanker.... For the reconnaissance paratrooper the unexpected is the rule, surprise is the normal occurrence, and an unexpected situation change is a customary state of affairs."

...Our second encounter occurred unexpectedly: we happened to be in the same group which was preparing for a jump onto a high-mountain plateau. By this time Khabarov had earned about a dozen first and second category ratings: he had become a mountaineer, truck driver, tanker, radio operator, and had mastered topography and demolition; he had learned to read nature's book from the tracks of animals and birds and from the behavior of flowers and insects, and he had become an expert marksman with all organic weapons.... He could parachute-jump into forest and water, desert and mountains -- winter and summer, day and night. And at a field exercise, where Khabarov led a group several hundred kilometers across the desert under very difficult conditions, he was finally "acknowledged" by both his subordinates and superiors.

"It seems you have accomplished a lot. And it has been less than a year since you became a scout?"

"No," Khabarov warded off the jest. "I have a long way to go to become a scout...."

Khabarov's subunit received the highest mark for that mountain exercise, at which the special training of the reconnaissance paratroopers was rigorously tested.

"Khabarov's men," stated exercise director officer I. Pantyushenko, "succeeded in delaying for quite some time the advance of a large 'aggressor' detachment and in inflicting heavy casualties."

...Step for step, with flank guard, with patrols out front and to the rear, we kept circling around the "pyramid." We dragged ourselves along, helping those who were becoming exhausted. The soles of our feet were burning and our bodies craved water -- even a mouthful, even a drop. It was easier for me, as I was not carrying a load, while the reconnaissance paratroopers were loaded down with 25-30 kilogram packs. Khabarov continued monitoring the pace of movement with his stopwatch, frequently relieving patrols in order to maintain alert for an ambush. But we completed circle after circle, and there was no ambush -- for some reason the "aggressor" was also avoiding contact and keeping up this cruel "game."

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"We must hold up until dark," Khabarov glanced at the sun with increasing frequency, "for that is our only chance of accomplishing the mission."

And we continued trudging along the well-trodden road across the red sands. It was really difficult, marching hour after hour, burning up from the heat and thirst, along a road which seemed to lead nowhere!

"Greetings, Leonid Vasil'yevich! This note is being written by Guards Senior Sergeant (Res) Naletka. You may remember me. This is why I am writing. It took me a long time to recover from that 'merry-go-round.' Even now I sometimes wake up in a cold sweat -- again I had been dreaming about the 'tombs' and our raid in the desert heat. Quite frankly, at the time it all seemed quite senseless and unnecessary to me. I did not believe, nor did others, that following that night march we would be able to hold up an entire day in that infernal circle, followed by another march and accomplishment of our mission. But it turned that you knew us better than we knew ourselves.

"Now I would like to express my sincerest thanks to you! I finally was made aware in a most emphatic manner that a person should never give up, even when everything seems absolutely hopeless.

"Please come and visit us on your annual leave. We have plenty of everything -- sea, sun, vitamins. You can stay with us -- my family will be pleased to have you. Please come!"

...I read letters. Khabarov -- he has now been promoted -- was having a meeting with his noncoms. They were people I did not know very well -- of later draft calls. Nikolay Abarin, Sasha Samoylov.... They submitted status reports on their squads, briefly and in good spirits -- it is pleasant to report to one's superior when everything is going well. But Khabarov frowned and chewed the end of his moustache -- he had not had this habit -- and then said: "I am pleased with your success, but I should like to draw attention...."

And ended with emphasis: "There is no limit to perfection!"

Assault Character

Col A. Danilov (Journalist's report on interview with Army
Gen V. F. Margelov, Commander of the Airborne Troops)

Encounters on military roads of life are sometimes surprising. Having been assigned to an airborne unit upon completing service school, I learned that our combined unit was under the command of Hero of the Soviet Union Lt Gen Vasiliy Filippovich Margelov, about whom we cadets had heard a great deal and knew to be a man with an amazing history and a hero of the Great Patriotic War.

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Subsequently the young officers became even more strongly attached to him. He was respected for his commander qualities and for his attentive and respectful attitude toward subordinates. He infected the men with personal example -- together with his men he climbed on board aircraft, jumped by parachute, executed marches, skied, showed proficient marksmanship with the assault rifle, and taught the paratroopers skill and fearlessness.

Almost two decades have passed since then. Recently I happened to meet him once more. Today V. F. Margelov is an army general, Commander of Airborne Troops, and a candidate of military sciences. Vasilii Filippovich is happy to relate the life and combat training of paratroopers, their difficult but honorable and uniquely romantic service.

"I cannot complain about the boys who serve in the airborne troops," he stated, leisurely strolling about his office. "They are outstanding lads -- politically sophisticated, broadly knowledgeable, physically well-developed, and composed. They quickly adjust to the rhythm of our busy life and earn the right to wear the light-blue beret and striped shirt -- symbols of fearlessness and military skill."

Suddenly stopping, the commanding general then continued with particular warmth in his voice: "At exercises of any level, when preparedness is being tested, paratroopers always display an exceptionally aggressive attitude. They love their military calling very much. Especially the jumps. They go up with great enthusiasm and jump boldly and confidently. They jump in daylight and darkness, in foul weather, into fields and into forests if necessary. In our combat arm it is frequently said that the only thing ahead of the paratroopers is missiles, but as we know, missiles are inanimate things, while a paratrooper is a fighting man of volition and professional expertise."

The general gave high praise to the combat equipment with which the Airborne Troops are armed. Today, he emphasized, fast military transport aircraft carry men and equipment swiftly and great distances. Not only lightly-armed troops but also guns, mortars, and tanks can be delivered deep behind enemy lines. It is not enough for a paratrooper to master his parachute and to jump fearlessly. The parachute is only the paratrooper's wings. The main thing is combat behind enemy lines against a numerically-superior adversary, against tanks and armored personnel carriers.

"Quite frankly," continued Vasilii Filippovich, "paratroopers are boys of passionate enthusiasm. They particularly like unarmed combat. A paratrooper cannot manage without unarmed combat: he must have the ability to engage the enemy in hand-to-hand combat, to take him even with bare hands. In addition, every officer and enlisted man in the Airborne Troops is a tank destroyer."

He was willing to talk for hours on end about paratroopers and their tough service. It was interesting to listen. The general was not so anxious to

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talk about himself, and had little to say, and yet his biography is both rich and interesting. Vasilii Filippovich and his generation had the difficult lot of defending the achievements of the October Revolution on the field of battle.

V. F. Margelov was born in Kostyukovichi, Mogilevskaya Oblast, in a worker family. He was sent by Komsomol to enroll at the Military School imeni Central Executive Committee of the Belorussian SSR. His career has been army since that time. He has served in the military almost half a century. He became a paratrooper in 1948, after he had already earned general officer rank.

Margelov had been well acquainted with the spirit and specific features of the winged troops, however, even before he began commanding paratroopers.

During the Great Patriotic War Vasilii Filippovich twice led his regiment behind fascist lines. At that time he was in command of the 1st Regiment of Baltic Marine Infantry, who instilled fear and terror in Hitler's invaders.

In the course of the war he crossed the front lines on 17 occasions. The general still keeps as a most precious memento his bullet-pierced striped sailor's shirt.

Vasilii Filippovich was awarded the lofty title Hero of the Soviet Union for the crossing of the Dnieper in 1943. He recalls those memorable days and nights as follows: "We were having a tough time taking the fortified Kherson bridgehead. The division I was commanding occupied a line 50 kilometers long on the left bank of the Dnieper. I received orders to cross the river at the first opportunity.

"It was night, raining, with thunder and lightning. I went over to inspect my flank. The regimental commander reported: "For some reason the Krauts are silent. Permission to probe them a bit? 'No', I replied. 'I want to do it myself.' I took a machinegun company -- 67 men with nine Maxims. We took a lot of ammunition, but somehow forgot about food. We set off across the river. It was pitch dark all around us. Suddenly we heard explosions. One of the boats had struck a mine. But the shore was quite close now.

"The fascists were not expecting us. We drove into their trenches and cleaned them out. We held the bridgehead for 72 hours. Fourteen men of the original 67 were still alive. On the third night another Soviet battalion crossed. We widened the bridgehead, and then the entire division proceeded to cross the Dnieper...."

This was only one combat episode from the war years. And how many there were! For Margelov went through the entire war, from the first to the last day. He was wounded several times but did not tarry long in the hospital, quickly returning to the line.

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Major Margelov began the war as commander of a rifle regiment, which engaged on the fourth day after the fascist invasion. The enlisted men, non-commissioned officers and officers, headed by Margelov, fought heroically at the gates of Stalingrad, liberated Rostov-na-Donu and Krasnodon..., and crossed the Dnestr, Prut, and Danube, as well as many other rivers, large and small. Vasilii Filippovich ended the war in Vienna, the Austrian capital.

After the war Major General Margelov graduated from the General Staff Academy and was given command of an airborne division. It was at this time that the division commander made his first jump.

From that time forward the parachute became for him, as for all paratroopers, a loyal friend and assistant. To date the commander of the Airborne Troops has made more than 80 jumps.

"Of course that is not so many for a paratrooper," stated Vasilii Filippovich regretfully, "but as long as health permits, I shall not give up jumping for anything. Believe me, soon doctors will be recommending parachute jumping to many people as therapy, for after a jump a person feels reborn.

"If you have noted, our officers have made hundreds, and some even thousands of jumps," Vasilii Filippovich proudly stated, but immediately added with a note of sadness, "but I began jumping a bit late, at the age of 40. Obviously I'll never be able to catch up with the younger ones...."

But I looked at the commanding general and thought to myself: "Some young people would have to catch up with him."

In spite of his age and wounds, General Margelov looks much younger than others his age. He is trim, just a slight graying at the temples, is cheerful, tireless, and continues to possess the ability to infect others with his aggressive energy.

I asked Vasilii Filippovich to recall his first jump.

"All kinds of things happened," he smiled slyly. "I remember we took off early one morning, I was sitting at one end of the cabin, on a special bench, while the instructor was at the other end, in front of a large hatchway in the floor of the cabin. He raised his arms: 'Go!' I grabbed the side of the cabin firmly and pushed with my chest against the seated paratroopers -- they spilled out through the hatch like peas. Before I knew it, I was at the hatch myself...."

"I know that even now people have the idea that sometimes a timid novice is pushed out."

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"It's happened," the general laughed, "but for good motives, and very rarely. It sometimes happens indeed that the commander of a paratrooper detachment is forced to hurry up one of his men. You see, sometimes it is difficult even for the bravest man not to vacillate before a jump. The vacillation lasts only a few seconds as a rule, but for the entire group even instants are precious.

"A modern aircraft flies at speeds of hundreds of kilometers per hour. If one paratrooper hesitates, those behind him will land far from those who went out earlier. Such a scattering is extremely dangerous in combat. I know this from myself. Therefore I would ask the jumpmaster to give me a push each time, until I became accustomed to jumping. But in most cases, the boys jump on their own. Gaining confidence in the reliability of the parachutes, they quickly overcome their feeling of fear."

"But do you have any 'otkazchiki' [paratroopers who refuse to jump]?"

"The term 'otkazchik' has long been an archaism in the Airborne Troops. Commanders help the men hold in check their instinct of self-preservation. They possess a fine mastery of an arsenal of means of moral-psychological conditioning, and most frequently influence by personal example.

"Paratroopers are people," General Margelov proudly continued, "who, no matter how many times they jump, keep coming back for more. They really love to jump. I know from my own experience: you visit a unit the day before a rest day, gather the men together and ask them: 'Who wants to jump tomorrow?' And 99 percent will shout: 'I do!' It would seem that they have had their fill of jumping, and yet they still complain about not jumping enough."

Listening to Vasiliy Filippovich, I recalled how he once also convinced an "otkazchik" by personal example.

As the aircraft entered the drop zone, one after another tiny figures separated from the aircraft: "Ask if all have jumped!" the officer in charge of the jump exercise ordered the radio operator. "One man did not jump," reported the radio operator. "What is his name?"

