JPRS-USA-86-012

1 DECEMBER 1986

USSR Report

USA: ECONOMICS, POLITICS, IDEOLOGY

No 9, SEPTEMBER 1986

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Except where indicated otherwise in the table of contents the following is a complete translation of the Russian-language monthly journal SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA published in Moscow by the Institute of U.S. and Canadian Studies, USSR Academy of Sciences.

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PUBLICATION DATA

English title	:	USA: ECONOMICS, POLITICS, IDEOLOGY No 9, September 1986
Russian title	:	SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA
Author (s)	:	
Editor (s)	:	V. M. Berezhkov
Publishing House	:	Izdatelstvo Nauka
Place of publication	:	Moscow
Date of publication	:	September 1986
Signed to press	:	19 August 1986
Copies	:	30,000
COPYRIGHT	:	Izdatelstvo "Nauka", "SShA--ekonomika, politika, ideologiya", 1986

U.S. 'CONFRONTATION' STRATEGY REVIEWED

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 3-14

[Article by R. S. Ovinnikov: "The Need To Keep the Peace and Washington's Policy"; passages rendered in all capital letters printed in boldface in source]

[Text] Mankind's most important task as it approaches the third millenium is the prevention of a nuclear catastrophe and the guarantee of the survival of world civilization. This is precisely the aim of the proposals drawn up by the 27th CPSU Congress on an all-encompassing international security system. All of the socialist countries are fighting for this.

Other factors, however, will also affect mankind's future. Socialism is opposed by the capitalist world, whose record includes the sinister history of the two world wars it started and the proposal of a new arms race of unprecedented danger. A great deal will also depend on the position of non-aligned and developing countries, representing most of the states and populations of the world.

The current and future functions of the capitalist world's strongest power in world development understandably warrant special attention in this context. In recent years the impact of the U.S. factor on the international situation has been highly negative. The militarization of society and even of the political thinking in this country is breaking all records. The American machinery of state is displaying the vicious habits of a drug addict unaccustomed to the standards of behavior in a civilized society. It has developed a strong dependence on injections of military allocations. This serious illness is of a chronic nature.

The Pentagon has amassed colossal arsenals of weapons of mass destruction. It is trying to remove all restrictions on the arms race and to extend this race into space. Therefore, from the standpoint of the possibility of human survival, the future U.S. role in world politics is by no means immaterial. Everything will depend on whether its present, destructive influence will become irreversible and inevitable or whether the prerequisites for official Washington's assumption of greater responsibility for the future of mankind in general will continue to exist.

The 27th CPSU Congress raised this question in the only accurate context: It would be impermissible to let these matters take their course. "Will the ruling centers of capitalism," the CPSU Central Committee Political Report to the congress says, "be able to make sober and constructive assessments of the current situation? The easiest answer is: Maybe, and maybe not. But history does not give us the right to make this forecast. We cannot take no for an answer when the question concerns the survival of mankind. We say that social progress and civilization can and must continue."[1]

By the same token, the importance of a thorough analysis of current processes in U.S. ruling circles, and of an assessment of the prospects for change in their present foreign policy points of reference, which are onesidedly militaristic, on this basis, is increasing. The only accurate method of this kind of analysis is the Leninist method: the examination of each issue from the standpoint of the causes of a specific phenomenon, the main stages in its development and the current appearance of the phenomenon from the vantage point of this development.[2]

What has been happening in the American ruling class in recent years? Why did it turn sharply to the right, more sharply than common sense would dictate, away from the detente of the 1970's? What did it hope to achieve by doing this? What has it achieved? And, finally, what lies ahead?

The Lessons of Realism

The "enormous reservoir of antagonism" toward the USSR among the powers that be, and their reluctance to accept "any other policy but hostility toward the Soviet Union," which have existed for decades in the United States, have become, even according to American analysts, an immutable fact of history.[3] All of this is not simply part of the common reaction, typical of the capitalist world and noted by the 27th CPSU Congress, to the birth of socialism as a historical "error" that must, in capitalism's opinion, be "corrected" in any way possible, with no concern for law or morality. American imperialism did not even recognize the Soviet regime for 16 years, right up to 1933. After World War II it assumed the role of the leader of the "cold war" against socialism, which frequently balanced on the brink of a hot war.

Nevertheless, due to the dialectics of history, there were two other periods, although shorter ones, in U.S. history. The first consisted of cooperation with the Soviet Union during World War II in the joint struggle against the brown plague of fascism, a threat common to all mankind. The second such period, which also turned out to be quite short, was the first half of the 1970's.

At that time, U.S. ruling circles agreed to some interaction--and quite broad interaction--with the USSR, but not because they had changed their hostile opinion of it. The main objective cause of the more realistic approach overseas was the Soviet Union's achievement of military-strategic parity with the United States. Both Wall Street and official Washington realized the futility of military confrontation with socialism.

The nation of Soviets, on the other hand, displayed a sense of historical responsibility. It did everything within its power to break the vicious circle of the arms race and wars and to ensure that the change in the international situation in favor of the forces for peace and progress would be distinguished by the relaxation, and not the escalation, of tension. This fact cannot be erased from history.

Another fact is also important in a correct assessment of the positive change of those years in the international situation. The triumph of realism in the citadel of world capitalism also did much to weave the principles of peaceful coexistence by states into the fabric of international affairs. As a result, several fundamental agreements were signed during the Soviet-American summit meeting in Moscow in spring 1972.

Above all, there were the two interrelated documents limiting the most powerful and dangerous types of weapons for the first time in the history of the nuclear age (the first was the Treaty on the Limitation of Antiballistic Missile Systems--ABM; the second was the Interim Agreement on Certain Measures With Respect to the Limitation of Strategic Offensive Arms--SALT-I). They recorded the overall balance, in spite of specific imbalances, of Soviet and American military strategic systems. The Basic Principles of Mutual Relations Between the USSR and the United States was another document of fundamental importance.

These, just as subsequent Soviet-American agreements, established the military-strategic, political, economic and other prerequisites for the reorganization of USSR-U.S. relations on the basis of the principles of peaceful coexistence and cooperation and for the consolidation of international peace and security in general.

It later became obvious, however, that temporary considerations, and not a thorough awareness of the new objective situation in the world and the importance of stronger common security, had prevailed on the American side. American ruling circles primarily wanted to wait out a situation that was unfavorable to them. The nature of imperialism continued to generate power plays. Under these conditions, Washington's willingness to consolidate detente soon began shrinking like shagreen leather.

The Truth About Anti-Detente

In his report at the June (1986) CPSU Central Committee Plenum, M. S. Gorbachev stressed that "the real threat to U.S. security does not emanate from external forces. This country's military-political elite and its adventuristic behavior in the world arena constitute this threat, and it is a considerable one."[4] M. S. Gorbachev also spoke of this in Vladivostok on 28 July.

The U.S. departure from the fundamental Soviet-American accords has been accompanied by an entire series of propaganda cliches to justify and conceal the U.S. violations of these accords by indiscriminately heaping the blame on the Soviet Union. The main distortions have taken the form, in chronological order, of the following theses.

THESIS ONE. Contrary to the Basic Principles of Mutual Relations between the two countries, the USSR has sought to obtain unilateral advantages at the expense of the United States during various conflicts in the "Third World." Here everything has been distorted. The initial premise of this thesis is the alleged special U.S. "rights" in the young developing states. The latter supposedly cannot decide their own future and are only objects of someone else's policy.

The Soviet Union, as a socialist power, has never agreed with these assumptions. Furthermore, as R. Nixon admitted in his memoirs, during his three summit meetings with Soviet leaders, they never denied the Soviet Union's intention to continue supporting national liberation wars. It is understandable that the USSR and the United States had different opinions from the very beginning about the role of anticolonial revolutions and the emerging countries in world development. But the U.S. refusal to cooperate with the USSR in the resolution of regional conflicts, even when its own interests demanded this, is genuine historical shortsightedness.

Opportunities to extinguish the flames of war appeared twice, for instance, in the Middle East. Objective prerequisites for the settlement of the Mideast conflict on a just and lasting basis were first created during and immediately following the "October War" of 1973. Soviet-American contacts created the real prospect of halting Israel's occupation of the Arab lands it had seized in 1967 while securing Israel's right to exist. But neither Israel nor its supporters in the United States wanted this kind of just settlement, as American researcher and diplomat R. Garthoff wrote in his recent study. The pro-Zionist forces became the first anti-detente assault detachment, a detachment with a mercenary interest in undermining USSR-U.S. cooperation in the Middle East and then undermining detente in general.[5]

A second chance to establish lasting peace in the Middle East came 4 years later, in October 1977. The USSR and the United States then issued a joint statement about the need for the quickest possible all-encompassing settlement of the Arab-Israeli conflict and for a conference on this matter in Geneva. Once again, the undermining strength of Israel and its American patrons forced the Carter Administration to go back on its word. President J. Carter then confessed (with regard to Egypt's request to put pressure on Israel): "I simply cannot do this; for me it would be political suicide."[6]

In short, the references to the USSR's "unconstructive" role in the settlement of regional conflicts, as the example of the Middle East indicates, are simply unscrupulous.

Another example of this kind of distortion is the misrepresentation of the causes of the international complications connected with Angola's declaration of independence in 1975 and the consolidation of its sovereignty. American propaganda portrayed the matter in such a way that the Soviet Union and Cuba had supposedly interfered in Angola's internal affairs. In fact, however, everything was quite different. It was Washington that supported the puppet UNITA and FNLA organizations there through the CIA. In conjunction with the South African racists, official Washington supplied them with money and weapons in the hope of putting them in power. When this plan failed, South Africa

launched a massive invasion of Angola with the blessing of the United States, sending its armored columns to Luanda. Under these conditions, the assistance the USSR and Cuba gave the Angolan legal government made it possible to resist the interventionists. This assistance was publicly commended by independent African countries and approved by the UN Security Council in a resolution that the United States could not take the risk of vetoing.

THESIS TWO. The Soviet Union supposedly stopped observing the limitations negotiated with the United States and unilaterally started an arms race to achieve military superiority. This was the notorious myth of the mounting "Soviet military threat." This rumor, which was energetically spread by the pathologically anti-Soviet Committee on the Present Danger, was based on deliberate falsification and distortion. For example, using allegedly new methods of calculating Soviet military expenditures, the inventors of this story declared that these expenditures had supposedly "doubled." In essence, the ruse consisted in the following: The Soviet expenditures which had previously been estimated by deriving their "arithmetical mean" in rubles and in dollars began to be calculated only in dollars, and this promoted their growth--on paper, of course. In exactly the same way, the overall line of reasoning that the USSR had supposedly violated strategic arms limitation agreements with the United States carefully avoided comparisons to the specific "ceilings" set in these agreements. Under the Reagan Administration the allegations became even more unfounded, such as the statements that the USSR was "violating agreements," "increasing its weapons" and so forth.

Documents available to the U.S. administration, however, testified otherwise. An interdepartmental report prepared for it said that the USSR had never been proved guilty of any kind of direct violation. But this report, as American researcher S. Talbott remarked, was deliberately given such a high security classification that even administration officials had no access to it.[7] By the middle of 1983 it was known that another secret report had been compiled, this time by the CIA. It ascertained that the USSR had not increased its military expenditures, but, on the contrary, had been decreasing them since 1976. The Pentagon's intelligence agency also reached the same conclusions. According to its data, which were made public in 1984, between 1977 and 1982 the Soviet Union reduced, and did not increase, the production of ICBM's, SLBM's, nuclear submarines and the majority of categories of military aircraft.[8]

Therefore, the allegation that the USSR used the years of detente to build up its weapons is false from beginning to end. But it pursued the specific goal of justifying Washington's escalation of its own arms race.