The radio operator was about to inquire, but the battalion commander stopped him, waving his arm: "I know who it is. Samokhin. This is not the first time he has let down the entire battalion."

And as luck would have it, the commanding general had flown in this day to watch the jumping. The battalion commander became even more upset.

"Have you talked with Samokhin?" the general asked. "Several times. So have his platoon leader and company commander. The Komsomol members have also 'worked him over.'"

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"Worked him over?" the commanding general frowned. "That won't do any good. Comrade Samokhin, come over here," he summoned the soldier, without raising his voice.

The general had a nice, friendly talk with the soldier.

"You see, comrade general," Samokhin frankly admitted. "When I am on the ground I am sure that I will jump, but as soon as the airplane takes off, I can't. My legs refuse to walk over to the door...."

"That sometimes happens. You will get over it. Where are you from?"

"From the Urals, from Magnitogorsk," replied Samokhin.

"Men from the Urals served with me in the war, fought in the Vyaz'ma Operation in 1942 and in the Dnieper Operation in 1943. Intrepid men!"

"And then look at me," the soldier waved his arms in despair.

"You mean you are afraid to jump?" the commanding general suddenly asked him. "How about the two of us jumping together?"

"Yes, sir, comrade general."

...The airborne transport took to the air.

"You jump first!" Margelov shouted to Samokhin.

"With your permission, I'll jump after you, comrade general!"

"Alright. But don't delay. Wait a second or two and then go."

Vasily Filippovich did not turn around, but he could sense the soldier's breathing behind him. What if he did not jump?

"Geronimo!" The general jumped out of the aircraft. Private Samokhin resolutely jumped after him.

The men on the ground were amazed....

"Samokhin actually jumped!"

"Thanks for everything, comrade general!" the soldier exclaimed joyously with an emotion-filled voice after they had landed. "May I take another jump?"

"Good boy. But that is enough for today. Now I am convinced that you will become a real paratrooper. You have all the attributes."

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Vasiliy Filippovich helped very many individuals become a skilled soldier, a bold paratrooper, to achieve victory over themselves and over their temporary cowardice.

Naturally a paratrooper's job is difficult. It demands of a person not only strong nerves, great strength of will and physical stamina. Every parachute jump is a jump into the unknown, a test of tenacity, self-control, and a certain risk.

"But ask any soldier," the commanding general suddenly became animated. "Does he regret having become a paratrooper? You will for sure hear the answer: No, and he will unquestionably state emphatically in addition that he is lucky to be serving in the Airborne Troops, that he is especially proud of this military profession."

It seems that paratroopers are unusual individuals, and yet to look at them they are ordinary, normal lads. Just as all army and navy personnel, they perform their military service with honor. And this is the most important thing in their lives. They fearlessly parachute-jump, skillfully operate combat vehicles, engage "aggressor" tanks, and boldly fight behind "aggressor" lines. In short, the following song lyrics apply to the paratrooper:

He flies down from the sky like an angel,
But he fights like a devil!

I asked Vasiliy Filippovich to discuss in greater detail the mobility of today's Airborne Troops, their place and role in our Armed Forces.

"Have you heard the expression 'a bolt from the blue'?" the general paused. "This expression perhaps applies more to paratroopers than to any other combat arm. It is they who appear deep behind 'aggressor' lines, stunning the adversary with a surprise attack. Within an instant the sky is filled with thousands of parachute canopies. Men, vehicles, and containers descend swiftly toward the ground... within a few minutes this entire armada of equipment swings into action. Armored personnel carriers and self-propelled guns advance on 'aggressor' positions, sowing terror and panic in enemy ranks.

"Whoever was in the area where the Dnieper and Dvina exercises and maneuvers were held saw the scope and scale of airborne operations, the high degree of proficiency and courage which distinguish the winged guardsmen. It took the Guards Chernigov Red-Banner Airborne Division only 22 minutes to land in the designated area and to engage during the Dvina maneuvers. Artillery, mortars, trucks, and self-propelled guns were dropped by parachutes together with the lightly-armed paratroopers... This graphically shows what a truly gigantic stride forward the Soviet Airborne Troops have taken in their development and what an important position they occupy in our Armed Forces. Their role has become especially enhanced under conditions of nuclear missile warfare. And consequently their combat might and mobility have increased."

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"Vasilii Filippovich, many people, especially young persons, are interested in the following question: from what altitudes do paratroopers jump, and how far can an airborne assault force be transported?"

"Paratroopers can jump from the stratosphere and from extremely low heights. As for range, an airborne assault force can be transported to the entire operating radius of modern aircraft. And there is one more specific feature. A paratrooper frequently does not know the precise spot where he may jump. Therefore in peacetime we teach the men what is essential in modern combat, and we teach them to fight behind 'aggressor' lines in various conditions and circumstances.

"Possessing a good mastery of all techniques of modern combat, paratroopers are bold and intrepid. They are equally at home in the sky and on the ground. Paratroopers fight boldly and act resolutely, in order to stun and crush the enemy, while displaying their paratrooper character. But when off duty they write poetry, compose music, take part in amateur talent activities, and engage in sports."

"You used the expression 'paratrooper character.' Is this term current in the military?"

"It certainly is, for in case of military operations paratroopers will be jumping into the very jaws of the enemy and tearing these jaws asunder. It is precisely these qualities -- boldness, ingenuity, and daring -- which form the foundation of the 'paratrooper character.'"

"The specific features of military service evidently also require special interpersonal relations: friendship, solidarity?"

"Soviet Army life is distinguished by firm combat friendship and unity on the part of all personnel for the sake of a great goal -- defense of the achievements of socialism in our country. The slogan 'one for all and all for one' is characteristic of all Soviet fighting men. But the role of friendship and mutual assistance is particularly important with paratroopers. One can scarcely count on reinforcements after being dropped behind enemy lines. If a truck driver is wounded, nobody will send a new driver. His place must be taken by a comrade. If a gunner has become disabled, the loader must take over; there is no other way out. And it particularly applies to parachute jumps, the moment of the assault, when you rely on your friend as much as you do on yourself, and even more....

"These specific features of paratrooper combat operations create a special atmosphere of collectivism. It is also manifested in the fact that nobody wants to lag behind one's comrades; nobody seeks to make things easier for himself.

"I recall an incident which took place in a unit which was preparing for a field exercise. On the day when the paratroopers were transported to the airfield to board the aircraft, seven men from this unit were in the

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hospital. And naturally they were not taken along on the maneuvers. When the seven men learned that their comrades were about to leave, the patients simply got up from their beds. Using various excuses and devices, they all turned up at the airfield -- so irrepressible was their desire to take part in the exercise and not to lag behind their comrades.

"And I would also add another trait to the paratrooper character. In the army there are hundreds of quite civilian occupational specialties, and every paratrooper has a mastery of a good dozen of these. He can become a first-class radio operator, driver, electrician, demolition expert, swimming, firearms, and parachute instructor, as well as an instructor in unarmed combat...."

A young man who has served two years in the Airborne Troops reenters civilian life with a great many skills and abilities!

"Comrade General, are there other military people in your family besides you?"

"Our family is almost entire military. My wife, Nina Aleksandrovna, is a captain in the reserve, a veteran of the Great Patriotic War, and has received medals and decorations. She and I raised five sons. The oldest, Gennadiy, is a general; our second oldest, Vitaliy, is a lieutenant colonel; our third, Aleksandr, is a major; our fourth, Vasiliiy, is a captain; the youngest, Anatoliiy, is an engineer. All of them except the youngest parachute-jump."

As I was taking leave, I asked Vasiliiy Filippovich to say a few parting words from an experienced veteran paratrooper and older comrade to young soldiers and those who would like to serve in the Airborne Troops.

"What can I say to the young lads?" the general repeated my question, and then emphatically replied: "First of all I would like to emphasize that the army is a school of indoctrination, a school of courage, skill and civic maturity. Regardless of the difficulty of our service, I do not regret and never shall regret that I have devoted by entire life to the military, that I have linked my destiny to it. Because there is no honor or duty greater than to serve the homeland, to defend the peaceful labor of one's people. And it is not simply a duty but also a great joy.

"So, my 17-year-old friend, if you are planning on wearing the light-blue shoulder boards with the paratrooper emblems, work hard and prepare. Study hard. Regularly engage in athletics. Develop a firm will, agility, and ingenuity. Then a highroad to the sky will open up before you. To those who have already become paratroopers I wish happy landings and success in battle!"

...Envelopes and postcards lay on Army General Margelov's desk. They were requests to visit, speak, share his reminiscences of past battles and campaigns. A large map with fresh marks also was spread out on the desk of the Commanding General of the Airborne Troops.

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Tomorrow the paratroopers would be jumping again.

Lads From DOSAAF

Lt Gen I. I. Bliznyuk, Political Section Chief, Airborne Troops

People and army. These two terms have merged into one in our country. This unity contains an inexhaustible source of the strength and invincibility of the Soviet Armed Forces.

The men of our army and navy have always felt and continue to feel massive help and support by their people. This assistance by all the people was manifested particularly strongly during the years of the Great Patriotic War against the fascist invaders. During that time of severe military trials, our army received everything it needed to gain victory over the enemy; it was being continuously replenished with new reserves, while those who remained on the home front gave totally of their energies and resources to assist the front.

Today as well, in the postwar period, taking account of the aggressive nature of imperialism, the Soviet people and their tested leader -- the Leninist Party -- display tireless concern for strengthening national defense and always keep matters of military organizational development at the center of their attention. Addressing the 25th CPSU Congress, CPSU Central Committee General Secretary Comrade L. I. Brezhnev stated: "Nobody should entertain any doubts that our party will do everything to ensure that the glorious Armed Forces of the Soviet Union continue in the future to have at their disposal all requisite means to carry out their responsible mission -- to guard the peaceful labor of the Soviet people and to serve as a bulwark of world peace."

An important role in strengthening the unity of the Armed Forces with the people is played by military-patriotic indoctrination of Soviet youth and their preparation in advance for carrying out their sacred duty to defend the achievements of socialism in this country. Truly enormous credit in this noble cause must go to the All-Union Voluntary Society for Assistance to the Army, Air Force and Navy (DOSAAF USSR), which recently celebrated its 50th anniversary.

Our army's Airborne Troops have had a very close link with DOSAAF for many years. The history of the establishment and development of the Airborne Troops and their fighting career are filled with vivid pages written by the deeds and feats of DOSAAF-trained guardsmen. Tens of thousands of glorious paratroopers selflessly and courageously defended their homeland in combat against fascist Germany and militarist Japan. Their ranks contained many alumni of DOSAAF who were awarded coveted government decorations for valor and heroism in combat against the enemy.

Today's daily life in the Airborne Troops is also full of examples of exemplary performance of military duty by alumni of DOSAAF, who received their first toughening and conditioning in DOSAAF schools and flying clubs.

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...The following incident recently happened to young paratrooper Gds Pvt Petr Timoshin. It was a fairly rare occurrence, but it was only this former DOSAAF member's excellent skill, composure and volition which enabled him to emerge victorious in an extremely critical situation.

Young personnel were taking normal practice jumps on that unusually-warm winter day. Everything was proceeding normally. The nimble AN-2 had just taken on board another 10 paratroopers and, swiftly climbing to the prescribed altitude, headed for the jump area. After about 10 minutes en route, the command would come: "Prepare to jump." Guards Private Timoshin turned his gaze earthward, where he saw square kolkhoz fields, the ribbon of a road, and multistory buildings.... Just like those in his home town of Lipetsk, where he had spent his childhood and youth. He had spent his school years there, and after graduation took a job at the Luchremtekhnik Association. He had worked hard and always overfulfilled work-shift targets. He had made his first parachute jump in the spring of 1975 in the DOSAAF Aviation Sports Club. It was followed by a second, and third jump.... He was subsequently drafted into the Soviet Army. He was extremely pleased when the military medical commission assigned him to the Airborne Troops....

Time passed quickly, and soon Petr heard the navigator's command: "Prepare to jump!"

A stream of cold air burst into the cabin. A buzzer sounded -- the jump signal. Timoshin confidently strode forward behind his comrades. As he stepped out of the aircraft, the paratrooper began counting: one thousand and one, one thousand and two.... As soon as he had counted "one thousand and three," he vigorously pulled the rip cord. Another second passed, but the familiar aerodynamic impact did not occur.

What had happened?

Paratrooper emergency procedures, which he and his comrades had perfected to an automatic response employing special parachute ground-training facility equipment, rushed through Petr's head at a feverish pace. The ground was approaching rapidly. The people on the ground also noted that something was wrong. But nobody could come to his assistance.

In such a situation everything depended on the paratrooper himself, on his expertise and skill. And composure, courage, excellent knowledge of the parachutes, and skilled actions by this young paratrooper in a difficult predicament emerged victorious in this situation.

In the 10th second, when he was approximately 400 meters from the ground, when all attempts to open the main parachute had been made, Petr Timoshin jerked the rip cord of his reserve parachute. The rest was routine: a smooth descent under a snow-white dandelion, and a soft landing.

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Petr Timoshin has now made about 10 jumps, several of which were from high-speed aircraft, is successfully mastering difficult paratrooper skills and knowledge, and is solidly among the performance competition leaders.

Twice each year we receive new conscripts -- future fighting men of the winged guard. We successfully utilize for training and indoctrinating the newcomer paratroopers young recruits who have gone through the training program at DOSAAF aviation schools and clubs. The fact is that young people, captured by the romance of service in the airborne troops, display at the time of induction into the Armed Forces a strong desire to serve in the Airborne Troops. Some of the conscripts make their first acquaintance with parachute jumping after they have joined the military. Today parachute jumping is not a difficult activity per se, but it requires certain psychological conditioning. We do not have any men who refuse to jump, although some soldiers at first must overcome a certain psychological barrier. It is during this period that we are given inestimable help by those men who already possess experience obtained in DOSAAF. As they are constantly together with the novice paratroopers in the classroom, in the paratrooper training facility ground simulators, and at the airfields, they help the novices by word and personal example to master an activity which is new to them, to take their first step into the expanses of the fifth ocean.

In the practical activities of our commanders, political workers, party and Komsomol organizations one can encounter many examples of a skilled approach to utilization of the experience of veteran paratroopers to train young recruits, to instill in them a love of paratrooper activities, and pride in serving in the Airborne Troops. The following is one such example.

...Young paratroopers were standing with their parachutes and observing the ground crews and pilots preflighting the aircraft. And although nobody said anything aloud about their concerns, one could see from their faces that many had a fear of heights.

Suddenly the drone of a motor could be heard somewhere up in the boundless blue sky. A small monoplane was approaching the airfield.

"Attention! A demonstration jump will be made by Sgt Sergey Slepov, outstanding performer in combat and political training," announced the jump supervising officer.

A tiny dot separated from the aircraft and was becoming rapidly larger. They soon saw that it was a parachutist. His arms spread wide, the parachutist was soaring like a bird. The ground was looming closer and closer. The rustling sound of a canopy filling with air drowned out the sigh of relief -- the novice jumpers had been quite concerned about the paratrooper.

A few minutes later a smiling, calm Sergey was gathering up his parachute several meters from the group of young paratroopers. He was in no way different from them. His calmness and confidence was transmitted over to the young soldiers.

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Sergeant Slepov's demonstration jump was his 400th overall. At some time in the past he had taken his first, and his 10th..., which he had made with the DOSAAF Flying Club in Rostov. At that time Sergey already realized that he could not live without the sky. When in the army he became enthusiastic about sport parachuting. He trained and practiced himself, and he taught others.

Sergey dreams of becoming an airborne officer and of meeting the performance standards for master of sport parachuting. His dream will most assuredly come true.

In any of our units one can encounter dozens of examples where yesterday's DOSAAF members readily and very successfully arouse in their comrades a real interest in parachute jumping. I once visited the young soldiers of the Guards Chernigov Red-Banner Airborne Division, which boasts of 50 Heroes of the Soviet Union. The future paratroopers were preparing to jump.

The sun had not yet come up when the roar of engines startled the airfield. As if doing setting-up exercises after an early wake-up, the aircraft propellers impatiently turned the cold air as the flaps were cranked down. Ground crews swarmed around the aircraft. There was every indication that the hard-working AN-2 had a big job scheduled. The ranks of paratroopers standing at some distance from the aircraft were another indication.

Parachute jump.... It had been quite the subject of discussion lately! Those who had jumped before were anxiously looking forward to it. The first-timers were not. And it was understandable: the unknown always engenders nervousness and doubts. "Won't you make a mistake?" This question is no idle one for those who are about to make their first jump. But it is apparent that each and every man is confident. The young soldiers' skills had become strengthened on the equipment at the parachute ground training facility. The commander's instructions no longer confused them, and they had learned to make decisions quickly. Talks by experienced parachute jumpers who had previously trained in DOSAAF flying clubs also had an effect.

The command "Don Parachutes" dissipated the last doubts. Helping each other, the men quickly readied themselves for the flight, which for many would be the beginning of their parachuting biography. Those who were awaiting their first baptism by fire and with whom we talked included Pvts Vladimir Yegorov, Nikolay Kirsanov, and Petr Kvasov.... The men realized the seriousness of the forthcoming test, but their faces did not show anxiety or alarm. One can only guess what is taking place deep down inside when the moment when one must take a courageous step is so close at hand. But true friends stand alongside. Nor did Pvt Vladimir Vasilishin see any reason for alarm. He had made 104 jumps prior to becoming a paratrooper. Many of these jumps were of the complicated type, since they were for accuracy and involved a free fall of up to 30 seconds.

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Vladimir greatly loved the sky and was irrepressibly drawn by altitude. He could talk to his new comrades for hours on end about the fascination of parachute jumping.

Nor could you call Pvt Aleksandr Kobzar' a parachute novice. This young soldier has logged 23 jumps, an impressive figure. Aleksandr Yershov's jumping experience is much more modest: he will be making his fourth jump. And there are many others like him. There is not a single first-time jumper in Jr Sgt Aleksandr Puzyrenko's group. Pvts Yuriy Kas'yanov, Roman Kulikovets, Pavel Frolov, Nikolay Borisyuk -- all of them have jumped before. In comparison, Pvt Sergey Korshunov might be considered a genuine ace. He was considered one of the top parachutists at the Arzamas Aviation Sports Club. Sergey came to the induction center wearing a first-category badge on his jacket and a request to be assigned to the Airborne Troops.

One could sense that Sergey Korshunov was accustomed to the parachute's suspension system, that he was in his element. The fact is that 123 jumps is a weighty argument in favor of a person who is just beginning his career in the airborne. Therefore not only his fellow inductees but also the veterans as well listen to what he has to say. How can one not listen to him, since the decisive moment is so near at hand?

Pvts Aleksey Khlopunov and Sergey Antonov were preparing to jump. One could not say from observing them that they were novices. They skillfully donned the taut parachute packs and clicked in the leg strap and chest strap snap links. A few seconds more... and the men straightened their backs: they were ready, and could assist novice Eduard Kasper. Pvts Sergey Lysankov and Anatoliy Krivorot were doing likewise. Viktor Akhmetin, who has already logged 29 jumps, willingly assists Vasilii Kobelev and Sergey Ivanov.

Conversing with the soldiers, one becomes convinced that these men will not balk at the airplane's open doorway, that they will not be frightened by height, and that they will perform with honor those tasks before them in their military career. The first successes of the young soldiers bolster this confidence.

Former shock worker of Communist labor Sergey Tarakanov, an electric locomotive maintenance mechanic at the Tayga yards and member of the Kemerovo DOSAAF Flying Club, has been in the army only a few weeks, but his superiors have already noted his performance on several occasions. Sergey received a commendation from his platoon leader for zeal displayed in weapon training, and he dreams of earning the "Excellent Soviet Soldier" badge.

The flight to the jump area was not long. The jumpmaster swung open the duralumin door, and the young men, as if snatched up by the stream of air rushing into the cabin, swiftly moved into line.

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...Engines droned overhead, and the sky was dotted with white parachute canopies. A normal routine was in progress, as the men of the winged guard worked hard on their military training. Soon we shall read the names of today's novice paratroopers on a commendation. "Outstanding in combat and political training..." They will honorably join the ranks of those who already bear this proud title.

My work frequently brings me among young people; I observe their hard work and watch the development of enlisted men, noncommissioned officers, and officers. A feeling of just pride is evoked by the friendship, constant endeavor and preparedness to come to the assistance of a fellow soldier, generously to share one's experience and know-how, to acquire the ability to take a comrade's place in "combat," and to carry high the honor of one's subunit, which have taken firm root in our units. These outstanding traditions are most vividly manifested in the difficulties of service and the tough training regimen. The campaign to implement the resolutions of the 25th CPSU Congress in our subunits and units became a genuine demonstration of the unswerving will and aspiration of personnel to boost their combat readiness to an even higher level by means of their soldier's labor. The extensively-practiced socialist competition revealed many outstanding individuals, whose labor is of a truly heroic character. Many of them are former DOSAAF members.

...During the winter training period Sgt Valeriy Moiseyev had on many occasions thought about how his combat vehicle crew could earn an excellent rating. He was thoroughly familiar with the BMD-1. While in the training subunit, he had thoroughly studied the equipment and mastered the weapons. And now that he had become crew captain, it was necessary not only further to develop his acquired knowledge and skills but also to train his subordinates, to achieve high-quality mastery of the complex combat equipment, to learn to drop it behind "aggressor" lines.

This paratrooper had gained familiarity with the sky prior to military service. Working in Orel as a mechanic and machine assembler, Valeriy completed a DOSAAF driver training course, as directed by the military commissariat. He really loved machinery, but he dreamed of becoming a paratrooper, and he told the people at the military commissariat of his desire. And after completing three familiarization jumps at the Central Glider Sports Club, he was placed on the list of candidates for service in the Airborne Troops.

He had been in the service more than a year now. This was a time of serious testing of his soldier's maturity. By the end of the winter training period the crew had overcome all difficulties and had received a rating of excellent. Driver Pvt Nikolay Lobov had passed the second-class proficiency examination, while Sergeant Moiseyev himself had become a proficiency-rated operator-gunner.

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Beginning the new training period, the crew member guardsmen worked especially hard on mastering the equipment. The excellent-rated crew decided firmly to consolidate its position in the ranks of socialist competition leaders. Sergeant Moiseyev pledged to learn to drive the combat vehicle, to become a second-class operator-gunner, and to teach the driver to fire the vehicle's gun and antitank missiles.

Following his commander's example, Private Lobov decided to become a specialist first class and responded enthusiastically to Sergeant Moiseyev's suggestion that he master the airborne combat vehicle.

The first firing exercises demonstrated that the crew had been fully utilizing their training time. The driver delivered fire with confidence and scored accurate hits on targets with the machinegun. The excellent theoretical knowledge obtained from his commander were successfully applied in practice. Sergeant Moiseyev performed tasks at this gunnery exercise in a somewhat more complex manner. There was no operator-gunner, and he was compelled to perform this training exercise himself. The guardsmen skillfully accomplished their task and received a mark of excellent.

There are many such examples of excellent service performance by guardsmen who had been active in DOSAAF schools and clubs. Sergeant Afanas'yev, a first-category sport parachutist, Pvt's Aleksandr Otrepov, Vasilii Kovalenko, Viktor Gorevskiy, and hundreds of others enjoy deserved fame in their units.

Some people you never forget. At first you do not even realize why you are attracted to them: is it their modesty and ability to understand the soldier's soul, or is it other qualities, but in any case others are somehow involuntarily drawn to them and begin emulating them.