THESIS THREE. The shift in the West, especially the United States, from detente to military confrontation with the socialist world was supposedly a necessary move. It allegedly became necessary when the limited Soviet military contingent was sent to Afghanistan at the end of 1979.

The basic aim of this thesis was to change the date marking the beginning of the rapid remilitarization of the U.S. economy and policies to a time 6 months following the actual beginning of this process. It was also supposed to

conceal the United States' responsibility for the beginning of a new round of the arms race by implying that this was simply "Washington's response."

Now that the memoirs of Carter Administration officials (the President himself, his National Security Adviser Z. Brzezinski and Secretary of State C. Vance) have been published, however, these explanations have been refuted. By their own admission, the move made by the United States, and then by its allies, from detente to a policy of anti-detente and an arms race began back in spring 1978. When the President signed the SALT II treaty in June 1979, Washington was already urging its allies to approve the decision to deploy new American intermediate-range missiles in Europe. The decision was passed by the NATO Council on 12 December 1979.

In fall 1979 the opponents of detente also raised a ruckus about the alleged "Soviet combat brigade" in Cuba. This lie was needed to delay and complicate the ratification of the SALT II treaty, which was then being discussed in the Senate. As J. Carter admits in his memoirs, a notation in his diary at that time says that the USSR had maintained "approximately the same level of troops for the last 15 or 20 years" in Cuba.[9] Publicly, however, the President did not contradict the anti-Soviet choir. This severely injured the process of the ratification of the extremely important treaty bearing Carter's own signature.

Therefore, the events in Afghanistan were not the real issue. Militarist groups in the United States were simply feeling the weight of parity and were actively seeking ways to thwart it.

Policy Line of Confrontation

At the beginning of 1981 Reagan's Republican administration, the most right-wing administration in the country's postwar history, took office in the United States. It immediately launched an attack on parity. Enormous military programs were launched with the aim of achieving military superiority for the United States.

As American authors summed up the situation, the radical distinction of the new administration's foreign policy reference points was that it "sought to challenge the limitations that previous administrations had accepted." It hoped that a militarily superior United States could use its strength to "reverse" unfavorable tendencies in the world and "thereby make adjustments and entrenchment unnecessary."[10]

In general, this was a plan to change the course of history by brute force and to take social revenge on a worldwide scale. The ultimate goals of this over-arming were not kept secret. The possibility of a U.S. victory in a nuclear war was openly declared in official statements.

The overt brandishing of the nuclear weapon, however, had the opposite effect. Broad segments of the American public and the United States' allies perceived this as a real danger of devastating nuclear warfare. A mass movement for a nuclear freeze, as the first step toward the reduction of this threat, was

launched in the United States. By fall 1982, 26 national organizations advocating a nuclear freeze and nuclear arms reduction had already formed a single coalition. The total number of Americans organized in this coalition was 18-20 million.

Doubts about the wisdom of the belligerent line the administration had chosen were also widespread in the American ruling class. In April 1982, four well-known Americans who had occupied prominent positions in business and government in the past, M. Bundy, G. Kennan, R. McNamara and G. Smith, wrote a pointedly critical article for FOREIGN AFFAIRS magazine. Stressing that "a nuclear world war would mean ruin for all and victory for none," they advocated the renunciation of the first use of nuclear weapons by the United States.[11] The American public was seriously alarmed by the results of a study by C. Sagan and other scientists. They proved that a nuclear war would lead unavoidably to a climatic catastrophe on earth--a polar night lasting many months, or a "nuclear winter."[12]

In this atmosphere it became clear that the Reagan Administration was in no position to completely ignore the antinuclear feelings in the country. It had to change its tactics, if not its goals. The decision to refuse the negotiation of arms limitation with the USSR (prior to the completion of Washington's military programs) was reconsidered. "The administration was seated at the negotiating table" with the Soviet Union by the demonstrations in Western Europe and the United States, its critics wrote.[13] Even R. Pipes, a well-known "hawk" among the administration's advisers, admitted that the administration had been "forced" to agree to talks with the USSR precisely under the pressure of the antinuclear demonstrations, even though it did not want to do this.[14]

At the end of 1982 and the beginning of 1983, as THE WASHINGTON POST later reconstructed the chain of events,[15] the Pentagon began to worry that it could not push its new military programs, especially the MX program, through Congress under these conditions. It was then that a clever plan was devised: It would stop stressing the need to deploy strategic offensive weapons and amplify the soothing songs about the "defensive" aspects of U.S. military strategy. A "new element," the argument about "strategic defense" against ballistic missiles, was born at a meeting of the President with the American military elite, headed by C. Weinberger, on 11 February 1983. It was to be added to the President's speech of 23 March to camouflage the buildup of American offensive arms. These were the strictly pragmatic, utilitarian origins of the "Strategic Defense Initiative."

But this was only the beginning of the "Star Wars" strategy. Soon the SDI was cynically used to outflank the American nuclear freeze movement. Since millions of Americans were persistently seeking "freedom from the tyranny of nuclear weapons," the administration "seized the initiative from the peace movement." It announced that it was pursuing the same goal and, what is more, was proposing a more "realistic" course, namely the protection of the American population from the nuclear threat by the unilateral erection of a "space shield" instead of a process of complicated negotiations with the USSR.[16] It must be said that this method, however immoral, influenced many Americans. The magic possibility of escaping the nuclear nightmare could, it seemed to them, become a reality.

In fact, however, official Washington conducted an increasingly hostile and openly confrontational line in relations with the Soviet Union. After the "crusade" against communism had been announced in June 1982, the USSR was called the "evil empire" in March of the next year, and it was announced that "the Scriptures and Jesus himself instruct us to oppose it with all our might."[17]

In the second half of 1983 the administration crossed a qualitatively new frontier: It moved from belligerent rhetoric and preparations for militarist actions to the overt use of force. A plane was sent to spy on the USSR in the air space over the Far East, and its unsuspecting passengers were sacrificed to further the plans of the CIA. The Pentagon also took action: A small independent country, Grenada, was ruthlessly crushed. American warships and planes bombed the Arab population of Lebanon. The deployment of new American nuclear missiles began in Europe.

Therefore, by the end of 1983 the United States had completed its 180-degree turn away from detente. It had reverted to military confrontations with socialism and national liberation forces. Reason again gave way to muscle reflexes, and realism was crushed by imperious ambitions.

Therapeutic Effects of Reality

The Soviet Union firmly rebuffed the nuclear blackmail. It proved unequivocally that the American administration would have to bear the political responsibility for the torpedoed talks on nuclear arms limitation in Europe and on strategic arms limitation and reduction.

A work published at that time, "The Russians and Reagan," stated the need to admit the "simple fact" that the Soviet Union would never agree to American unilateral demands regarding the kind of strategic arsenal it should have. Furthermore, it went on to say, there is reason to believe that the result of the "pressure of the tough U.S. line" on the USSR "might be the direct opposite of the one intended."[18] The administration's line in relations with the Soviet Union, another work said, had "simply reached an impasse."[19] Many called the result of the administration's actions its "Pyrrhic victory."[20]

A. Harriman, the American elder statesman and businessman and one of the most knowledgeable experts on American-Soviet relations, began the year of 1984 with a disturbing article in THE NEW YORK TIMES. "A depressing consequence of Reagan Administration diplomacy," he wrote, "is this: If the current course of events in the sphere of nuclear arms and American-Soviet relations is allowed to continue, we may be faced not only with the risk, but also the reality, of nuclear war."[21] Soon afterward the alarm was sounded by former President R. Nixon. "The continuation of confrontation with the Soviet Union could ultimately lead only to a conflict," he stated, calling this conflict "suicidal" for the United States. Nixon voiced serious doubts that this policy line could retain the "necessary political support" within the country.[22]

The year of 1984 was a special one in the United States: The presidential elections were coming up, and this was probably one of the main reasons why

President Reagan called U.S.-Soviet relations a matter of "tremendous importance to the cause of peace" in his speech of 16 January. He stated that the United States and the USSR had "common interests" and that "the main one is the avoidance of war and the reduction of arms levels." In connection with this speech, the American press remarked that the President's advisers had convinced him to "tone down his anti-Soviet rhetoric" because statements of this kind "only alarm the voters."[23]

The mood of the latter was clearly revealed not long before the election in a public opinion poll that was publicized extensively: 96 percent of the Americans, as against 3 percent, felt that a war with the Soviet Union would be extremely dangerous; 89 percent, as against 9 percent, agreed that there could be no winner in a nuclear war; 83 percent, as against 14 percent, were afraid that the result of this kind of war would be the destruction of life on earth itself. Finally, 68 percent, as against 20 percent, rejected the idea that there is no alternative to nuclear war. As the authors of the poll concluded, all of this reflected a "dramatic change" in the thinking of the American voter.[24]

Under these conditions, the Republican administration approached the election with statements about the need to strengthen international peace through the normalization of relations with the USSR. Admittedly, it avoided proposing any kind of specific program. The question naturally arising as a result of this was worded in the following way by THE NEW YORK TIMES: "Much--perhaps even the future survival of the United States--will depend on whether Reagan remains just as receptive to the actual priorities of public opinion in the foreign policy sphere as he was forced to be for the sake of political expediency during the campaign."[25]

Differences Grow More Pronounced

After the frontier of the November 1984 elections had been crossed, the administration's future foreign policy reference points had to be determined. This coincided with the first major difference of opinion in the American ruling class in connection with the interpretation of the United States' obvious difficulties in the international arena. There were two different opinions regarding possible adjustments. One was that reliance on force was dangerous; according to the other, reliance on force was, on the contrary, inadequate, and the logical conclusion was that more "pressure" had to be applied.

The re-elected administration turned out to be subject to the concerted pressure of ultra-rightwing forces, whose overall mood was reflected in efforts in three main areas.

Above all, there were the attempts to return to overtly confrontational precepts concerning the "main enemy," the Soviet Union, to the line of social revenge. The pioneer was the ultra-conservative Heritage Foundation, which submitted a set of specific recommendations to the administration just 10 days after the election: to stop observing the SALT II treaty and to step up the unilateral buildup of the American nuclear arsenal; to refuse to stop nuclear

tests; to avoid concluding a treaty banning chemical weapons; to strive for the collapse of the Soviet Union; to launch paramilitary operations against progressive nonaligned countries, and so forth.[26] R. Pipes also laid down the law in the same terms: "If the Soviet Union changes its system, ideology and policy,...then, and only then will meaningful arms limitation agreements be possible."[27]

These might have been regarded as unofficial statements, but U.S. Secretary of State G. Shultz' address to a Senate committee in January 1985, which was subsequently transformed into a magazine article in April of that year in FOREIGN AFFAIRS, indicated the opposite. Stating that "the balance of power is tipping in our favor," Shultz stressed: "We must be strong and, what is more, willing to use our strength."[28]

The second area of the administration's more intense activity after the elections, when the wishes of the American voters no longer had to be considered, was the elevation of the "Strategic Defense Initiative" to the status of an actual military program. The SDI discarded its no longer necessary trappings as a propaganda screen for other military programs and became the strategic weapon of the new dimension the United States was seeking. Increasingly large sums were invested in the development of "Star Wars" technology. There were more frequent statements at the highest level that the United States would "on no account" give up this program.

The third area of more intense administration activity after 1984 concerned what had first been called the "Reagan Doctrine" and then was more frequently termed "neoglobalism." The administration took the offensive, and not only against the nonaligned countries friendly with the Soviet Union, even going so far as financing and equipping internal counterrevolutionary forces in these countries and practicing direct intervention, but also against all of the nonaligned and developing countries whose independent policies were distasteful to Washington. White House Communications Director P. Buchanan, known in the United States as one of the authors of the "Reagan Doctrine," actually wrote the following: "If half of the members of the club of tyrants known as the Organization of African Unity were hanging from lampposts from Accra to Dar es Salaam, it would be no more than they deserve." Buchanan advised the administration to crack down on the most prominent nonaligned countries: India in Asia, Tanzania in Africa, and Mexico in Latin America.[29]

Therefore, the U.S. ruling clique was moving toward the intensification of power politics in all areas. The danger of critical complications in the world arena increased. But it was precisely this tendency, by virtue of its indisputable adventurism, that began strengthening the opposite feelings in the U.S. ruling class--self-preservation and worries about the real security of the country.

At first these feelings did not go beyond isolated, although authoritative, statements, but their realistic nature and sound logic became increasingly obvious. The same four prominent Americans who had advocated the renunciation of the first use of nuclear weapons now advised the renunciation of the "Star Wars" strategy as something that could lead to the complete destabilization of Soviet-American relations.[30] Former prominent officials in the Carter

Administration, L. Gelb and A. Lake, published a book calling for "a more sensible and realistic concept of foreign policy." They said that the American leaders "must return to a position of responsibility."[31] In turn, a group of well-known American ideological centers warned that the United States could overreach itself unless it learned to distinguish between the "possible and desirable" and see "the gap between aspirations and capabilities."[32] A book published by the Council on Foreign Relations also spoke of the need to find a "balance between ends and means" and the need for an understanding of the "complexity" of the world and of the fact that "if we choose an overly ambitious strategy, we will ultimately fail."[33]

It is true that these attitudes, and this is quite important, have not reached the ruling elite yet and are not even the prevailing ones, but they are growing and spreading. The more realistic segment of the powers that be has begun seeking a practical alternative to the administration's current policy line.

Long-Term Elements

All of this applies to the subjective aims of the American ruling class and its segments at the present time. What are the objective possibilities for the continuation of the current U.S. imperious, hegemonic line? It must be said that these possibilities are gradually diminishing--slowly but surely.

Above all, the need for the normal development of the American economy has been an increasingly strong limiting factor. The enormous federal budget deficits, which have reached the astronomical level of around 200 billion dollars a year as a result of the arms race, cannot last forever. Up to the present time, American imperialism has covered its debts by pumping huge quantities of capital into the country from abroad. This was done at the expense of the allies and through the robbing of developing countries by transnational monopolies. These opportunities are now running dry. The shortage of funds has already resulted in the curtailment of the growth of military spending by the American Congress in 1985 for the first time in many years.

The administration's hope of obtaining a space strike weapon also seems less and less realistic. This is an extremely adventuristic idea even from the military standpoint. It is not only that most scientists have doubts about the technical feasibility of the smooth operation of the "Star Wars" mechanism. For this reason, despite deliberately cheerful statements, Congress is still reluctant to take any irreversible steps to stimulate a race for space weapons. The very attempt to emplace strike weapons in space could be a fateful and destabilizing step.

President Reagan's statement of 27 May 1986 regarding the intention to stop observing the SALT II treaty in a few months has catalyzed processes that are quite contrary to those the administration expected. Broad segments of the American public and, under their pressure, many congressmen and senators, as well as U.S. allies, hastened to dissociate themselves from this decision. Judging by all indications, a new round of complications in NATO is just beginning for official Washington.

The administration's irresponsible militarist aims and actions, which are increasing the danger of thermonuclear catastrophe, are tantamount to skating on thin ice as far as domestic political difficulties are concerned. Twice in recent years the White House has had to deal with mounting antiwar feelings in the country. The first time, in 1982, it managed to circumvent the nuclear freeze movement, which had turned into a serious force, with the help of a fraudulent maneuver; the second time, during the campaign year of 1984, it had to don the mask of a peacemaker. The new wave of mass peace movements in the country has not reached a high level yet, but this is certainly not due to the absence of deep-seated processes.

Furthermore, as the influential American magazine FOREIGN AFFAIRS stated in its survey of world events in 1985, the Soviet Union's impact on the international situation is qualitatively increasing.[34]

A Dictate of the Times

The threat looming over mankind in connection with the continuation of the arms race and its imminent--through the fault of imperialism, especially American imperialism--new and possibly fatal round in space, is of unprecedented dimensions. Consequently, the responsibility for the future of mankind is also unprecedented.

The Political Report of the CPSU Central Committee to the 27th Congress states the need to "seek, find and use even the slightest chance--while it is still possible--to stop the tendency toward the mounting danger of war."[35] The effective employment of the creative forces of socialism and its impact on the international situation has followed a definite sequence.

In July 1985 the Soviet Union firmly seized the initiative in the matter of stopping nuclear tests. With its unilateral moratorium on all nuclear explosions, at first for 5 months, then for another 3 and then until 6 August 1986, it graphically demonstrated socialism's concern for the future of mankind and its moral-political superiority. The program for the complete elimination of nuclear weapons by the year 2000 and accompanying measures, put forward on 15 January 1986 in a statement by the general secretary of the CPSU Central Committee, is of great importance in this context. The 27th CPSU Congress reaffirmed all of these initiatives and proposed the basic ways of creating an all-encompassing international security system in the military, political, economic and humanitarian spheres. In April 1986 Moscow suggested the substantial reduction of conventional arms and armed forces in Europe, from the Atlantic to the Urals. This initiative was later amplified and clarified in the program for the reduction of armed forces and conventional arms in Europe, adopted at a session of the Political Consultative Committee of the Warsaw Pact states in Budapest in June 1986.

A realistic analysis of the state of affairs reveals that this group of consistent initiatives by the Soviet Union and socialist community did not gain the attention it warrants in the West, especially the United States. The impetus of solutions based on strength, engendered by the very nature of imperialism, is still too great there.

After discussing the situation at the Soviet-American talks in Geneva with Warsaw Pact members, the Soviet Union decided, as M. S. Gorbachev said in his report at the June (1986) CPSU Central Committee Plenum, not to continue the impasse in these talks, but to seek new approaches to clear the way for nuclear arms reduction. The USSR proposed an interim option to the American side: It suggested the conclusion of an agreement on non-withdrawal from the ABM treaty for at least 15 years, the limitation of SDI projects to laboratory research and the imposition of equal limits on strategic offensive arms (ICBM's, SLBM's and heavy bombers). In the draft agreement on intermediate-range missiles (IRM) in Europe, the USSR agrees that English and French nuclear missiles could remain at their present level on the condition of an equal balance of U.S. and Soviet IRM's in the European zone. In addition, the number of Soviet IRM's in Asia would not be increased either.

At the end of July the President of the United States sent a reply to the Soviet proposals. Judging by all indications, however, it specified no definite moves in a constructive direction.

There is no alternative to peaceful coexistence and nuclear disarmament. The need to solve the most pressing problems common to all mankind, especially the prevention of thermonuclear catastrophe, should ultimately awaken the instinct of self-preservation in people.

FOOTNOTES

1. "Materialy XXVII syezda Kommunisticheskoy partii Sovetskogo Soyuza" [Materials of the 27th CPSU Congress], Moscow, 1986, p 20.

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3. S. Hoffmann, "Dead Ends. American Foreign Policy in the New Cold War," Cambridge (Mass.), 1983, p 74.

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5. R. Garthoff, "Detente and Confrontation. American-Soviet Relations from Nixon to Reagan," Wash., 1985, pp 405-407 (for a discussion of this book, see p 93 of this issue of SSHA: EPI).

6. Quoted in: G. Fahmi, "Negotiating the Peace in the Middle East," Baltimore, 1983, p 196.

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10. "Eagle Defiant. United States Foreign Policy in the 1980's," edited by K. Oye, R. Lieber and D. Rothchild, Boston, 1983, pp V, 5.

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22. U.S. NEWS AND WORLD REPORT, 30 January 1984, pp 22-23.

23. THE NEW YORK TIMES, 24 February 1984.

24. FOREIGN AFFAIRS, Fall 1984, pp 33-38.

25. THE NEW YORK TIMES, 9 November 1984.

26. THE WASHINGTON POST, 20 November 1984; THE CHRISTIAN SCIENCE MONITOR, 7 December 1984.

27. R. Pipes, Op. cit., p 242.

28. FOREIGN AFFAIRS, Spring 1985, pp 707, 718.

29. "Future 21. Directions for America in the 21st Century," edited by P. Weyrich and C. Marshner, Greenwich (Conn.), 1984, pp 33, 38 (also see N. S. Beglova and V. A. Kremenyuk, "The 'Reagan Doctrine'--Efforts To Escalate Intervention," SSHA: EPI, 1985, No 11--Ed.).

30. FOREIGN AFFAIRS, Winter 1984/85, pp 264-278.

31. I. Destler, L. Gelb and A. Lake, Op. cit., pp 283-288.

32. "Eagle Defiant," pp VI, 29, 226.

33. "The Making of America's Soviet Policy," edited by J. Nye, New Haven (N.J.), 1984, pp 262, 343, 354.

34. FOREIGN AFFAIRS. AMERICA AND THE WORLD 1985, pp 479-498.

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CSO: 1803/01

U.S.-USSR TRADE, ECONOMIC COOPERATION

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 26-32

[Article by T. F. Baturin: "Trade and Economic Cooperation by the USSR and the United States (Compensatory and Commodity Exchange Agreements)"]

[Text] Compensatory agreements are one of the modern forms of the Soviet Union's trade and economic cooperation with industrially developed capitalist countries and are concluded mainly in the development of crude and energy resources, the production of semimanufactured goods, chemical products, mineral fertilizers and consumer goods, and so forth. They envisage the organization of highly effective and specialized production units of various types on the territory of the USSR, with the extensive use of modern scientific and technical achievements by means of shipments of complete sets of industrial equipment, licenses, technical documents and technology on the basis of special credits from foreign banks. After these enterprises have been built and begin operating, they produce high-quality goods needed by both partners on a long-term basis.

Accounts are settled by means of the export of some of the products of these enterprises from the Soviet Union. Compensation shipments generally represent 20-30 percent of the output of the facility, while the remaining 70-80 percent is used for the satisfaction of the domestic needs of the Soviet Union and for export to third countries. The complete repayment of credits generally takes 5-8 years.

It is precisely this kind of transaction that represents, according to the definition of the UN Economic Commission for Europe, one form of long-term industrial cooperation, and these transactions are compensatory in what could be called the narrow sense of the term.

Commodity exchange (or barter) agreements envisage reciprocal shipments of goods of equal value without any long-term industrial, scientific and technical cooperation. Experience has shown that the commodity exchange form of trade is of definite benefit to both countries in some cases, because there is no need to acquire large sums of foreign currency and bank credit, and this is particularly important now that the cost of the latter is rising.

Soviet foreign trade practices include strictly compensatory and barter transactions as well as agreements combining some elements of both. For example, these include contracts envisaging the production of a specific commodity on foreign licenses (but without the extension of credit or the delivery of complete sets of equipment), with payment in goods; scientific and technical cooperation supplemented with reciprocal commodity deliveries, and so forth. Since these contracts include, on the one hand, long-term cooperation and, on the other, the compensation of the partner with Soviet manufactured goods, they can also be categorized as compensatory agreements in the broad sense of the term.