One such person is party member Warrant Officer Piruz Nikolayevich Ksovreli, who had also been active in DOSAAF. Externally he is unremarkable: lean, of medium stature, smart in appearance and animated. But when you become more closely acquainted with him, it immediately becomes obvious that this is a man with a great heart, who has a boundless love for his job.

"I remember when the young recruits arrived," related experienced officer-educator Captain Kurilov. "Among them was a puny little fellow who had made three parachute jumps at the Tbilisi Aviation Club. His name was Piruz Ksovreli. From the very first he worked so hard that soon he began to stand out among his fellow soldiers. Private Ksovreli completed the separate period of training with marks of nothing but excellent."

And when the question arose of who to send to a training subunit, the commander immediately decided upon Private Ksovreli, since he had confidence in him.

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The officer had not made a mistake. Piruz completed training with distinction, and three stripes appeared on his shoulder board. He set to work with enthusiasm. Performance results for the training period were as follows: the squad earned top place in the subunit and earned the designation excellent.

Sergeant Ksovreli was named deputy platoon leader. Much credit must also go to him for the fact that the platoon became excellent-rated.

When the platoon leader received a promotion, Senior Sergeant Ksovreli took over his duties. He liked working with people, and therefore Piruz was successful.

Now Piruz Nikolayevich is a warrant officer. Many soldiers have gone through his hands during his years of service. And as a rule all of them became fine specialists. Warrant Officer Ksovreli has the ability to find the key to each individual, to teach those who initially have a hard time learning military affairs.

...Private Batishchev received a 2 for marksmanship. This made not only him unhappy but the warrant officer as well. The commander decided to look into things himself and determine what the problem was. It was quite simple: when squeezing the trigger, Batishchev failed to keep the assault rifle aligned, and the bullets would miss the target.

Piruz Nikolayevich began drilling Batishchev. He worked with him not only during training classes but also during free time, of which he had very little. Batishchev began performing with greater precision and confidence. At the next firing exercise he received a mark of good.

The job of platoon leader is a good deal of trouble and work. He has many concerns. But they are no burden on Warrant Officer Ksovreli. He possesses a mastery of several military occupational specialties and can stand in for any specialist at any time. The men frequently bring to him questions which can be answered only by a person with expert knowledge of the equipment. And Piruz Nikolayevich is always willing to help.

For five years now the platoon led by party member Ksovreli has been the leading platoon in the subunit in socialist competition and has maintained an excellent rating.

We should also probably say a few words about the sport parachutists of the Airborne Troops, whose successes are well known throughout the country. The majority began their athletic career in DOSAAF aviation clubs where, in addition to a love of the sky, they learned skill, courage, persistence, and a will to win. Much can be said about this category of paratroopers. But I shall cite just one example.

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A team from the Airborne Troops took part in international parachute sport competitions held in Czechoslovakia. The competition among master parachutists was sharp and without quarter, for contestants included the top parachutists of the GDR, USSR, and Czechoslovakia.

Warrant Officer Vladimir Pen'kov, a master of sport international class, demonstrated a high degree of athletic skill, courage and ability. He essentially had no equal either in performance of the acrobatic sequence or in jumping for accuracy. In the first exercise Pen'kov surpassed such well-known athletes as Skotosek from Czechoslovakia and (Seyd) from the GDR, and took first place in this phase of the competition.

In the jumping for accuracy competition, Vladimir had to make four jumps, since the first three were performed with an identical result by Czechoslovak parachutist Slambor and Soviet athletes Pen'kov, Aleksandrov, and Luchshev. They landed all three times precisely in the center of the circle. It took an additional, fourth jump to determine the first and second place finishers. The winners were Pen'kov and his teammate Luchshev.

We should add that all sport parachutists in our Airborne Troops are excellent rated in combat and political training.

The profession of paratrooper is of a highly diversified character. The uniqueness of the winged guardsmen lies in the fact that they must not only possess a competent mastery of the parachute but must also be able to shoot, drive, operate communications gear, etc. Therefore we are always grateful to those DOSAAF organizations which train not only parachutists but also signalmen, drivers, and marksmen. I am particularly pleased to say that today thousands of our troops' vehicles are serviced, operated and maintained in a continuous state of combat readiness by drivers who received DOSAAF training.

There are many military units which, in performing tasks of indoctrinating loyal defenders of the homeland, successfully maintain close contact with local DOSAAF organizations. For a long time now personnel of the Guards Chernigov Red-Banner Combined Unit have been on very friendly terms with the DOSAAF group at the Kuybyshev Plant imeni Maslennikov. This friendship and meaningful collaboration were born in the harsh year 1942, in Stalingrad, where the combined unit was fighting and to which the plant's first delegation came, bearing gifts for the combat soldiers. And for more than 35 years now representatives of this DOSAAF organization have been regularly visiting the paratroopers, relating to them the accomplishments and labor successes of their twice-decorated plant, and have been inquiring about the combat training of the Chernigov guardsmen and their former workers. This interest is far from mere happenstance: at the present time approximately 450 DOSAAF members from the city of Kuybyshev, including many from the plant organization, are serving in the units of this combined unit.

The former plant workers are becoming bold, courageous guardsmen and are holding high the honor of the DOSAAF alumni. Among them, deserved prestige

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in the subunit is enjoyed by paratroopers V. Osipov and L. Minlov, A. Chitov, A. Markin, N. Kulagin, V. Kurbatov and many others for whom service in the Airborne Troops is a high honor.

Pvt Aleksandr Klishchenko wrote the following to his parents in Kuybyshev: "I send a soldier's or more precisely a paratrooper's greetings. I already wrote you that my occupational specialty is combat engineer. I frequently recall the plant where I worked, my DOSAAF mentors, and everything binding us together. Right now I have no regrets that I became a paratrooper. Although we must work hard, you realize that you are a part of that potent force which is capable of cooling the ardor of any aggressor. Soon it will be a year and a half since I became a soldier. In this time I have learned a great deal and have begun looking at things more seriously. I believe that the training I received in the aviation club and will be receiving here will help me in my later life.... I recently was awarded the "Excellent Parachutist" badge, and my name was entered on the Board of Honor. All of us soldiers feel at all times a sense of responsibility to the homeland, which has given us the order to defend it. I cannot conceive of myself without love for my homeland."

Plant activists took a motorcycle tour along a route running from Kuybyshev to the unit's location via battle sites where the combined unit fought in the last war. The tour was led by plant party committee secretary V. Myasnikov. The guests visited the military subunits, informed the men on how things were going at the plant and on the diversified DOSAAF activities. The guardsmen informed the plant workers on their success in military labor and assured them that they would continue in the future improving their combat skills.

The paratroopers in turn also visit the plant. Soon after the motorcycle tour by the Kuybyshev Plant workers, a delegation of paratroopers, headed by Col A. Burkov, deputy commander of the combined unit, visited the patron enterprise and presented to leading shop No 27 the Challenge Red Banner established by the combined unit.

At this point we must mention the following remarkable fact -- this long and fruitful friendship was interestingly and vividly portrayed in a book entitled "Nas porodnil Stalingrad" [Stalingrad Brought Us Together] by O. Ogorodnikova, who was a member of the first plant delegation at the front. This book is extremely popular both with the plant work force and with paratroopers.

A fine friendship binds the men of the unit in which Lt Col V. Astapenko is the political section chief to the DOSAAF city organization. More than one generation of members of this voluntary Society has served in the paratroopers and as a rule these people have completed service as excellent rated in combat training.

Every day the paratroopers improve their combat skills, toughen their volition, and work persistently to increase their political knowledge.

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They are well aware of their place in the ranks of the defenders of the achievements of socialism, in the ranks of the fighting men of the brother socialist nations, and draw correct conclusions from the contemporary international situation. "Our primary missions," stressed USSR Minister of Defense Mar SU D. F. Ustinov, member of the CPSU Central Committee Politburo, in his address to service academy graduates, "continue to be further strengthening of this nation's defense capability, strengthening of the fighting alliance of the Warsaw Pact member nations, and an all-out increase in the vigilance and combat readiness of the army and navy."

Soviet fighting men are ever ready to carry out their sacred duty in the name of these lofty goals.

Makers of White Canopies

A. Salutskiy, Journalist

Today the parachute has taken a firm place among the prominent inventions of mankind. Parachute jumping from the sky opened up new spheres of activity for man -- in art of warfare, in science, and in sports. Not only people began descending to the earth with the aid of parachute canopies, but also diversified equipment and scientific instruments. Finally, parachute systems began smoothly dropping cargo not only to the earth but also onto other planets. The potential applications of the parachute are endless!

But how are these complex devices for smooth descent created? Who designed them, and who tests them? Finally, who sews the canopies, which are so diversified in shape and size?

It is a well-known fact that the honor of inventing the world's first parachute which could be compactly packed into a backpack and taken aloft belongs to Russian designer G. Ye. Kotel'nikov. Unfortunately Czarist Russia's War Ministry was not interested in this invention. During World War I Russian aviation was equipped with only 70 parachutes -- for the crews of the Il'ya Muromets heavy bombers.

Such indifference toward the parachute by the Czar's bureaucrats was subsequently quite costly.

When our aviation began developing rapidly during the years of the First Five-Year Plan, when pilots needed thousands of parachutes, the parachute plant was initially forced to manufacture parachutes on the basis of foreign licenses.

But the first director of this plant, Mikhail Alekseyevich Savitskiy, did not want to accept this situation. He set up a small design office at the plant, and he invited young engineers to work there. He assigned them a task: to design Soviet parachute systems. This task was successfully accomplished at the beginning of the 1930's.

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In February 1934 a technical conference was held at the plant, at which representatives of military organizations, Osoaviakhim, and institutes which were developing fabrics for parachutes gathered. About 80 persons jammed into the plant clubhouse, which was actually a temporary wooden barracks. Experts presented reports, and production people exchanged experience and know-how. In short a working meeting was held. Suddenly Savitskiy requested that the meeting be temporarily adjourned so that the conferees could go outside for a little fresh air. He then announced a "surprise" for the conferees.

Everybody poured out into the yard. They had scarcely lit up a cigarette when a single U-2 aircraft appeared above the vacant area by the clubhouse. The guests looked skyward and saw that a parachutist had jumped from the aircraft. After a several-second free fall, suddenly a canopy of surprising, unconventional shape deployed above the parachutist -- not a round but a square canopy, with slightly-cut-back corners, like a flying carpet.

The parachutist descended smoothly and without swinging, in spite of the fairly strong winds. Everybody noticed, to be true, that at the moment the jumper left the aircraft a fur boot came off and, descending faster than its owner, rapidly fell to earth and smacked into the snow, but the parachute itself worked perfectly.

Some young boys who were running around in the vacant area immediately retrieved the fur boot and, when the jumper landed near the clubhouse, ran headlong over to the parachutist. The latter quickly pulled on the boot and, running over to the director, reported mission accomplished. He then sought out in the group of onlookers a tall, thin lad, ran over to him, embraced and kissed him: "Congratulations, Kolya! An excellent parachute!"

Mikhail Alekseyevich Savitskiy introduced parachutist Nikolay Ostryakov to the assembled conferees and asked him to say a few words to the guests. The tester walked up to the speaker's stand and began in quite simple fashion: "I am happy that I was able to be the first to test this new-design Soviet parachute. The results exceeded my expectations. I am convinced that Air Force pilots will soon receive this new parachute of Soviet design. I warmly congratulate the young parachute industry on its success."

And he gave particular congratulations to his friend Nikolay Lobanov, who had designed the new-system parachute.

The parachute indeed proved to be very promising. A series-produced emergency parachute was manufactured on the basis of this new design, a parachute which was subsequently utilized by all pilots in the Soviet Air Force. The square-shape canopy, proposed by Lobanov and tested by Ostryakov, fully proved itself at the first stage of development of our parachute industry.

Much time has passed since then. The area of application of the parachute has increased immeasurably, and in conformity with this the most diversified

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types of parachutes have been developed. Today Soviet designers possess a wealth of experience, for many of those who began at the first design office are still working today on developing new parachute systems. They include Lenin Prize recipient Doctor of Technical Sciences Nikolay Aleksandrovich Lobanov.

Together with his colleagues, he designs highly complex parachutes capable of reliably serving man. But the process of developing new parachutes, just as any creative process, requires tireless search, full mutual understanding among all members of the designer team, and bold, innovative solutions. Then begins the painstaking work of embodying the idea in working drawings and experimental models. Then....

At this point, however, we must make a slight digression.

As it happens, the people who design personnel-carrying parachutes very often become the testers of these parachutes. Not because their job requires it -- on the contrary, sometimes despite prohibitions they seek to take to the sky, for they are unable to remain calmly seated at their drawing board. It is not surprising that even the position "engineer-parachutist-tester" now exists.

Ivan Stepanovich Stepanenko joined the Airborne Troops and went into combat in 1941, as a 17-year-old youth. He made three jumps behind enemy lines, and after the Great Patriotic War he became a parachute tester. Essentially all personnel parachutes went through his hands; he possesses 15 certificates of invention.

But just what is a tester? For example, he can jump from an aircraft flying at a speed of 500 kilometers per hour. If you open up your fist at such a speed, your fingers will be bent back behind your palm. The extremely powerful airstream imposes maximum loads on a person. But a person is not strapped to the seat of a centrifuge or pilot's seat; he does not select a pose which corresponds to the most uniform load distribution; during the first, most difficult instant of the jump he is twisted and turned in all directions. But even in this instant the tester is able precisely to record in his mind everything which is happening to his parachute.

Perhaps a tester, who is capable of all this, could be compared to a cosmonaut without stretching a point -- he requires equal endurance. Incidentally, it is a well-known fact that cosmonauts have a great deal of respect for expert parachutists. "Who in their abilities stand closer than all others to the cosmonauts?" asked German Titov. And he replied to his own question: "Paratroopers!" Many people know that before Yuriy Gagarin donned his spacesuit, this gear was tested time and again by parachutist Petr Dolgov.

But let us not forget that the testers we have mentioned, as well as many of their comrades, also design parachutes. What versatile qualities a person must possess who combines in himself the experience of a designer and the skill of a parachute tester!

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But perhaps it is precisely the fact that many parachute designers are also parachute testers promotes exactly that high degree of creative tension which reigns in designer work forces? For sometimes technical documentation cannot keep up with the new proposals and ideas which are "churned out" by these people, who have made thousands of parachute jumps.

But they, these people, not only design new types of parachutes, not only test them, but also take active part in setting up series production of parachutes which have passed comprehensive testing. They are frequent visitors at the parachute plant, where designers' ideas are incorporated into cloth.

...This parachute plant is located in a comparatively small old Russian town. Somewhat more than 100 years ago some enterprising merchant, having become wealthy in commerce, decided to set up his own production and founded a textile mill. All that remain from that time is the brick chimney on the boiler house plus a small building. When the former textile mill was transformed into a parachute plant, modern buildings were erected here.

There is, however, something in common between a textile mill and a parachute plant -- the work force consists chiefly of females. Their careful hands transform rolls of nylon and waterproofed canvas into highly complex products, with which no garments can compare by diversity of cut. Even the electric sewing machines here are different from those in a wearing apparel shop; they are distinguished by an extremely high "rate of fire" and larger-"caliber" needles. As regards the diversity of seams, they are unique.

Many years ago, when the plant was just beginning manufacture of parachutes, each unit would first be basted, checked for accuracy of assembly, and only then final-stitched. In short, the procedures were the same as with custom-fitted and sewn wearing apparel, where a mandatory element of the process is the fitting. Now the procedure is different -- everything is final-stitched the first time through.

But does this procedure not have an effect on product quality? After all, complaints about parachute plant products are out of the question -- defective work can lead to a person's death, an error which cannot be corrected or excused. And therefore the people who make the white canopy devote particular attention to the quality of their product, as they are fully aware of their responsibility to paratroopers, pilots, and athletes. A quality control process has been developed at the plant which gives a 100-percent guarantee against defects of any kind.

Finished parachute assemblies go to inspectors, who inspect not selectively, as at the majority of enterprises engaged in mass production, but thoroughly inspect 100 percent of the sewn assemblies. Then the assemblies are mounted into a complete unit, and the parachutes again go to the technical inspection division -- at which each and every one is again inspected. But

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there is more. The plant could ship its products to the customer without packing the parachutes. Here they do it differently: absolutely all gear intended to be used for personnel is packed according to regulations. This is done because correctness of parachute manufacture can be checked with the greatest degree of reliability precisely during the packing process.

But even this does not end the inspection process. Customer representatives right here at the plant pull the rip cord, pull out each and every parachute and again perform quality control. In other words a rigorous triple quality control system has been developed, which fully eliminates the possibility of error.

The process of parachute manufacture also specifies personal responsibility by each and every seamstress. As early as the point where a parachute exists only in the form of a cut, a manufacturing certificate is made out for it, a certificate to which the names of all those persons who participated in its manufacture are recorded operation by operation, as the unit is produced. The head of the plant series-design office keeps this certificate on file one year beyond the parachute warranty. By referring to the file, one can always establish who had made an error.

There are many outstanding experts at the plant. They include sewing machine operator Lidiya Petrovna Garanina, who recently was awarded the Order of Lenin. She works fast, nimbly, and energetically. The large pieces of nylon literally dance under her fingers, moving swiftly under the sewing machine needle, from which emerges an even, attractive seam. Lidiya Petrovna has been sewing parachutes for almost a quarter of a century. And during every work shift she turns out more than 1,000 meters of seam. And therefore in many parachutes used by paratroopers there is a bit of Garanina's labor.

It might seem to a person far from parachute jumping that a device to descend to the ground is not a very sophisticated item. It is also related that somebody somewhere made a parachute out of an ordinary bedsheet and successfully jumped with it from the roof of a multistory building. One can reply to such an amusing anecdote with another story: there is a known case where a person who had fallen out of an airplane at a height of 1,000 meters and survived the fall uninjured, because he fell onto a snow-drifted ravine slope and slid down it, gradually slowing the velocity of the fall. But nobody would consider recommending the elimination of parachutes on the basis of such an exceptional event.

The same applies to home-made parachutes: the chance success of a reckless individual who has fashioned a primitive parachute by no means attests to the fact that this device is extremely simple. On the contrary, the modern parachute is a highly complex device. It would, however, be more correct to put it another way: the parachute itself is relatively simple (and for this reason it is also reliable), but its design and manufacture is a highly laborious and complex business.

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In addition, today there are many diversified types of parachutes! Parachutes for various purposes are designed and manufactured at design offices and factories.

Yes, the parachute is used today for many purposes -- to bring scientific instruments and flares to earth, and to brake landing aircraft. Many air travelers have probably seen the white cloudlet of a deploying canopy at the tail of a modern passenger aircraft swiftly rolling out down a concrete runway, after which the aircraft's speed begins dropping appreciably. Incidentally, it is interesting to note that sometimes during test flights, when pilots induce a spin, a parachute is utilized as an extreme means of saving the aircraft -- to bring it out of the spin. The parachute has also great promise for utilization in space missions -- it is remarkable in the fact that, in contrast to retrorockets, it does not require energy expenditures. And this means that a spacecraft's weight can be reduced. In addition, a parachute can be tucked away practically anywhere on a spacecraft.

Each of the above-enumerated and many, many other types of parachutes have been developed as a result of enormous work on the part of scientists and designers, for they have had to engineer the most diversified canopies -- from dwarfs to giants, from conventional paratrooper units to special equipment consisting not of sewn pieces but of high-strength nylon strips.

What about the problem of packing parachutes? The enormous parachute canopies for dropping heavy loads are forced into comparatively small canvas containers, and a high density of packing is achieved. A parachute, pressed into a small volume, emerges from the container with ease and in a definite sequence when the release device is actuated.

Yes, many parachutes of different types are utilized today in the army and in the civilian economy. But far from all of the parachutes which have been invented have gone into series production. But even those which remained experimental models nevertheless promoted the overall progress of parachute engineering for, as scientists claim, without refuted hypotheses, without thorough elaboration of hundreds of different variants, the one correct way cannot be found. In this connection as well today's parachute designers recall with gratitude their predecessors, those who established these basic directions of development of Soviet parachute engineering, whose experiments, even if unsuccessful, nevertheless helped mark out the highroad. These people included the head of the special design office to develop paratrooper equipment, P. I. Grokhovskiy, under whose direction special "cradles" were designed and built at the beginning of the 1930's for bringing personnel to the ground, as well as so-called airbuses -- carriages for paratroopers. These airbuses were suspended under an aircraft fuselage and dropped from treetop level -- they would skid on for some time by inertia, would then slide to a stop, and soldiers would leap out. It is notable that the first test of these devices was conducted personally by Grokhovskiy and his deputy, I. V. Titov, and that the type of modern parachute designer-tester was forming during those years. But of

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course many of Grokhovskiy's inventions found practical application, such as an assault parachute with forced automatic opening. Incidentally, this unit was eventually replaced by the PD-1 parachute designed by M. A. Savitskiy, who was not only a skilled production organizer but also a gifted designer as well.

The history of Soviet parachute engineering contains many famous names. The technology has advanced far, but there has been preserved the succession of traditions of creative quest and bold experiment. And herein lies the guarantee of future successes by Soviet parachute designers.

Airborne Assault Wings

Col Gen Avn G. N. Pakilev, Commander of Military Transport Aviation, Honored Military Pilot USSR

Neither distances, nor weather, nor the imposing size of the combat equipment with which paratroopers are armed today -- nothing is an obstacle to military transport aviation. It is capable of delivering troops and equipment with precision to the designated area, wherever it may be located, precisely at the designated time. Nor could it be otherwise, since without maneuver of troops, without the capability of extensive employment of airborne assaults, successful execution of large-scale military operations is inconceivable.

The development of our military transport aviation took place inseparably linked with the development of the Airborne Troops. This natural, logical alliance was born on the eve of the Great Patriotic War. Designers as well as the pilots who flew paratrooper assault teams were vigorously engaged in a search for ways and means of delivering men and supplies. We should mention first of all military pilot P. I. Grokhovskiy. Many devices which made it possible even in those years to airlift trucks and light guns were based on designs of this gifted inventor.

Experimental drops of troops and supplies at the beginning of the 1930's demonstrated that employment of airborne assaults was extremely promising. As we know, the first airborne detachment was established in the Leningrad Military District. The first military air transport units were also formed there -- a heavy bomber squadron and a corps aviation detachment of R-5 aircraft. Military transport aviation dates from the establishment of these units -- 1 June 1931. The mission of the first military air transport units was practical mastery of the techniques and methods of airdropping troops and combat equipment.

The Farman-Goliath aircraft was adapted to drop the first paratroopers, while the lighter R-1 and R-5 aircraft were employed to drop supplies. The Air Force's TB-1, one of the world's finest bombers, and subsequently the TB-3 considerably broadened capabilities to airdrop troops and combat equipment. The TB-3 had a five-ton payload, a speed of 230 km/h, and a range of 2,500 km. It was an all-metal, four-engine monoplane and carried

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fairly powerful machinegun and cannon armament. The airborne version of this aircraft was lightened by reducing armament, chiefly by removal of the turrets, with paratroopers positioned where they had been. The TB-3 aircraft could airlift heavy equipment -- a light tank, a truck with a mounted 45 mm gun, an armored car, and two 76 mm guns.

A powerful material and technological foundation for the aircraft industry was established in this country in the prewar years. Not only did the aircraft fleet grow, but there were also increases in aircraft speed, range, altitude, and payload. The aircraft industry delivered to the Air Force substantial numbers of heavy bombers, which were successfully utilized to airdrop troops and combat equipment. This experience proved extremely useful during the difficult war years.

During the Great Patriotic War our air transport was very extensively employed, performing the most diversified missions for all combat arms. We should stress that delivery of airborne troops by parachute and landing was one of the principal missions of military transport aviation. Long-range bomber units, tactical air units, and the civil air fleet were also employed for this purpose.