Unfortunately, full-scale trade, economic, scientific and technical cooperation between the USSR and United States is still being prevented by the attempts of American ruling circles to use trade to exert political pressure on the Soviet Union. At the beginning of the 1970's, when the process of detente was growing stronger, trade and economic relations underwent a positive change. A Soviet-American trade agreement was signed in 1972, granting the Soviet Union most-favored-nation status and Export-Import Bank credit, which could have promoted broader trade relations in the future, including cooperation on a compensatory basis, in which many prominent U.S. businessmen had expressed an interest.

The agreement, however, never went into effect because the American Congress passed the so-called Jackson-Vanik amendment to the 1974 Trade Act and thereby made trade relations and the possibility of the Soviet use of U.S. government credit conditional upon some aspects of Soviet domestic policy. This amendment, just as its lengthy discussion in the Congress, accompanied by an anti-Soviet campaign, considerably complicated matters pertaining to trade policy and led to the cancellation of promising joint projects.

Long-term cooperation between the Soviet Union and the United States on a compensatory basis began in 1973, when the USSR Ministry of Foreign Trade concluded an agreement with the Occidental Petroleum firm on the establishment of a gigantic complex in Tolyatti for the production, storage and shipment of mineral fertilizers and on reciprocal shipments of superphosphoric acid from the United States to the USSR and ammonia, carbamide and potassium chloride from the USSR to the United States. On the strength of this agreement, the Soviet Union purchased technical documents, licenses, industrial equipment and construction materials from firms in several capitalist countries, including American firms, for eight plants for the production of ammonia with a combined output of around 4 million tons a year and two plants for the production of carbamide with a total output of around a million tons a year, as well as equipment for the storage and shipment of superphosphoric acid, ammonia, carbamide and potassium chloride, which was installed at the Odessa and Ventspils port facilities. Besides this, pipe and equipment were purchased for the construction of the Tolyatti-Gorlovka-Odessa ammonia pipeline and the assembly of rubberized railway cisterns for the transport of superphosphoric acid. The equipment, documents and licenses were paid for with credit from banks in the United States and other Western countries. American firms made around 37 percent of these shipments, and the rest were made by firms in France, Italy and the FRG. All of the equipment envisaged in the agreement was delivered, installed and put in operation between 1979 and 1982.

Another two agreements were signed with the Occidental Petroleum firm in 1974 to regulate shipments of chemical goods from the USSR to the United States. To compensate for Soviet imports connected with the construction of the production complex in Tolyatti, the firm pledged to purchase ammonia from the USSR in quantities securing the complete coverage of the expense of the new equipment and the payment of interest on the credit (a total of 1.6 million tons of ammonia a year). Besides this, this agreement envisaged the exchange of commodities between the two sides: The Soviet Union pledged to buy a million tons of superphosphoric acid a year for 20 years beginning in 1978 from the United States, and Occidental Petroleum pledged to buy around 1.5 million tons of ammonia, 1 million tons of carbamide and 1 million tons of potassium chloride a year from the USSR for a sum equivalent to the cost of the superphosphoric acid delivered to the Soviet Union.

The agreement with Occidental Petroleum resulted in a substantial increase in the nitrogen fertilizer output in our country, and this played a definite role in increasing the yield of several agricultural crops. Besides this, the exchange of scientific, technical and production experience with the firm's specialists contributed to the development of the optimal technology for the use of the fertilizer with a view to the distinctive natural and climatic features of agriculture in the USSR.

In 1973 the USSR Chamber of Commerce and Industry concluded an agreement with the Occidental Petroleum firm "On Cooperation in the Design and Construction of a Center of International Trade and Scientific and Technical Relations with Foreign Countries in Moscow."

The center was to be built with the use of American credit and with the participation of Occidental Petroleum, in the capacity of general contractor, in its planning, construction and financing. To this end, the USSR Foreign Trade Bank signed an agreement in May 1974 with the American Chase Manhattan Bank and U.S. Export-Import Bank, in accordance with which the Soviet Union was extended credit in the amount of 90 percent of the cost of import purchases connected with the construction of the center. The credit was to be repaid between 1979 and 1989 with the advance payments of foreign firms leasing center facilities, foreign currency receipts from its operations and the above-plan currency receipts on USSR Chamber of Commerce and Industry operations.

The center consists of an administrative building with 250-300 agencies of foreign firms, an international-class hotel with 600 rooms, a condominium-style hotel with 625 apartments for representatives of foreign firms who live in Moscow, a conference facility, a club for business meetings, an information center, a library and a garage with a service station. Contracts for the construction project were awarded by 18 Soviet foreign trade associations.

The American subcontractors involved in the project included such well-known firms as Armco Steel (metal structures), Otis (elevators and escalators), Robertson (metal decking), Fischbach & Moore (electrical equipment and special systems), IT&T (communication system), DMC (mini-computers), Wachtel (sanitary equipment and ventilation systems), Trans Vac (waste disposal systems), Caterpillar (bulldozers), Brown (washing machines), Amimpex (laundry equipment),

Long Island (concrete mixers), Thomson (automatic concrete pumps), Weiss (kitchen equipment), Communication Enterprises (office equipment), Belvedere Products (barber shop equipment) and Atlas Copco (instruments). Equipment and materials were supplied by 55 U.S. firms.

Besides this, firms from other countries also took part in the project as subcontractors. The center was opened on 1 January 1982 and has been functioning successfully since that time, promoting the development of mutually beneficial foreign economic, scientific, technical and cultural contacts between the Soviet Union and foreign states.

The Pepsico firm, which produces nonalcoholic beverages, is one of the largest U.S. corporations and ranks second in the world in the production and sale of these beverages, surpassed only by the Coca-Cola firm. Pepsi-Cola, which is sold in more than 130 countries, became the first consumer item of American origin to be sold on a broad scale in the Soviet Union. The cooperation on a long-term compensatory basis with the Pepsico firm began in April 1973, when the All-Union Soyuzplodoimport Association concluded a general agreement with it, in accordance with which the firm was granted the exclusive right to sell the Stolichnaya brand of Soviet vodka in the United States for 10 years, and Soyuzplodoimport guaranteed that Pepsi-Cola would be the only cola beverage sold in the USSR during the period covered by the agreement. Around 3.3 million decaliters of Stolichnaya vodka were delivered to the United States between 1973 and 1984, and 111,000 units of beverage concentrate[1] and the equipment for the preparation and bottling of Pepsi-Cola were purchased from the firm and delivered to the USSR. In all, 15 bottling production lines were purchased and were installed in Moscow, Leningrad, Kiev, Tallin, Alma-Ata, Novorossiysk, Yevpatoriya, Novosibirsk, Tashkent, Sukhumi and some other cities; automatic equipment for two bottle production lines and a bottling machine with molds for the production of plastic containers were also purchased.[2]

In May 1985 Soyuzplodoimport signed a new agreement with Pepsico on the delivery of 5 million decaliters of Stolichnaya vodka to the United States between 1985 and 1990 in payment for deliveries of the firm's products to the USSR. The decision to sign the contract was made with a view to the fact that this firm had proved to be an extremely reliable partner during the preceding period of cooperation, in spite of difficulties connected with U.S. trade policy.

In addition to producing soft drinks, the Pepsico firm has experience in building fast-food establishments selling no alcoholic beverages. This experience is of practical interest to the Soviet Union. The 12th Five-Year Plan envisages the provision of existing and new public dining facilities with the most modern equipment. With a view to this, the Ministry of Trade and the Ministry of Foreign Trade are investigating the possibility of cooperation with Pepsico in the creation of a network of such establishments, each with seating for 60 customers and with a minimum staff of service personnel, in the USSR.

A second American soft drink, Fanta, is being produced and bottled in Moscow, Leningrad and Tallin on the basis of an agreement concluded by the Soyuzplodoimport Association and the Olympics-80 Organizational Committee with the Coca-Cola firm. By the end of 1985, 38,400 units of Fanta concentrate had been delivered to the USSR in accordance with the agreement. The concentrate

will continue to be delivered to the Soviet Union. The firm is being paid with the funds earned from the sale of Soviet vodka in the United States.

In April 1979 an American cigarette manufacturer, the Philip Morris firm, and the USSR Ministry of Foreign Trade signed a general agreement on cooperation in the growing, picking and processing of Virginia tobacco (in the Azerbaijan SSR) and burley tobacco (in the Moldavian SSR) and the production of the Marlboro brand of cigarettes in the USSR. Tobacco grown in the USSR was to be shipped to the United States to cover the cost of the licenses, tobacco blend and materials acquired by the Soviet side. By the end of 1985 the work on this agreement had brought the Marlboro output in the USSR up to around 500 million cigarettes a year. When the agreement expired in 1985, the firm proposed the continuation of the cooperation on a compensatory basis, to secure an output of 2.6 billion Marlboro cigarettes a year in the USSR by 1990. The firm expressed a desire to purchase export-quality Virginia and burley tobacco and the Abkhaz SSR's Samsun tobacco from the USSR in payment for shipments of the tobacco blend and non-tobacco materials and royalties[3] on the production of Marlboro cigarettes in the USSR. A new compensatory agreement is now being negotiated with the firm.

In November 1982 the All-Union Soyuzkhimeksport Association and the American Monsanto firm, one of the world's leading producers of agricultural chemicals, signed an agreement on long-term cooperation and reciprocal shipments of chemicals. The Soviet items sent to the United States include ammonia, orthoxylene, acrylonitrile, aniline, phthalandione, methanol, cyclohexane, butyl alcohol, acetylsalicylic acid and others. The Monsanto firm is supplying the USSR with synthetic rubber, plastic, peptizing agents, feed additives, special chemical products, agricultural chemicals for plant protection (the Roundup, Lasso-Atrazine, Avadex and Glyphosat herbicides) and other commodities.

In an attempt to increase exports of its agricultural chemicals to the USSR, Monsanto is conducting active scientific and technical cooperation with interested Soviet organizations within the framework of existing protocols and operational programs, by the terms of which the firm is supplying the Soviet Union with agricultural equipment and chemicals. One of these programs envisages the mastery and incorporation of ridging techniques of corn and soybean cultivation in Kharkov Oblast with the aim of the possible northward move of heat-loving crops and their earlier planting. Another program concerns the introduction of so-called ecofarming--that is, a technology envisaging the use of herbicides instead of mechanical soil cultivation to increase the moisture content, reduce soil erosion and conserve energy and manpower--in Stavropol Kray.

In February 1984 a contract was signed with the Monsanto firm on the sale of two Prism gas distributing units to the USSR. In exchange, the firm received ammonia shipments of equal value.

In the last 10 years Soviet purchases of machines and equipment on a compensatory basis have represented around 20 percent (including around 4 percent from the United States) of Soviet imports from the industrially developed capitalist countries. In a comparatively short period of time, this equipment

has been used in the USSR to build and operate large facilities in the gas, chemical, petrochemical, metallurgical, timber, pulp and paper and coal industries and others--around 70 large industrial facilities in all. The assortment and geography of Soviet exports have been expanded. In the chemical industry, for example, there has been an increase of 54.8 percent in capacities for the production of ammonia, with corresponding figures of 79.2 percent for carbamide and 54 percent for polyethylene. New Soviet export goods have also made their appearance: methyl alcohol, paraxylene, orthoxylene, polypropylene, polystyrene, aniline, dimethylterephthalate, plywood, iron ore pellets and others. The items produced in compensatory facilities are distinguished by high quality because the foreign suppliers of the equipment will accept only items meeting world market requirements in compensation.

Between 1975 and 1985 the volume of exports shipped by the terms of compensatory agreements increased more than 16-fold, and during the years of the 11th Five-Year Plan these exports surpassed the indicator for the 10th Five-Year Plan 3.4-fold. The increase in Soviet exports of chemicals has been particularly rapid. For example, the Soviet share of the world ammonia trade increased after the start-up of the production complex built in Tolyatti with the aid of Occidental Petroleum from 4.6 percent in 1974 to 55-60 percent in 1985. The Soviet Union is now the largest supplier of ammonia to the world market.