Tactical airborne assaults were more frequently employed by the Soviet command during the first period of the war and in the Far Eastern campaign. Dropping of a tactical assault force, which as a rule did not exceed 1,000 men, was successful in the majority of instances.

In January 1942 21 Li-2 aircraft and three TB-3 aircraft from the Moscow Special Air Group -- one of the most highly-trained military transport aviation combined units, were assigned to deliver an airborne assault force consisting of two battalions of the 201st Airborne Brigade and the 250th Rifle Regiment.

Precise timing, coordinated actions on the part of the airborne units, front command and military transport aircraft crews, and close coordination with partisan detachments ensured the success of this operation. The airborne assault force captured and held for several days important lines of communication behind enemy lines, contained enemy maneuver, disrupted rear services operations, and thus facilitated the operations of the troops of the left side of the Western Front.

As the transport aircraft fleet grew and the strength of fighter and bomber aviation increased, employment of airborne assaults became increasingly effective. Especially indicative in this respect are the airborne assaults employed in August 1945 in the war against imperialist Japan.

Extensive employment of aircraft, in particular for delivering assault troops, was caused by the necessity of quickly capturing strategic points, industrial and military installations behind Japanese lines, in order to prevent the Japanese forces from destroying valuable property.

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The size of airborne tactical assault forces delivered to the central cities of Manchuria, the Liaotung Peninsula and North Korea ranged from 200 to 500 men, while even smaller forces -- from 35 to 130 men -- were employed in Southern Sakhalin and the Kurile Islands.

Delivery of airborne assault troops in August 1945 involved landing the troops. By that time our Air Force contained special air transport combined units.

Air operations in the Far Eastern theater were quite complex: transport aircraft not only crossed the battle line but also advanced 200-300 kilometers behind enemy lines and landed at enemy airfields. The assault troops brilliantly accomplished their mission; they would disembark as soon as the aircraft had landed, engage the enemy immediately and establish a reliable defense, thus securing the landing of other troop-carrying military transport aircraft.

Organization and conduct of an operational assault is a more complex task than a tactical airborne assault. Considerable air transport manpower and equipment are needed for its execution. While the size of tactical assault forces rarely reached 1,000 men, in operational assaults it would be necessary to deliver up to 10,000 fighting men and more.

Such operations required the employment of a large number of aircraft of all air arms, which was not always possible in the initial period of the war, due to a shortage of aircraft.

In the last war, however, two airborne assaults were of operational significance: the airborne assault operation of the IV Airborne Corps on the Western Front in January-February 1942, and the airdrop of the 3d and 5th Airborne brigades on the Voronezh Front in September 1943.

During the airborne assault of the 8th Brigade of the IV Airborne Corps (from 27 January to 1 February), a total of 2,497 men, 120 light machine-guns, 72 antitank rifles, and 20 82 mm mortars were airdropped. Between 16 and 24 February 1942 the remaining units of the IV Airborne Corps were delivered -- the 9th and 214th Airborne brigades with all their equipment, a total of approximately 10,000 men. This was the first instance in military history where such a large combined unit was delivered at night, under difficult winter conditions. No foreign army even attempted to execute such airborne operations.

During execution of an airborne operation on the Voronezh Front during crossing of the Dnieper, approximately 5,000 paratroopers, plus a large quantity of weapons and combat equipment, were dropped behind enemy lines just during the night of 24 September 1943. The heroism and courage displayed by these paratroopers enabled them to draw significant enemy forces, and thus ease the situation for our troops which were crossing the Dnieper near Cherkassy.

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The experience of the war indicated that the tasks assigned to air transport and the conditions of their execution are distinguished by a high degree of specificity and require special training of transport aviation aircrews. Experience dictated the necessity of establishing military transport aviation as an independent aviation category, which should possess special organization and training, its own rear services and flight operations control system.

Another extremely important circumstance also became clear in the course of the war: essential for successful accomplishment of military transport tasks is not only an independent aviation category but also special military transport aircraft capable of delivering troops and combat equipment by both airdropping and landing, and of airlifting personnel and equipment for the various combat arms.

Development of military transport aviation in the postwar period has occurred under the influence of the experience of the Great Patriotic War and the further development of Soviet art of warfare, on the basis of the successes of the socialist economy, science and technology. The development of nuclear missile weapons has exerted particular influence on development of all branches of the Armed Forces and combat arms, and military transport aviation in particular.

In the postwar period development of military transport aviation has been characterized by reequipping with turboprop military transport aircraft, enhancement of the role of air transport, and improvement in the employment of assault transport aircraft.

An outstanding contribution to the development of a special assault transport aircraft capable of performing highly complex tasks pertaining to delivery of airborne troops by airdrop and landing, as well as airlifting various combat equipment and supplies in all weather, day and night, has been made by general designer O. K. Antonov, Lenin Prize recipient and Hero of Socialist Labor. The experimental design office team under his direction has designed the An-8, An-12, and An-22 aircraft, which have made it possible to accomplish a great forward stride in improving the combat capabilities of military transport aviation and in accomplishing the tasks assigned to it.

Modern military transport aircraft are equipped with state-of-the-art gear. Radio compasses, radars, astrocompasses, periscopic sextants, autopilots, precision navigation instruments, and electronic computers -- this is a far from complete list of the instruments which help an aircrew control a heavy aircraft and accomplish long flights at the most diverse latitudes.

The level of contemporary development of the Soviet Armed Forces, and particularly the Airborne Troops, determines what today's military transport aviation should be, as well as the methods and modes of employment of military transport aviation and the character of its operations under conditions of modern warfare.

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Combat training of military transport aviation and airborne troops focuses on working on this aggregate of tasks. The close cooperation and coordination of our troops is expressed in thorough preparation of all elements of combat training, from elaboration of general plans at the troop command level to attainment of complete mutual understanding and coordinated actions between aircrews and winged guardsmen.

Very much attention is focused today on professional training of military transport aviators.

Thorough study of aircraft equipment, aerodynamics, tactics, navigation, as well as regular practice drills and flight operations under the supervision of experienced instructors -- every military transport aircrew goes through this regimen in order to earn the right to deliver airborne personnel day and night, in fair weather and foul.

Particular attention in aircrew training is focused on learning and achieving mastery of the most promising modes of combat employment of military transport aviation which can be utilized in an actual combat situation. We have achieved a situation where today military transport aircraft are taken up exclusively by commanders first and second class.

But on a large aircraft successful accomplishment of the combat mission depends on the level of training of each crew member and on the smooth performance of each and every combat tactical unit. Therefore a complex and responsible task has been placed on the agenda and is being accomplished in a practical manner -- the target of having a first-class crew on each and every aircraft.

At the present time all our aircrews possess considerable experience in delivering airborne troops as well as airborne supplies and are capable of performing any and all missions assigned to them by the command.

A characteristic feature in the training of military transport aircrews for delivering airborne troops is the fact that all missions pertaining to accomplishing training flight operations, at exercises and maneuvers are performed jointly with paratroopers.

The friendship between the aircrews and paratroopers grows stronger in the course of joint performance of combat training tasks. This can easily be traced in the process of combat training on any scale -- be it practice jumps by individual subunits or mass airborne assault operations, involving tens and hundreds of powerful aircraft.

Let us take, for example, preparations for and execution of the Dvina maneuvers. Following detailed elaboration of the exercise plan, coordination of and agreement on all possible items pertaining to coordinated action between our aircrews and paratroopers, the military transport and airborne units assembled at the departure fields, where military transport aviation and airborne troops command posts were deployed. Thorough joint

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preliminary work was aimed at ensuring that each and every paratrooper knew precisely and thoroughly what mutual coordination should take place with the military transport pilots and technicians during those few minutes scheduled for loading personnel and combat equipment, as well as for dropping the assault force. Airborne assault plans, calculations, and timetables were refined down to the tiniest details. Each paratrooper knew what he was to do during the loading process. Finally the day arrived, in March 1970. The maneuvers began, in the course of which our Armed Forces were to test their combat readiness and work on techniques of mutual coordination among the different combat arms.

During the course of 24 hours combat operations developed at full pace in the maneuver area, while at the paratrooper and military transport aviation assembly airfields they were still tensely awaiting the departure command. Nobody yet knew precisely when the command would consider it necessary to employ an airborne assault, but the intensity of combat readiness continued to increase.

Finally the long-awaited moment arrived: the command decided to drop a large operational assault force behind "aggressor" lines, to assist the successful advance of the main force.

The air shook from the roar of the mighty turbines. But neither the roar of the aircraft engines nor the tractors, fuel trucks and combat vehicles darting about the airfield impeded the swift, smooth rhythm of the loading process. The air transport and airborne commanders precisely and smoothly managed the loading of personnel and combat equipment.

The designated time arrived, and powerful wings bore the assault force, totaling several thousand men, up beyond the clouds. For the paratroopers this was a time of relative inactivity, while it was the most intense moment for the military transport aircrews. Each crew member concentrated his attention, listening and watching instruments, charts, and schedules. The crew commander received and analyzed data being fed to the aircraft and from time to time would give commands to the crew members.

Inevitable on a long flight are route corrections and changes, and sometimes totally unexpected scenario changes, for the maneuvers were conducted in a situation approximating actual combat conditions. Our aircrews were prepared to carry out any complex missions.

The aircraft flown by Honored Military Pilots USSR Colonels Dobrovolskiy, Babichev, and Yuger, Military Pilots 1st Class Lieutenant Colonel Shevtsov, Major Petrov, and Captain Zakharov proceeded confidently toward the drop zone.

The assault force jump time was approaching. The special technician on board informed the airborne subunit commander of current weather conditions: cloud cover, winds aloft and at ground level, and air temperature. The

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paratroopers needed this information, for it is important to know what is out there and prior to the jump mentally to rehearse the entire jump right down to the ground, taking into account those scenario data which this time nature furnished.

The aircraft proceeded in close formation. The aircraft loading doors opened simultaneously, and white parachute canopies flashed in the gray haze of the March day.

The military transport aircrews required 22 minutes to drop all personnel and combat equipment.

...Time moves swiftly. It seems that the Dvina maneuvers, at which the fighting men of Military Transport Aviation and the Airborne Troops demonstrated a high degree of combat proficiency, ended only yesterday.

Military Transport Aviation personnel, carrying out the resolutions of the 25th CPSU Congress, work day after day honing their professional skills and work persistently to achieve socialist pledges pertaining to mastering complex modern aircraft equipment. And this is logical, for the military transport aircraft fleet is changing qualitatively with each passing year, which in turn exerts considerable influence on increasing the combat efficiency of the Airborne Troops.

Thanks to concern by party and government for military transport aviation development, the mighty wings of our airborne troops are growing, becoming stronger and are in a continuous state of combat readiness.

Brothers in Class -- Brothers in Arms

Lt Gen I. I. Lisov

The Warsaw Pact is a reliable shield guarding the revolutionary gains and the security of the peoples of the socialist nations. The fighting men of the armed forces of the Warsaw Pact member nations are deeply aware of the fact that they are performing responsible and honorable national and international tasks, and this evokes in them a strong feeling of pride.

An important role in strengthening the combat readiness of the brother armies is played by regularly-held Warsaw Pact military forces exercises. Coordinated actions between armies and combat arms of the allied nations are worked out at these exercises, and there takes place mutual enrichment of combat experience and experience in training and indoctrinating personnel.

Paratroopers of the brother armies also frequently take part in these exercises, at which they exchange experience and know-how in combat training, become enriched with the practical experience of conducting joint combat operations, jointly drill in parachute jumping and in mastering complex airborne equipment.

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I have on several occasions participated in large exercises of the brother armies, in which airborne troops were employed on a large scale. Particularly memorable to me are the October Storm and Vltava exercises, which I should like briefly to describe.

"October Storm"

In the fall of 1965 joint exercises were held on the soil of the German Democratic Republic for the armies of the Warsaw Pact nations -- the USSR, Polish People's Republic, Czechoslovakia, and the GDR. The exercise was code-named "October Storm." Subunits from the Pomeranian Airborne Division of the Polish Army took part in this exercise.