The cooperation by Soviet organizations with firms in the capitalist countries on a compensatory and barter basis objectively reflects a trend in international trade. According to the data of various Western firms and organizations, total transactions based on full or partial compensation represented only 2 percent of world trade in 1976. The figure had already reached 30 percent in 1982 and could rise to 40 percent by the end of the 1980's. With a view to this tendency, many large Western firms and banks have established special departments of reciprocal and compensatory trade. An American association of corporations engaged in compensatory and reciprocal trade (USACC) was recently founded in the United States to give American firms effective assistance and support in transactions of this kind with foreign partners. The creation of this association, on the model of existing organizations in several developed capitalist countries, was initiated by firms well known in the U.S. business community--Amax, Amoco, Caterpillar, Combustion Engineering, Hercules, Honeywell, Merck and others.

It must be borne in mind, however, that the large scales of compensatory transactions require guarantees of their completion from the U.S. firms themselves and from the American administration. The Soviet side must be completely certain that the U.S. firms will unconditionally fulfill their obligations in line with the compensatory agreements and contracts. This will be in the interest primarily of the American companies themselves.

In the middle of the 1970's, during the period of detente, several promising large-scale projects were being negotiated by Soviet organizations and U.S. firms. One example is the "construction project of the century"--the Urengoy-Uzhgorod export gasline. American corporations had a chance to

participate extensively in this project, especially in supplying the equipment for 41 compressor stations with a total cost of over a billion dollars. As a result of the American administration's negative position, however, the equipment and pipe were purchased from firms in the FRG, France, Italy and Great Britain. Compressor stations equal to the best foreign models were designed and built in the Soviet Union. More than 10 such stations of domestic origin were installed and are operating on the pipeline. When the contracted deliveries of pipe layers from the Caterpillar firm for the Urengoy-Uzhgorod gasline were prohibited, pipe layers of the same parameters were purchased from Japan.

In spite of the official Washington policy of discrimination against the USSR, many American firms are still actively promoting the development of bilateral trade with our country, including compensatory transactions. The possibilities and terms of cooperation in new projects are being negotiated with several interested American companies, such as, for example, the design and construction of a plant for the production of sleet-proof offshore platforms in the Far East (the McDermott and Brown & Root firms), the construction of sleet-proof offshore platforms for the exploitation of oil and gas condensate deposits on the shelf of Sakhalin Island (Pool Company Petroleum Services, Pool Arctic Alaska, Foster Wheeler Petroleum Development, Armco International, Freed & Goldman and Marine Concrete Structure), the construction of a complex in the USSR for the production of 50,000 tons of nylon fiber a year (the technology of the Du Pont de Nemours firm), the delivery of pumps and valves to the USSR for the Belovo-Novosibirsk coal line, manufactured on Soviet licenses (Ingersoll-Rand), and so forth.

Soviet-American cooperation on a compensatory basis could be developed successfully in the 12th Five-Year Plan and later in the offshore drilling and transport of natural gas and oil, in the chemical industry, in the timber and pulp and paper industries, in ferrous and nonferrous metallurgy and other areas. Furthermore, American firms could cooperate with Soviet organizations in the establishment of new facilities and participate on a compensatory basis in the modernization and remodeling of existing enterprises.

The number of barter transaction proposals received from American firms has also increased recently. Transactions of this kind are being negotiated with Continental Grain and Stauffer Chemicals, and the proposals of Dresser Industries, Du Pont de Nemours and other firms are being considered.

The Soviet Union is a country with tremendous production potential and rich natural resources. It is capable of independently attaining all of the objectives of its socioeconomic development. Nevertheless, as speakers noted at the 27th CPSU Congress, the USSR will continue participating in international economic cooperation with all willing countries, including the United States.

However, as Chairman N. I. Ryzhkov of the USSR Council of Ministers stressed in his speech at the party congress, "cooperation has to be mutual. It demands the strictest consideration of mutual interests and the complete renunciation of all of the restrictions, boycotts and embargos organized by the United States. Economic relations in today's world can be built only on the basis of equal rights, trust and the strict observance of mutual agreements."[4]

The prospect of long-term compensatory cooperation by the Soviet Union with the United States, on the condition that the American side observe the principles of mutuality and equality, is indisputably promising. This kind of cooperation would be of mutual benefit from more than just the economic standpoint. Along with other forms of foreign economic contacts, it now represents a factor contributing to stronger mutual understanding between our populations and, consequently, serves the cause of peace on earth.

FOOTNOTES

1. A unit of concentrate is the amount needed for the derivation of 1,000 decaliters of the beverage.

2. Whereas the agreement with Occidental Petroleum is an example of compensatory cooperation in its "classic" form, the contract with Pepsico is more of a compensatory agreement in the broad sense of the term because, firstly, no bank credit is involved and, secondly, payment is made in products other than those produced at the enterprises established with the aid of the foreign firm.

3. Contracted payments to the firm representing a percentage of the value of the products manufactured on its license.

4. "Materialy XXVII syezda Kommunisticheskoy partii Sovetskogo Soyuza" [Materials of the 27th CPSU Congress], Moscow, 1986, p 257.

8588
CSO: 1803/01

U.S. PRE-ELECTION MOOD ASSESSED

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 44-50

[Article by N. D. Turkatenko: "America on the Eve of the Elections (Letter from Washington)"]

[Text] The hot and humid summer is having an oppressive effect on the inhabitants of Washington and their many guests--Americans from other parts of the country who have come to the capital either as tourists or for meetings with their congressmen and senators. Whole families of tourists stand in long lines for a tour of the White House or simply stroll past the chief of state's residence. They fatten the wallets of the shrewd pair of "businessmen" who have set up a life-size photograph of President Reagan on the sidewalk. Anyone who wants to can take a picture with his arms around the President. The price is 7 dollars, or 5 dollars if the tourist brings his own camera. There is no shortage of customers. Of course not! It is very lifelike. When the tourist goes home, he can brag to his friends and acquaintances.

The ones lucky enough to tour the White House are quickly rushed through apartments set aside specifically for this purpose. The rest of the building is off limits: It is heavily guarded because it houses the offices of people with no time for tourists.

At one time political life in the American capital slowed down perceptibly or almost came to a halt in the summer. Now there is no time for this. In spite of the 35 degree heat and the 80-90 percent humidity, the White House Staff, the State Department and the other main departments have a full work schedule. Members of Congress and their large staff of public relations advisers also work on the preparation of reports, research and propaganda materials. The Republican administration and the members of Congress from both parties already have their sights on the mid-term elections coming up in November, during which a third of the seats in the Republican-controlled Senate and all of the seats in the Democrat-controlled House of Representatives will be up for re-election.

The ratio of Republicans to Democrats in the Senate is now 53:47. According to many observers, for the first time in recent years the Democrats have a good chance of changing this balance in their favor and of winning the majority of Senate seats. Of course, this would be a major defeat for the

administration. An impressive victory for the Democrats in the congressional elections will help them consolidate their ranks, which, as even the Democratic Party leaders admit, have been in a state of disorder for a long time, as a result of which the party's influence in the country has grown much weaker. At the same time, people here believe that the policy of the Republican Party, which has presented the country with many insoluble problems, has been discredited in a number of areas. Only the personal popularity of the "great communicator," as R. Reagan is often described, has saved the situation up to now. But since this is Reagan's second and last term in office, Republicans are already conducting a frenzied search for presidential and vice-presidential candidates. Their choices now are, respectively, G. Bush, now the vice-president, and J. Kemp, a comparatively young but extremely energetic member of the House of Representatives who is winning increasing support in rightwing circles. The latter is already being "promoted" at various neoconservative forums.

With what kind of accomplishments are the Republicans and Democrats approaching the congressional elections, the results of which, as people here have stressed, will largely determine the outcome of the "presidential race"? What is the mood of the voters?

It is still difficult to judge this mood, although some predictions can be made on the basis of local news reports reaching the capital. As far as accomplishments are concerned, their summation must begin with a discussion of the scales and severity of at least a few of the major problems in domestic policy, the state of the economy and the administration's foreign policy line.

Problems connected with the economy and military spending occupy a prominent position in Washington newspapers. Attempts have been made to analyze just how close to the truth the administration's cheerful statements are when it asserts that its economic policy, the very one that was christened "Reaganomics," has let Americans live better, that "America has rolled up its sleeves and gone back to work" and that national security has been strengthened immeasurably, as a result of which Americans can now sleep better at night. Assertions and statements of this kind are voiced daily by prominent administration spokesmen. They skillfully use the mass media, making speeches and statements, sometimes twice a day, with extensive press and television coverage. This applies in particular to Secretary of Defense C. Weinberger, Secretary of State G. Shultz, Lt Gen J. Abrahamson, the man in charge of the work on the "Strategic Defense Initiative," and, of course, President Reagan himself. And this does not include the daily White House and State Department briefings and the weekend statements and comments of officials from these departments. There is also a constant flow of speeches from the Senate and House of Representatives, where committees and subcommittees regularly hold hearings on the most diverse issues--from the illegal drug trade to tax reform.

For several reasons, the state of the economy has remained fairly stable. As a rule, this does not depend on the administration's actions. It is connected, for example, with the sharp drop in oil prices in world markets or with the fact that the United States is literally living in debt, now that the foreign assets of over 100 billion dollars in the United States exceed total American assets abroad.

Let us hear the opinion of an expert, and, what is more, one who belongs to the ruling Republican Party. The administration's excessive military expenditures will inflict irreparable damages on the U.S. economy over the long range, are having an adverse effect on the standard of living of broader and broader segments of the population and are undermining the U.S. position in world markets--this is what Ralph Regula (Republican, Ohio) said in his speech in the House of Representatives, recorded in the CONGRESSIONAL RECORD for 19 May. He stressed that expenditures on military needs had devoured a trillion dollars since the start of the current administration. To a considerable extent, these astronomical expenditures are financed by a federal budget deficit, and this increased the national debt from 914 billion dollars in 1980 to 1.841 trillion dollars in 1985. It will take 143 billion dollars just to pay the interest on this debt in fiscal year 1986.

Huge sums, the congressman went on to say, are being spent not only on arms production, but also on the maintenance of more than 500,000 American servicemen abroad. There are more than 350,000 American servicemen just in Western Europe, costing the treasury at least 55 billion dollars a year. In all, the maintenance of U.S. armed forces in accordance with the military articles of the NATO treaty costs around 133 billion dollars a year. The constantly rising military expenditures, R. Regula said, are pumping capital into the military sphere and depriving the civilian economy of opportunities to make the necessary investments in the renewal of fixed capital, as a result of which obsolete equipment has to be used in many industries. There have been production cuts and rising unemployment in such leading branches as the automobile, steel and machine tool industries. Between 1981 and 1984, 2 million people in these industries lost their jobs; 20,000-30,000 are laid off each month in the processing industry. The chronic federal budget deficit and the growing national debt are also inflicting perceptible injuries on U.S. foreign trade. The foreign trade deficit rose from 36 billion dollars in 1981--that is, the start of the current administration--to 150 billion in 1985. This situation, the congressman stressed, cannot be tolerated any longer.

Warnings of this kind are far from isolated or sporadic. They are being voiced not only by congressmen, with a view to the upcoming elections and the situation in their electoral districts, but also by leading economists. In addition, warnings have been issued by several "think tanks," such as the Brookings Institution, and even, although less directly, the U.S. Commerce Department's Bureau of Economic Analysis.