I became closely acquainted with the officers, noncommissioned officers and enlisted personnel -- the "Red Berets," as the Poles affectionately call them, and I worked together with them on the ground and in the air.

The fighting chronicle of this combined unit is proud indeed. When formed, it was based on the 6th Pomeranian Infantry Division, which was established on Soviet soil in July 1944 as a component of the Polish 1st Army. The division took part in the liberation of Warsaw, in penetrating the Pomeranian defensive wall on the Baltic coast and the capture of Kolobrzeg, and subsequently in crossing the Oder and in the Berlin Operation. The 6th Infantry Division, designated the Pomeranian, was the first Polish combined unit to reach the Elbe in April 1945. Its colors carry, alongside Polish decorations, the Order of Kutuzov, 2d Class. This banner is now in a museum, while on the new colors is woven an eagle soaring on a parachute background -- the emblem of the Polish Army airborne troops.

The airborne division continued its glorious fighting traditions. These traditions, which constitute the foundation of the patriotic and internationalist indoctrination of paratroopers, are constantly and continuously being added to by successes in combat and political training. Competition in which all units and subunits participate is extensively developed in the division. The majority of units and subunits bear the honorary designation "social service subunit." As regards individual competition, on the eve of the exercise many paratroopers already possessed "excellent soldier badges, 1st class."

They have also established a title "Excellent airborne troops marksman." Its award entitles a soldier to wear a special aiguillette woven of parachute suspension lines and to receive three days leave. Paratroopers who receive this award wear with pride on their dress uniform the coveted sharpshooter aiguillette.

During the training period paratroopers acquire solid knowledge not only in the techniques of jumping from various aircraft and other diversified conditions, not only in sharpshooter skills, but also the occupational specialty of driver capable of driving vehicles of different types, and they learn to

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be radio operators, mine specialists, gunners, underwater swimmers, ski troopers, and they master the techniques of unarmed combat and mountaineering. During their two-year military service each acquires two or three military occupational specialties.

At that time the division was commanded by Edwin Razlubirski. He comparatively recently transferred to the airborne troops, gained a strong affection for his brave soldiers, and himself became an ardent patriot of these troops and a bold paratrooper. He has made more than 600 jumps to date, with various types of parachutes, and he was the first in the division to jump from the An-12 heavy military transport.

General Razlubirski was a famous partisan. After the war against the fascist occupation forces, he graduated from the General Staff Academy in Moscow.

The enlisted men, noncommissioned officers and officers love their division and are proud of belonging to the airborne troops, are neat and smart of appearance at all times, and they wear their headgear -- red berets -- with a particular jauntiness. All the men voluntarily and enthusiastically chose to be a paratrooper. They are ardent patriots and are proud of the fraternal friendship with the peoples of the other socialist nations.

I spoke with Corporal Jan Mucha. He is from Bochnia in Krakow Voivodship. Before the war, the corporal told me, there were many unemployed people in Bochnia. Now people are happy and have plenty. The Metallurgical Combine imeni V. I. Lenin -- not only the largest in Poland but also in Europe, was built near Krakow with the aid of the Soviet Union. It is a symbol of the indissoluble brotherhood of our people. But Jan is particularly proud of the fact that he is fortunate enough to serve in the airborne.

Pfc Ryczard Smolak considers the most important events of his army career to be the swearing of the military oath and his first night parachute jump. Smolak is commander of a signal section in an antitank artillery battery; he is rated excellent in training and is actively involved in Union of Youth affairs. He is very fond of jumping from the Soviet An-12 aircraft.

...Finally the day came when all Polish paratrooper subunits assembled at the departure airfields, prepared and ready to load onto military transport aircraft. Somewhere far in the distance intensive "fighting" was already in progress. The situation required that fresh forces be engaged, and taking the "aggressor" by surprise.

Dozens of powerful military transport aircraft dropped Polish paratroopers before dark into that intensive-fighting exercise area.

The last paratrooper had not yet touched down when aircraft bringing the paratroopers heavy combat equipment -- tanks, self-propelled guns, armored personnel carriers, missile systems, and anti-aircraft guns -- began landing at brief intervals on an airfield captured by forward detachments of "red berets."

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Under cover of darkness the paratroopers, executing a march, and their presence still unknown to the "aggressor," assembled in an attack position to seize an important line.

It was early morning.... Heavy artillery preparation broke the guarded stillness. The forest came alive along a frontage extending several kilometers. The subunits shifted to the attack. Soviet tankers under the command of Gds Lt A. Sivovolov and Czechoslovak tankers under the command of Lt S. Bauruk surged forward. They performed with smoothness and precision.

Providing air cover to protect the advance of the Soviet and Czechoslovak tankers, antiaircraft gunners of the National People's Army of the GDR were delivering fire from a well-camouflaged position to the right. They were skillfully directed by Lieutenant Grumert. His battery is the best in the unit. It also demonstrated excellent military proficiency here at the exercise.

Suddenly Soviet and Czechoslovak supersonic fighter-bombers appeared overhead. Under cover provided by these aircraft, the tank crews, working in coordination with Czechoslovak motorized riflemen, shifted to a swift attack. On the right flank Polish paratrooper subunits engaged. The "red beret" platoon of Lt Jan Maliberski initiated an assault phase. Taking advantage of terrain irregularities, it advanced swiftly. To the left, to the right, and behind it advanced the precise formations of the winged infantry. But this was not infantry in the usual meaning of the word: nobody advances on foot -- all are mounted on combat vehicles, armored personnel carriers, and self-propelled guns.

All units and combined units, all fighting men of the brother armies performed at this exercise like a well-tuned orchestra, which resulted in overall success of the exercise proper. The "aggressor" was crushed, toppled back and routed in very short order....

The directors of the joint exercise gave high marks to the skill of the Polish army paratroopers. Many enlisted men, noncoms and officers were commended by the Minister of Defense of the Polish People's Republic.

"Vltava"

...It was the morning of 20 September 1966. Heavy preliminary artillery bombardment and airstrikes along the many-kilometer frontage of the "Pink" and "Green" forces signaled the beginning of a joint exercise code-named "Vltava" and involving the participation of the armies of Czechoslovakia, the USSR, the GDR and the Hungarian People's Republic. And the first to hit behind "aggressor" lines were paratroopers of the Czechoslovak People's Army, who were part of the "Pink" force.

The sky was clear and cloudless that morning. A light breeze rustled the autumn foliage. It seemed that nature herself was helping the paratroopers carry out the forthcoming complex combat mission in a worthy manner.

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The weather reconnaissance aircraft was the first to take off, to determine the possibility of dropping troops and combat equipment in the designated area. It was followed into the air by An-12 heavy aircraft carrying reconnaissance personnel, a team to seize and secure the drop zone, and heavy combat equipment crews.

A bit later this forward detachment was followed by Soviet military transport aircraft carrying Czechoslovak paratroopers, self-propelled guns, anti-tank guns, mortars and trucks -- the main airborne assault force.

As was later learned, the reconnaissance personnel and drop zone seizure team performed vigorously and resolutely behind "Green" force lines. Immediately after landing, they joined battle to seize and secure the drop zone for the main airborne assault force.

Suddenly tiny dots appeared in the sky. These were the Soviet military transport aircraft. They approached the drop zone wave after wave. This air armada was led by Pilot 1st Class Colonel Lazarev, a party member and veteran of the Great Patriotic War. The route for the column of transport aircraft was laid out by officer Gulyayev, an experienced navigator and 1st-class specialist.

Pallets carrying heavy combat equipment were the first to be dropped, descending smoothly below enormous parachute canopies. Some of these parachutes seemed to stop dead for an instant just before touching down. Their swift descent toward the ground was being decelerated by a special reactive device and, as the cosmonauts say, a "soft landing" was accomplished.

After the combat equipment was dropped, the entire sky above the drop zone was filled with hundreds of deploying parachutes. These were the paratroopers, as well as Soviet gunners. The combat vehicles were already waiting for them on the ground below.

The paratroopers landed one after another precisely at the designated spot. This was a result of the consummate skill of the Soviet aviators and the excellent proficiency of the Czechoslovak paratroopers.

As we know, the jump and descent is only the beginning for a paratrooper. Real combat begins after landing. One could observe how the paratroopers, as soon as they touched down, quickly freed themselves from the parachute harness, deployed into position, and swiftly advanced to contact with the "aggressor." The winged infantry was given continuous support by the winged artillerymen, gunners, mortarmen, and they were all given air cover by fighter-bombers and supersonic fighters.

Somewhat later another airborne assault force was dropped onto an "aggressor" airfield in another area. This force was assigned the mission of quickly capturing the airfield and securing it for the landing of an assault force. This mission, just as the others, was successfully accomplished.

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Dozens of An-12 aircraft very rapidly unloaded heavy self-propelled guns, antitank and antiaircraft guns, tractors, armored personnel carriers, and other combat equipment.

All aircrews and crews of the unloaded combat vehicles performed with exceptional boldness and speed. Soon they were advancing into the dispositions of the attacking paratroopers, who had been engaged since landing that morning in an area of importance to the "aggressor."

The dense Bohemian forests, which extended far from the location where the final phases of the exercise were taking place, seemed empty. But when we visited the Czechoslovak airborne battalion under the command of Major Michnak we saw that the forests were far from uninhabited. Company commanders and platoon leaders, noncoms and enlisted personnel were inspecting weapons and combat equipment in a businesslike way, while the Soviet paratrooper gunners were fueling the vehicles and replenishing ammunition. In short, they were all preparing to rejoin combat.

The first harbingers of the forthcoming battle were two "Green Force" reconnaissance aircraft which passed over the paratroopers' position. This reconnaissance effort was apparently successful, because a few minutes later a group of fighter-bombers appeared. They delivered a very telling blow -- a "strike" with shells and bombs.

Soon "Green Force" tanks with an assault force riding on the armor appeared on the horizon, to the right of the observation post of Colonel Mansfeld, airborne combined unit commander. They swiftly attacked the "Pink Force" paratroopers who were dug in on a hilltop. In the course of the intense fighting the soldiers paid no attention to the sky, where fighters of both sides were clashing.

The "Pink Force" opened fire with artillery on the attackers, attempting to halt the "Green Force," but their tank companies reached the hilltop and proceeded to dig in. "Pink Force" fire was augmented by airstrikes. Executing a turning maneuver from the flanks, the paratroopers forced the "aggressor" to withdraw from his positions, leaving on the battlefield a great deal of disabled equipment. The "Green Force" attempted to restore the situation and engaged reserves. The situation was changing. Counter-attacking from the flanks, they threw back the attackers and retook the positions they had just lost....

It is gratifying to note that both sides displayed a high degree of combat proficiency and the ability to accomplish various combat missions in a very complex situation.

In addition, the "Vltava" joint exercise was exceptionally successful. It enabled each side to test its forces, the firmness of coordinated action between brother armies, and settled many important questions pertaining to the fighting alliance.

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On conclusion of the "Vltava" exercise the troops of the brother armies gathered in the town of Ceske Budejovice to take part in a review. On the eve of the parade friendly get-togethers, political rallies and concerts took place in the garrisons where the troops were billeted. I was invited with a group of Soviet airborne officers to take part in an international evening of representatives of the four participating armies.

At this most interesting get-together we met a remarkable individual -- Ludvik Svoboda, an internationalist general and Hero of the Czechoslovak Socialist Republic and the Soviet Union.

Of course it would be difficult to find a person who is not familiar with the name of General Svoboda and who does not know of the feat accomplished by the Czechoslovak I Army Corps which he commanded in the last war. But it does not happen so often that one meets him in an informal atmosphere and hears his tales of the combat experiences of Czechoslovak fighting men, their military valor and fame, their internationalist duty and service. It was interesting for the young soldiers to learn from General Svoboda that the first Czechoslovak military unit was formed in the USSR in January 1942, and that the unit was stationed in the small Urals town of Buzuluk. This small military unit formed the foundation for development of combined units of the Czechoslovak People's Army -- the 1st and 3d brigades, and the 2d Airborne Brigade, which were components of the Czechoslovak I Army Corps.