The people who are well aware of the long-term consequences of the administration's policy line are particularly disturbed by the obvious discrepancy between reality and the assurances that "Reaganomics" can secure the military, the technological and, consequently, the economic superiority of the United States throughout the world. The faith in U.S. technological successes was severely shaken by the space shuttle "Challenger" disaster on 28 January, which took the lives of seven astronauts. The Rogers Commission report submitted to the President on 7 June pointed out the radical technological shortcomings of American space programs. We should also recall that right after the "Challenger" disaster, such seemingly perfected space vehicles as the Titan and Delta rockets misfired or exploded during lift-off. This situation is not confined to the aerospace industry. Many experts here believe that the main cause of, for example, the domination of the American market by

imported high technology products, even in the automobile market (and the automobile was always the pride of American industry!), is the fact that American goods are no longer reliable.

The people in Washington's "corridors of power," however, have not expressed the slightest desire to pay attention to the warnings about the effects of excessive military expenditures on the American economy, effects which are already quite apparent. They are insisting on the need to act in line with the "highest national security interests."

The lyrics of this song are still the same: Yes, the Americans might have to make a few sacrifices. But the administration is doing this for their own good, as its economic policy is aimed at restoring America's strength, especially its military strength. Only this, the administration's spokesmen and its propaganda network assert, can diminish the "threat looming over America," a threat allegedly posed by the Soviet Union and other countries and peoples with the supposed aim of forcing the United States to submit unconditionally to their wishes.

The assault on American public opinion with the aim of forcing the population to continue supporting this policy line is being conducted in the most diverse forms. The main ones are the recitation of the fable about the "Soviet threat" literally each day and in every possible context, and the babbling about the "global terrorist conspiracy against the United States and all Americans" and about the "prevalence of spies" on U.S. territory, "undermining national security from within."

Using the "Soviet threat" as a pretext, the President announced on 27 May that the United States would soon stop observing the SALT II treaty, a Soviet-American agreement of fundamental importance, limiting the scales of the buildup of the offensive arms of both countries. Furthermore, a unilateral renunciation of the ABM treaty is also being planned, to remove all of the obstacles from the path of the "Star Wars" program. This intention is arousing serious worries in the United States and abroad.

Some 46 senators demanded the observance of these important agreements, because they serve the interests of the United States as well as the Soviet Union. Senator J. Biden and Congressman N. Dicks introduced bills prohibiting the allocation of funds for weapons exceeding the limits stipulated in the treaty. Speaking for the White House, Deputy Press Secretary L. Speakes categorically opposed the bills and requested the Republicans in both houses to block them. This demand was part of the administration's general campaign against any congressional attempts to impose even the slightest restrictions on military spending. As we know, expenditures in fiscal year 1987 were projected at 320 billion dollars. During a preliminary vote, the Senate cut these allocations to 301 billion dollars, and the House cut them to 285 billion. A conference committee then set the figure at 292.2 billion, but this still needs the approval of both houses. The amendment on cuts in SDI allocations was rejected by a majority of one vote in the Senate.

In addition to employing such arguments as the "Soviet threat," the need for "strategic modernization" and others, President Reagan also resorted to a

purely McCarthyist ruse when he declared that each dollar subtracted from military programs is "a victory for a potential aggressor." In other words, dear congressmen, take note of this, or you will be known as accomplices of the aggressor and enemies of America. The administration used a similar "argument" in support of its demand that Congress allocate another 100 million dollars for direct military aid to the Nicaraguan Contras. When Reagan addressed Republican Party activists on 6 June, he declared that if the Congress should refuse to help the "freedom fighters," America would know who are the "friends of Managua and Moscow" and who are the "enemies of democracy and America." And the Congress surrendered.

The chauvinistic feelings in the country, aroused by warnings about the "mounting threat" to the United States, are also being fueled with the aid of the bugbear of "international terrorism." These warnings are supposed to convince Americans that certain actions are justifiable, such as the piratical raid on Libya, and to force Congress to allocate more and more funds for the arms race and for the expansion of the budgets of the CIA and FBI, which are, incidentally, now more inclined to "keep an eye" on Americans than on "international terrorists."

But this has not made life sweeter for Americans, despite the officially announced "fight against terrorism." Terrorist acts, committed primarily by members of neo-Nazi and Zionist organizations, have become commonplace in the United States. Specific examples readily come to mind. In May a terrorist act was committed against the students and teachers of a high school in Cokeville, a town in Wyoming. A former policeman and a woman accomplice, both members of Posse Comitatus, a neo-Nazi organization, took more than a hundred children and adults hostage, threatening them with an explosive device, and demanded millions in ransom from the authorities. The device accidentally exploded in the hands of one of the terrorists, and both of them died. Dozens of children were wounded.

Terrorist acts are regularly committed against Americans of Arab origin. They constantly receive telephone threats at work and at home. The 26 May issue of U.S. NEWS AND WORLD REPORT revealed that this matter is not confined to threats. Alex Odeh, one of the leaders of the American-Arab Anti-Discrimination Committee, was killed in Santa Ana, California, just recently. The committee's offices in Boston (Massachusetts) and Houston (Texas) were bombed, and Muslim centers in San Francisco, New York and Bethesda (Maryland) were vandalized. Members of the committee were the victims of severe beatings in Syracuse (New York) and New Haven (Connecticut). "There is the suspicion," the magazine remarked, that belligerent Zionist groups are to blame for these terrorist acts.

Renowned American satirist Art Buchwald once commented, in connection with all of the violent crime and terrorism in the United States, that Americans have to have a large measure of courage to live in their own country. The facts testify that there is a great deal of truth in this bitter joke.

Washington's campaign of "spy-mania" is working out for the administration and for "genuine Americans." The Soviet Union is the main target of this campaign.

During this campaign, the administration took openly discriminatory steps against the Soviet UN mission, demanding the reduction of its staff. To reinforce its "arguments" in favor of this, the administration is striving for the most extensive publicity of only the aspects of this matter it considers to be necessary--the trial of the members of the "spy ring" headed by a man named Walker, accused of transmitting confidential military information to "Soviet agents." It is true that the main link in this chain, namely the "Soviet agents" to whom the secret information was allegedly transmitted, could not be found, although the FBI supposedly had learned about the spies' meeting-place from "reliable sources" and its agents had kept it under "constant surveillance."

During the investigation of the case, an interesting detail was ignored. The lover of one of the accused said that, as far as she knew, Walker and his accomplices were working for...Israel. This revelation was immediately suppressed. How ridiculous! After all, Israel is the United States' best friend and "strategic ally" and is protected by the powerful Zionist lobby, firmly entrenched in Washington's "corridors of power."

This was followed by an extremely unpleasant incident. A man named Pollard from U.S. naval intelligence was caught red-handed carrying a briefcase full of secret Pentagon documents into the Israeli embassy in Washington. Once again, an attempt was made to suppress the news. Both Washington and Tel Aviv declared that Pollard was a free-lancer and was stealing Pentagon documents without the knowledge of the Israeli authorities. Nevertheless, the investigation continued. And what happened? When Pollard was indicted by a federal grand jury in the beginning of June, the indictment named four Israeli officials who had overseen the actions of not only Pollard, but also a highly confidential and generously financed Israeli espionage network in the United States and Western Europe. The four included R. Eitan, veteran of the Israeli intelligence service, and Israeli Air Force Colonel A. Sella.

The Israeli authorities, including the heads of military intelligence, have persistently denied their involvement in any kind of espionage activity in the United States. The CBS television broadcasting company had this to say about the "denials": Who is in charge of Israeli intelligence? If its leaders did not know that its officers were spying on the United States, then who did know? The Israeli and American authorities have had little to say about the details of the matter, obviously in the hope that people will gradually lose interest in the case and that the "special relationship" between the United States and Israel will not suffer any particular harm. The television company was absolutely right. The U.S. Department of Justice and the CIA and FBI severely restricted the press' access to information about the Pollard case. He was advised to plead guilty to "some charges," eliminating the need for a trial and simultaneously offering the spy a chance for a light sentence in exchange for his "cooperation with the court and the investigators".... There is another "paradox" connected with the Pollard case: For his work for Israeli intelligence against the United States, he was paid 50,000 dollars, according to some sources, or even 100,000, according to others. Where would Israeli intelligence get these thousands of dollars? The money was virtually taken straight out of the pockets of American taxpayers, because it was part of the money sent to Israel in the form of American military assistance!

The administration and the press and television coverage it orchestrates have also made an exceptional effort to "hush up" many other "unnecessary" news items. Above all, this applies to all of the Soviet Union's proposals to put an end to the arms race and keep it from spreading to outer space. The administration, as a rule, confined itself to statements that it was "carefully considering" the Soviet proposals. It was not until the end of July that the Soviet leadership received a reply from the U.S. President.

There have been particularly persistent efforts to counteract the influence on American public opinion of the Soviet appeal to the United States to join it in its moratorium on all nuclear tests, announced unilaterally by the Soviet Union on 6 August 1985, with the aim of promoting the quickest possible negotiation of a complete and final nuclear test ban treaty. With maniacal persistence, the administration has reiterated that the suspension of nuclear tests "is not in the interest of the United States" and has continued the nuclear tests in Nevada. These tests are publicized as little as possible. Now the official announcements of the tests are made farther away from Washington--in the pressroom of the Nevada testing ground--and the U.S. national press does not cover them.

The press could say as much as it wanted, on the other hand, about the accident at the Chernobyl nuclear power plant. There were, however, some people and whole organizations to remind Americans that there had also been several accidents of this kind at American nuclear plants. Acting in line with common sense, they asked people not to gloat, but to seek ways of expanding international cooperation to prevent accidents in nuclear reactors and to use the information gained from earlier accidents throughout the world to make nuclear power engineering less hazardous.

In addition, just as the "Challenger" disaster, the accident at the Chernobyl plant underscored the danger of Washington's plan to deploy weapons systems in outer space. It is no secret that the "Star Wars" program assigns an important role to a nuclear-powered laser weapon, which will necessitate the emplacement of sources of nuclear power--that is, nuclear reactors--in orbit near the earth. The shuttle disaster demonstrated the unreliability of the electronic operational systems of space vehicles. The accident in Chernobyl and earlier accidents at plants in the United States and other countries proved that no one is insured against these problems. All accidents to date have occurred on earth under conditions allowing for the rapid neutralization of their consequences. But what will happen if the accident should occur in a nuclear reactor in outer space? "This prospect disturbs me greatly," physicist B. Johnson wrote in a WASHINGTON POST article. Is he the only one it disturbs?

Problems, problems.... There are many of them in American economic and political affairs, and they are becoming increasingly serious.

The upcoming elections will tell how much the voters know about their severity and urgency. It is not so easy for them to realize this. A powerful propaganda machine is operating at full speed to calm the Americans and to focus their anger, their anxiety and their worries about their own and their children's future on "the hand of Moscow," "international terrorists" and so forth.

At the same time, attempts are being made to defame the congressional candidates who are trying to take a realistic stance and are demanding the cessation of the growth of military expenditures and the refusal to cut the social programs on which at least 35 million Americans living below the official poverty line depend for their existence. These candidates are being opposed by the administration, neoglobalists of all stripes, neoconservatives, the preacher-politicians from the religious community, such as Falwell and Robertson, and the jingoist organizations with incontestable authority in Washington's "corridors of power."

The future will show the degree to which their efforts can influence the outcome of the congressional elections.