...A troop review was held on the following day. General Svoboda stood on the reviewing stand, accompanied by Czechoslovak officers, many of whom were his former comrades in arms. I observed him at the moment when units of the Czechoslovak People's Army entered the square. His eyes radiated pride and joy. He evidently was recalling the first postwar review of troops on Old Town Square in Prague. How far the Czechoslovak Army had advanced in its development, arms and equipment! What a potent force it had become on the western boundaries of the socialist community of peoples!

The Czechoslovak paratroopers entered the square accompanied by noisy applause by the onlookers. They were all tall, strapping lads, wearing red berets and camouflage suits, riding in automobiles and armored personnel carriers; the paratroopers of this brother army received the highest mark at the exercise.

We Soviet airborne officers gazed with pride at our comrades in arms, for over the course of several years we had been endeavoring to impart to them not only technical knowledge but also our many years of experience in training the Soviet Army Airborne Troops. Together we had flown and jumped from the latest military transport aircraft, had taught them to air-drop field pieces, self-propelled guns, and trucks employing multiple-canopy parachute systems, and quickly to make them ready for combat after landing.

Our Czech friends proved to be unusually capable pupils, rapidly mastering not only technical matters but also tactics of conduct of combat operations behind "aggressor" lines.

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My group included Col Petr Vasil'yevich Tereshchenko, who is well known to veterans of the 2d Airborne Brigade as weapons training instructor in 1944. His friend, Col Vladimir Afanas'yevich Shekker, served as senior adviser for airborne training. Both are well known in the Soviet Army as master sport parachutists, and they are officers with a great deal of theoretical and practical training and with combat experience. At that time 12 men served in the brigade as instructor-advisers. It was gratifying to see this get-together between brigade veterans and Soviet officers. They reminisced about the old Russian town in which the brigade was born in January 1944. There, under the supervision of experienced Soviet instructors, the men of the combined unit rapidly mastered the difficult business of airborne combat.

In the fall of 1944 the 2d Airborne Brigade was relocated to the Ukraine, to the town of Proskurov, where it became a component of the Czechoslovak I Army Corps. Soon the paratroopers took part in the fighting in the Carpathians, as an element of the troops of the left flank of the 38th Army. This was their baptism of fire. The brigade received high marks from the Soviet command for its successful performance in combat.

In the latter half of September 1944 the Czechoslovak Airborne Brigade concentrated in the vicinity of the town of Krosno, ready to be airlifted to assist the Slovak insurgents. At that time the brigade already totaled more than 2,000 paratroopers. They were well equipped with Soviet weapons -- submachine guns, machineguns, mortars, and light antitank and antiaircraft guns. In addition, a substantial quantity of weapons and ammunition had been prepared for airlifting to the insurgents.

On 24 September 1944 the first 33 Soviet transport aircraft carrying Czechoslovak paratrooper on board took off. The airborne assault continued on the following days. The patriots were forced to engage immediately upon landing, since the insurgent-held area was becoming smaller every day under incessant pounding by superior German forces. It was not until 18 October that the paratroopers assembled and received a short breathing spell to replace casualties and put themselves in order.

As we know, prior to initiation of the insurrection in Slovakia 24 groups of paratroopers were flown in from the Soviet Union, totaling more than 400 men, plus several partisan detachments which entered Czechoslovakia from the Ukraine to assist the insurgents. During World War II 700 Soviet and Czechoslovak military personnel -- excellent fighting men and partisan movement organizers -- parachuted into Czechoslovakia.

It is evident even from this far from complete presentation what selfless fraternal assistance was rendered by the Soviet Union to the Czechoslovak people at the time of their most difficult trials.

The friendship between the armies and peoples of Czechoslovakia and the USSR has a glorious history. It is pleasant to acknowledge that the Soviet Airborne Troops also made and are continuing to make a contribution toward strengthening this friendship in the postwar years.

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Museum Displays...

Col V. Ivonin

An old building stands on a quiet side street in Ryazan'. It is famous and familiar to many Ryazan' townspeople and their guests. A memorial plaque on the building states that the great Russian scientist Academician I. P. Pavlov and other prominent Russian scientists once studied here.

Since July 1972 interest in this building on the part of the townspeople, as well as others, has appreciably increased. A field piece and self-propelled gun were placed on special pedestals by the openwork porch, and blue signs bearing the inscription "Airborne Troops Museum" appeared on both sides of the main entrance. It was housed on the first floor of a building which is currently occupied by the Twice Red-Banner Ryazan' Higher Airborne Command School imeni Lenin Komsomol.

The Airborne Troops.... One of the youngest combat arms in the Soviet Army. Born in our country in August 1930 -- the first country in the world with such troops -- during the prewar years they formed into brigades and corps, became toughened in the flame of battle in the Great Patriotic War, and have risen to an even higher level.

Numerous displays, collected with affection and placed under the museum showcase glass, in glass cabinets and on display pedestals tell of the history of the birth of the airborne, of those who stood at the cradle of the Airborne Troops, who earned their combat fame in the battles of the last war, of postwar exercises and maneuvers, of paratrooper training and of champion parachutists....

Let us take a brief excursion through the museum's eight display rooms, where an area of more than 1,500 square meters contains thousands of different displays, many of which are very valuable and unique.

The first hall is to the left of the main entrance. It tells of the birth of the Workers' and Peasants' Red Army, the first decrees signed by V. I. Lenin, and battles during the Civil War years. But we also find in the first hall signs of a new combat arm, as yet unborn -- Russia's first backpack parachute, designed by G. Kotel'nikov, the RK-1, as well as photographs of the first Soviet citizens to make a parachute jump. This is actually the prehistory of establishment of the Airborne Troops. And the curators of this museum were absolutely correct in beginning the displays in this manner. The new combat arm was established on the foundation of the matured and improved Red Army, on the foundation of the young aviation of the Soviet nation, as well as scientific discoveries in the parachute field.

There is a large photograph in the first display case in the second hall. It portrays a group of parachutists descending over a small village. This

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is a historic and unique photograph. It records the birth of the Airborne Troops: on 2 August 1930, at an experimental-demonstration exercise for the air forces of the Moscow Military District, a paratrooper assault force of 12 armed soldiers was dropped for the first time in history. This airborne assault was directed by famed Soviet pilot and parachutist L. Minov. He can be seen in the photograph together with his colleague and ardent supporter of sport parachuting Ya. Moshkovskiy, who was also a participant in the first airborne assault.

In the second hall, which covers the prewar years of Airborne Troops development, the displays tell of Airborne Troops participation in the 1935 maneuvers of the Kiev Military District, in liberation campaigns in the Western Ukraine and Western Belorussia, and in combat operations against the White Finns.

We pass through a corridor into the third hall. This dark, narrow passage is red-illuminated -- like the glow of a fire penetrating the blackness of night. Documentary photographs relate the first minutes and hours of the treacherous attack by fascist Germany on the Soviet Union. "Red Army soldier, save us!" These words are spoken by a woman carrying a child in her arms, featured on a poster from the first days of the war.

Further museum displays relate how from the first days of the war Soviet paratroopers stood shoulder to shoulder with the men of the other combat arms in defense of the homeland. The battles at Berezino, in the Riga-Dvina sector, and the heroic defense of Kiev. It was here that Soviet citizens heard for the first time the name of famed paratrooper Col A. I. Rodimtsev, commander of an airborne brigade which in August 1941 mounted a counterattack together with other brigades of the airborne corps against the vaunted German-fascist troops.

A great many photographs and war relics tell of the largest airborne assault of the Great Patriotic War, mounted by the IV Airborne Corps, during the Moscow counteroffensive in January-February 1942. The photographs show combat scenes behind enemy lines. The glass display cases contain weapons, maps, and personal articles of the participants in the airborne assault.... One can see decorations, documents and personal articles belonging to Gen A. Kazankin. He was in command of the airborne assault force which fought behind enemy lines for several months, inflicted enormous casualties and losses on the Germans and liberated more than 200 villages and towns.... "Paratrooper republic" -- that was what they called this liberated area at the time, and on display is an envelope bearing this unusual address....

In the summer of 1942 the paratroopers were once again right in the very crucible of the war. Eight airborne corps were reorganized into guards rifle divisions and sent to Stalingrad. They included the 36th, 37th, 38th, 39th and other guards rifle divisions under the command of V. Zholudev, S. Gur'yev and other airborne commanders. Here again is displayed

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a photograph of Gen A. I. Rodimtsev, now commander of the 13th Guards Rifle Division, formed of paratroopers.

Paratroopers fought on many fronts of the Great Patriotic War. They fought at Kursk and on the Northwestern Front, crossed the Dnieper and the Svir', and were in the assault on Vienna.... One cannot help but feel a rush of emotion at the sight of the enormous key placed in a display case at the center of the following hall. This symbolic key to the Austrian capital of Vienna was presented to the commander of one of the airborne divisions of the Soviet Army, which saved the city from fascist enslavement and destruction.

Museum visitors stand for a long time before a remarkable work of Soviet art, which was awarded the RSFSR State Prize -- a diorama entitled "Airborne Assault Force Fighting Behind Enemy Lines in the Winter of 1942," created by artists P. Mal'tsev and N. Prisekin of the Military Studio imeni Grekov. The diorama depicts a fierce clash between paratroopers and German troops. The faces of some of the participants -- Soviet paratroopers -- are actual portrayals. Standing by the diorama is a nickel-plated container of sacred soil from Smolenskaya Oblast, stained by the blood of heroes, the area where the airborne assault force fought.

The subsequent halls of the museum portray the postwar life and combat training of the men of the Airborne Troops, their participation in the Dnieper, Dvina and many other maneuvers, specimens of modern parachutes, and models of heavy airborne equipment.

A separate hall is dedicated to paratrooper athletic achievements. The record holders and champions of the fifth ocean also have many glorious achievements. They are embodied in gold medals won in international and national competitions, in world record certification documents, in unique athletic achievements -- jumps onto the "roof of the world" -- the Pamirs, a stick jump from a height of 100 meters, plus many, many others. Sport parachutists of the Airborne Troops established 12 world records just in honor of the 60th anniversary of the Great October Socialist Revolution. An enormous photo panel adorns the hall's central wall: Communist Party and Soviet Government leaders congratulate female sport parachutists of the Central Sport Parachute Club of the Airborne Troops on a successful jump at the jubilee air review in Domodedovo in 1967.

The museum is still very young, but it has already gained considerable popularity with the townspeople, especially youth. The museum's fame has also spread to many other cities and military units. There is a constant stream of visitors from everywhere -- veterans of the Great Patriotic War, persons who are presently serving in the Airborne Troops, former paratroopers, college students, and officials from various public organizations who are doing considerable military-patriotic work among the public.

To date hundreds of thousands of visitors have viewed the interesting exhibit of the Airborne Troops Museum, to which new materials are continuously being added.

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The museum also contains an auditorium where visitors can view films about the Airborne Troops: "Winged Guard," "School of Courage," and others.

Many visitors leave emotion-filled comments in the visitors' book. Here are a few.

"Participants in a seminar for chairmen of rayon DOSAAF committees visited the Airborne Troops Museum. The museum and the exhibits on the history of the Airborne Troops have made a lasting impression on us....

"We DOSAAF officials extensively utilize this example of military affairs in military-patriotic indoctrination of youth and in preparing young people toward service in the USSR Armed Forces."

"We should like to express great thanks to all museum personnel and to all those who were involved in collecting the exhibits for their enormous work in establishing the Airborne Troops Museum," write Komsomol members from Ryazanskaya Oblast. "This work will promote indoctrination of young people in the glorious fighting traditions of our homeland."

The museum staff is pleased with the large number of visitors and endeavors to do everything possible to ensure that each and every visit is maximally useful and interesting.

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