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CSO: 1803/01

JAPANESE-U.S. ECONOMIC RELATIONS STRAINED

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 51-55

[Article by Ye. V. Gorbunova: "United States-Japan: Aggravation of Monetary Conflicts"]

[Text] The first half of the 1980's was a period of important changes in the development of the world capitalist economy. One of the most important was the unprecedented growth of trade and monetary imbalances in U.S.-Japanese commercial relations, which led to a new outbreak of conflicts between the two countries. The most acute differences of opinion are no longer confined to foreign trade and have spread to the sphere of monetary matters and the transfer of capital from one country to another. The latter is due to a qualitatively new situation, engendered when Japanese capital rushed to the United States in search of higher profits.

The Reagan Administration's policy of strengthening the country's military potential and stimulating private investment for the purpose of the stepped-up structural reorganization of the economy has led to a situation in which domestic financial resources can no longer cover government and corporate expenditures. The United States reduces this gap by encouraging foreign deposits with the mechanism of high interest rates. In 1984 the new capital entering America exceeded 100 billion dollars, and the figure in 1985 was over 110 billion. The United States is already using around 9 percent of the domestic accumulations of other developed capitalist countries and even developing countries and is thereby financing much of its own industrial development and military preparations with foreign resources.

In contrast to the United States, Japan has had accumulations far in excess of investment opportunities within the country in recent years. Under the conditions of relatively low rates of economic growth for Japan (3-5 percent), the investment activity of corporations in that country has been negligible. Consumer demand has not been high enough to absorb these resources either. The alarming growth of the national debt also precludes the use of domestic accumulations by the Japanese Government.

Furthermore, the savings norm in Japan is almost the same now as it was in the 1960's, when economic growth exceeded 10 percent, and it represented

around 17-18 percent of income in the first half of the 1980's, as against 5-7 percent in the United States. All of this contributed to the flow of capital out of Japan, a situation which became chronic in 1981. Capital leaving Japan in 1985 exceeded 55 billion dollars, as against 6 billion in 1981, and the figure has continued to rise. The capital is mainly used to purchase securities. As of 1 January 1986, Japanese overseas assets exceeded its liabilities by almost 130 billion dollars, and three-fourths of these assets were in the United States.

The vigorous flow of Japanese capital into the United States is contributing to the substantial discrepancy between currency exchange rates and relative changes in commodity prices. From this standpoint, the exchange rate of the dollar in the first half of 1985, for example, was overstated by 25 percent in relation to the yen.

This correlation of exchange rates is the main reason for the unprecedented foreign trade imbalance between the two countries. According to some calculations, this is the reason for from two-thirds to three-fourths of the U.S. negative balance in trade with Japan, which exceeded 50 billion dollars in 1985. In this kind of situation, as many American experts believe, even if Japan were to satisfy all U.S. demands for easier access to its market for American goods, the U.S. negative balance in trade with it would be reduced by no more than 10 billion dollars.

The abrupt deterioration of U.S. solvency in the middle of the 1980's motivated Washington to resort to unconcealed pressure on its trade partners, especially Japan. The United States believes that the Japanese side has to take immediate and effective steps to raise the exchange rate of the yen, which will make American goods more competitive and will thereby help to correct the trade balance between the two countries. The price of the Japanese currency will rise when there is a higher demand for it, and this will mean that the yen will have to play a more important role in the international currency system.

The yen now occupies an insignificant position in international accounts and payments, a position which, in the United States' opinion, is inconsistent with Japan's status in the world capitalist economy. This is largely due to Japan's many currency restrictions, which apply primarily to financial operations involving the yen. Japan extends most of its credit in dollars. The liberalization of currency regulations in December 1980 and November 1983 mainly affected routine foreign trade transactions. Under these conditions, in spite of Japan's positive trade balance, there is no great demand for Japanese currency because foreigners still cannot apply for loans directly in yen. Besides this, the domestic credit market in Japan is under strict government control, especially interest rates, which are subject to administrative limits. This is why the American administration is now trying to force Japan to agree to the further substantial liberalization of international operations in yen and of the domestic capital market.

People in Washington believe, and with good reason, that increasing the scales of international financial operations in yen will inevitably heighten the

impact of foreign factors on Japanese domestic credit and force the Japanese Government to change the entire financial system considerably by relaxing regulations and relying more on "market forces." As a result, interest rates and the related transfer of capital will, according to American experts, reflect the existing economic situation more accurately, especially Japan's huge positive balance in foreign trade. In particular, this will increase the value of the yen and, consequently, the possibility of the more successful marketing of American exports in Japan and the simultaneous limitation of the penetration of the U.S. market by Japanese goods.

This is the official position of the American administration. Besides this, a more "open" Japanese financial market is regarded in the United States as an essential condition for stronger U.S. influence on Japan's foreign economic policy and even directly on its economy.

The Japanese Government, however, is still not ready for quick changes. The fear of losing control of the economy is just one reason for its slowness. The main reason is its desire to use the objective process of the enhancement of the yen's international role for the further consolidation of its position in the world capitalist economy, which has nothing in common with the U.S. plans. This is why Japan has made some concessions but is simultaneously trying to avoid any abrupt changes in the existing mechanism of monetary interrelations with the world market and is trying to make this process gradual and to control it as much as possible, making certain changes only when it feels they are warranted.

All of these factors lay at the basis of the agreement the two countries concluded in May 1984 on a broad range of monetary issues. Its main purpose was declared to be the further expansion of the use of the yen as an international payment and reserve medium. To this end, the agreement envisaged a group of measures in three interrelated areas. First of all, there was the substantial liberalization of operations in Euro-yen for citizens of Japan and for foreigners. The Japanese Government also pledged to take certain steps to relax interest rate regulation in the domestic credit market. Finally, the agreement envisaged the relaxation of restrictions on the operations of foreign financial institutions in Japan.

These measures, however, did not lead to any perceptible rise in the yen's status in international financial operations. As the FINANCIAL TIMES remarked, "the internationalization of the yen is only an illusion."

The fact is that the yen is still not being used much in Japanese foreign trade, and it is unlikely that this can be changed in a few months or even years. For example, only 40 percent of Japanese exports are paid for in the national currency. The indicator for the United States is around 90 percent, and the indicator for the largest states in Western Europe ranges from 60 to 85 percent. Virtually no payments for imports are made in yen--only 3 percent, as against 70-85 percent of payments in dollars in the United States and 30-45 percent in national currencies in Western Europe. Besides this, many borrowers have the valid fear that the benefit of the lower interest rates on loans in yen could be nullified by a rise in the price of the Japanese currency.

On the whole, the results of the American-Japanese agreement were the opposite of those expected. The cancellation or relaxation of restrictions on international operations in yen stimulated the export of capital from Japan to other countries, where, just as before, it was converted into other currencies, primarily the American dollar. This helped to maintain the disparities in exchange rates and promoted the continued growth of the foreign trade imbalance between the United States and Japan.

Under these conditions, the United States is trying to force Japan to make changes in its economic policy to stimulate domestic demand. According to American calculations, this will increase Japan's need for capital for investment within the country, which should slow down the outflow of resources and raise the price of the yen.

People in Japan are also aware of the need for substantial domestic investments, especially in the infrastructure, municipal services and housing construction. Japan's indicators in these areas are far below those of the majority of other developed capitalist countries. In the words of H. Takoshi, the director of the Japan Long-Term Credit Bank, "a capital-exporting country whose cities are filled with buildings resembling rabbit-hutches is a pitiful sight." The stimulation of domestic demand, including consumer demand, will, however, necessitate substantial changes in Japan's economic policy, which assigned priority until just recently to the stimulation of exports and ignored domestic problems. A significant increase in government expenditures is still inadmissible in view of the constant growth of Japan's budget deficit and national debt. Japanese experts feel that a restrictive budget policy will be necessary at least until 1990. Therefore, it would be wrong to anticipate the kind of rapid changes the United States wants.

In response, Japan has said that the continued restriction of credit with the aim of raising interest rates would be impossible without heavy losses for the economy and has suggested that the United States put its own financial affairs in order. It is willing to take some measures to coordinate their credit and budget policies, but it is demanding something in return. It has made the valid observation that the unprecedented U.S. federal budget deficit and the high interest rates in the American market in the first half of the 1980's were the main cause of problems in the monetary sphere, especially the unjustifiably high exchange rate of the dollar.

Many American economists have to agree with this point of view. For example, in the words of Director F. Bergsten of Washington's International Economic Studies Institute, the U.S. trade deficit will last as long as America "has large budget deficits, which promote higher interest rates and the transfer of capital. The result is the maintenance of the excessively high dollar exchange rate, a drop in employment and profits and the mounting danger of the degradation of the global trade system."

Besides this, Japan, which is supported by the other main capitalist countries in this matter, is insisting on a fundamental tax reform in the United States, which cannot be replaced by negligible cuts in budget expenditures or a slight rise in current rates of taxation.

The Reagan Administration, however, has no wish to give up its own policy and is striving to transfer the entire burden of at least the partial normalization of the international financial situation to other states. The United States also displayed this approach at a special meeting of the finance ministers and central bank directors of France, the FRG, Japan, Great Britain and the United States in New York on 22 September 1985. The reason for the meeting was the further exacerbation of monetary conflicts in connection with the alarming growth of trade imbalances between the main capitalist countries, resulting in stronger protectionist tendencies.

The measures agreed upon at this meeting stimulated the decline that had already begun in the exchange rate of the dollar in relation to the currencies of other capitalist countries, especially the yen. Between September 1985 and January 1986, for example, the value of the dollar in relation to the Japanese currency displayed a decline of almost 20 percent. The United States is not concealing its intention to continue encouraging the devaluation of the dollar for the purpose of acquiring additional temporary advantages and simultaneously facilitating the access of American goods to the Japanese market.

The new pronounced disparities in international economic exchange have created great difficulties for Japanese exports. In connection with this, during the latest meeting of the "big seven" in Tokyo on 5-6 May 1986, Japan tried to talk the United States into joint actions to make the changes in the dollar-yen correlation more controllable and predictable. This will be needed to facilitate the adaptation of the Japanese economy to the new foreign economic situation. The U.S. response, however, was a categorical refusal. In this way, it proved once again that the coordination of the economic policies of leading capitalist countries, the need for which, at the insistence of the American delegation, was stipulated in the economic declaration of the Tokyo conference, is good only when it serves Washington's interests. Otherwise, the partners are supposed to cope with any problem that might arise on their own.

In general, in view of the desire of both sides to find a way out of the current situation at the partner's expense, it is unlikely that any serious agreements will be concluded in the near future for the coordination of their economic policies to limit the one-way traffic of goods and capital from Japan to the United States. And this means that the economic and, in particular, the monetary relations between the United States and Japan will continue to give rise to acute conflicts and disagreements in the future.

8588
CSO: 1803/01

CANADIAN PARTICIPATION IN SDI

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 55-61

[Article by Ye. V. Israelyan and A. G. Kvasov: "Canada in the Pentagon's Space Plans"]

[Text] It has been a year since Ottawa officially dissociated itself from Reagan's "Star Wars" program, although it did not restrict the participation of Canadian firms in the work on the program. The very fact that the pro-American Mulroney government refused to take an active part in carrying out the "Strategic Defense Initiative" (SDI) is seen as a major victory for the country's peace-loving public over the influential supporters of unquestioning military cooperation with the United States. Recent events have indicated, however, that the Pentagon has received signals of support from Canadian rightwing groups and is now in no hurry to give up its efforts to involve Canada in the preparations for "Star Wars." For example, in March 1986 Ottawa already had to start "paying Uncle Sam's bill." Against the recommendations of respected Canadian specialists, the Mulroney government renewed the agreement on the North American Aerospace Defense Command (NORAD) for another 5 years without any reservations, amendments or concessions from the United States to allow Canada to "preserve its image" as a country with an independent military policy. In connection with this, the Canadian public is anxiously wondering whether Canada's official refusal to participate in the SDI will keep it from being pulled into the "Star Wars" program through some kind of back door, such as the NORAD treaty.

NORAD--The Trojan Horse of "Star Wars"

This is how the NORAD agreement was described by P. Juillet, a member of the Canadian Parliament from the New Democratic Party. The opposition parties in the country, members of the peace movement and specialists have categorically stated that the Canadian-American agreement on the modernization of the North American ABM system, concluded last March, is closely related to the U.S. President's SDI.

It is true that the initial work on the SDI was accompanied by heightened U.S. interest in the improvement of the air defense system. The Pentagon's line of of reasoning was the following: For reliable defense against Soviet retaliation, the "space shield" protecting U.S. nuclear arms from ballistic missiles

must be supplemented with an effective system of air defense against the cruise missiles and strategic bombers remaining on the Soviet side after the delivery of the first American "disarming" strike. The general plan for North American air defense, prepared by the Pentagon back in 1982, envisaged the modernization of NORAD for this purpose. In the future, if the United States should deploy a new ABM system with space-based elements, NORAD and, consequently, Canada will certainly be asked to take more "decisive" measures.

An American-Canadian memorandum signed in March 1985 envisaged the reorganization of the entire continental aerospace defense system for what Canadians uneasily describe as its "reorientation from the functions of deterrence to the functions of warfare."

The cost of the planned work will total 7 billion dollars, 88 percent of which will be provided by the United States. The program will cost Canada 840 million dollars. The most important element of the reorganization is the creation of a new radar "northern early warning system" in place of the obsolete "DEW Line," which has been operating since the end of the 1950's. Its cost has been estimated at 1.5 billion dollars, 40 percent of which will be paid by Canada. Of the 52 radar stations forming a chain extending from northern Alaska through the Canadian Arctic to the east coast of the Labrador peninsula, 47 will be located on Canadian territory (11 of the 13 long-range radar stations and 36 of the 39 automatic short-range stations) and will be completely maintained and controlled by Canada. This, however, certainly does not mean that Canada will acquire greater independence in matters of air defense. It has no air defense system of its own. Furthermore, the Pentagon control of the entire NORAD system means that any modernization of U.S. air defense in line with the SDI will unavoidably affect Canada as well.

"Active" defensive subsystems are already being established in Canada within the NORAD framework (these are distinct from the radar stations, which are "passive" warning systems). In particular, five airports in the Canadian north, capable of accommodating American F-15 planes, are being modernized. Besides this, as U.S. Secretary of Defense C. Weinberger unequivocally announced, there is the possibility that missiles designed for the interception of low-flying targets in the NORAD system will be deployed in Canada.

Back in 1981 the defensive system in North America, which had been called "air defense" up to that time, was renamed "aerospace defense." This reflected the actual expansion of NORAD functions. The new "northern warning system" will, for example, use space-based elements, including Canada's Anik satellite. Over the long range (up to the year 2000), the United States intends to completely replace ground radar stations and AWACS planes with special satellites for the detection of low-flying targets. According to a report in Canada's FINANCIAL POST, in 1985 Canada was supposed to take part in the testing of the "Teal Ruby" satellites, the prototype of the spacecraft being developed primarily for air defense, and later, possibly, for the missile defense of the continent (after their inclusion in an ABM system with space-based elements).

In the event that an ABM system is created, the United States will, as Director J. Lindsey of the Ministry of National Defense Strategic Research

Agency said when he addressed the Canadian Senate, also want to deploy weapons in Canada for the interception of ballistic missiles in mid-flight. Other experts have noted the probability that the American interceptors on Canadian airfields will be equipped with antisatellite weapons.

Therefore, the plans for the modernization of NORAD are closely connected with the U.S. preparations for war in space. Both are elements of a single system of American strategic defense. Both NORAD and the U.S. Aerospace Defense Command are headed by American General R. Herres. Canadian and American command personnel took part in joint exercises to perfect the integrated plans for strategic, including space, defense--"Strategic Defense Architecture-2000," the potential results of which could have far-reaching consequences. Canadian observers recall that the agreement on the modernization of NORAD was the logical conclusion to the first phase of these exercises in 1985.

To calm the Canadian public, B. Mulroney's office issued a special statement that the Canadian-American agreement was consistent with the 1972 Treaty on the Limitation of ABM Systems and other international arms agreements. This was just short of a Canadian denial of the very idea of a connection between NORAD and the SDI, because it argued that NORAD's aims allegedly would not violate the ABM treaty. As later events indicated, however, Canada's inclusion in the extensive program of preparations for "Star Wars" is still a possibility. The Canadian communist newspaper made the correct observation that "the 1986 NORAD agreement opened the door even wider for Canada's participation in the Pentagon's 'Star Wars.'"

Military-Space Partnership

The Pentagon was already inviting Canadian firms to take an active part in the military preparations in space in May 1983. As a high-level Pentagon spokesman then announced at a seminar on space technology in Canada, "the United States regards Canada as its most important partner in the creation of military space systems." He was echoed by J. Collins, former director of the continental defense plan coordination agency of the Canadian Ministry of National Defense: "It is possible that Canada might not be a direct participant in 'space wars,' but we should arrange for the closest possible cooperation with the United States in the development of military space technology."

This idea was energetically supported by the Canadian business community. In its Canadian military policy planning document, prepared in fall 1984, the most influential organization of Canadian big capital--the Business Council on National Issues--advocated Canadian participation in American military space programs, although it limited this participation to the creation of communication, reconnaissance and early warning systems (excluding space-based strike systems).

The Canadian Association of the Aerospace Industry became the most energetic supporter of the SDI. Many of the companies belonging to the association are not inclined to regard Ottawa's official refusal to participate in the preparations for "Star Wars" as an obstacle to cooperation with their partners in the United States. For example, for a long time the Canadian Fleet Airspace firm has been producing structural elements for the satellites of the

American Hughest Aircraft corporation, one of the top 10 "Star Wars" contractors. Here is another example. Other Canadian companies, Spar Airspace and Canadian Astronautics, were contracted by Ottawa to investigate the possibility of creating a satellite system for the tracking of low-flying targets within the framework of the joint American-Canadian research in this field.

Canadian universities are also involved in the development of military space technology. In 1983, for example, the country's five leading universities earned the following amounts from their work on Pentagon contracts: 49,000 dollars for the University of Alberta, 55,000 dollars for McGill University, 154,000 for the University of Toronto, 217,000 for the University of Western Ontario and 245,000 for Dalhousie University. For example, laser development projects financed jointly by the U.S. Air Force and the Canadian National Research Council have been conducted for many years at the University of Toronto.

Government-controlled enterprises have not remained on the sidelines either. For example, Atomic Energy of Canada is working with the American Energy Department and the U.S. Air Force on an American "military nuclear power engineering" program with the aim of developing compact nuclear reactors for military use on earth and in space. Ottawa allocated around 3 million dollars for this program in 1984-1985.

The Pentagon's hope of drawing Canada into the group of direct participants in the SDI stems from, among other things, the intention to use its space potential for military purposes. After all, when Canada launched its own first artificial earth satellite in 1962, it became the third "space power." Since that time the Canadian national space R & D programs have been of modest dimensions but have been extremely effective: The output of space equipment exceeds government expenditures on these programs. One important reason for this is the small share of the "military component" in Canada's space research. The chief aim of this research is the commercial use of achievements. Up to 85 percent of all the funds allocated for space research is used in applied projects, and only 15 percent is used for basic research.*

Between 1962 and 1985 Canada launched 14 artificial satellites of 7 series (Alouette, ISIS, Hermes and Anik-A, B, C and D) with the aid of American rocket-boosters. The development of the "Canadarm" remote-control manipulator in 1982 for the American space shuttle was a great achievement. Preparations are being made for the launching of two more satellites, M-SAT and RADARSAT, before the end of the decade. Canada was the first of the Western countries to organize a national commercial system of satellite communications. It has been quite successful in the prospecting of natural resources from space and in the study of the upper layers of the atmosphere, the ionosphere and the

* Total federal government expenditures on Canadian space programs amounted to only 600 million dollars during the first two decades of the programs (from the beginning of the 1960's). Later, however, financing volumes grew considerably. The amount allocated in 1981-1985 was 476 million dollars, and the Conservative government's allocation for fiscal year 1986 alone was 195 million.

magnetosphere. Canada received symbolic recognition of its services in space exploration when Canadian astronaut M. Garneau was included (the first foreign citizen to be so honored) in the crew of the American space shuttle "Challenger" in October 1984.

Canadian space programs are distinguished by a high level of integration with American programs of the same type. In connection with this, Canada could be of considerable interest to the Pentagon during the present stage of the work on the SDI.

Besides this, in addition to a network of government and university centers of space technology, a "space branch" of industry and services has taken shape in Canada and is being developed quite successfully. It now consists of more than 50 Canadian firms. In 1983 it had a turnover of 380 million dollars and employed around 3,800 people. The high growth rates in the branch in the last decade (an average of 28 percent a year in sales volume and 13 percent in employment) allow specialists to anticipate the tripling of its turnover--to 1.2 billion dollars--by the middle of the 1990's. A distinctive feature of Canada's space industry is its orientation toward the foreign market--the American market in the overwhelming majority of cases. In all, more than 70 percent of its total product is now exported.

Therefore, Canadian firms and organizations have experience in working with American partners in extremely complex technical projects. Canada's participation, along with Japan and several West European countries, in the construction of an American orbital station by 1992 will be a new important milestone. In 1985 Canada officially agreed to take part in this program, which could cost the federal government from 300 million to 600 million dollars. Ottawa allocated 8.8 million dollars in fiscal year 1986 for the elucidation of the specific fields of Canada's participation in this project.

Canada's potential proposals, reflecting its growing technical capabilities, include the second generation of the "Canadarm" manipulator with an autonomous cybernetic support system known as the "space vision system" (developed by the National Research Council and the Spar Airspace and Diffracto firms). The success of the new U-X Basic system of computer software, developed by the U-X Software firm in Toronto and first tested during the "Challenger" flight with the Canadian astronaut on board, also attests to Canada's ability to participate in the creation of the station. Other areas of Canadian participation could include the production of structural elements for the station, solar batteries and electronic optical telecommunication systems and the development of a microwave radar system for the prevention of collisions with stray objects in orbit.

Intense propaganda is being conducted to convince the Canadians of the absence of any kind of connection between the new American project and the SDI. At the same time, the heads of NASA have not excluded the possibility of the military use of the station, but for non-aggressive, "peaceful military purposes." As the Canadian Government's critics have pointed out, there is still no real guarantee that the Canadian-American cooperation on this project will not be used to involve Canada in research connected with Reagan's "Star Wars" program.

At the Crossroads

What are the possible economic and social consequences of Canada's participation in the Pentagon's space plans? What will NORAD be in the future? How will all of this affect the country's political sovereignty? These questions are still being hotly debated by broad segments of the Canadian public.

Under the pressure of mounting opposition to Ottawa's line of military-political convergence with the United States, Mulroney's cabinet had to refuse to give the SDI complete support. After issuing this refusal, however, the Canadian Government tried not to disrupt its close military-strategic alliance with the United States. The report of a special parliamentary conference committee on this matter frankly said: "A refusal with certain provisos is good because it leaves Canada a choice. It is possible that there is no urgent need at this time to accept (the SDI proposal). But this kind of 'no' would not exclude the possibility of participation in the SDI in the future and would allow for the thorough consideration of the implications of changes in American strategy."

Apparently, Canada's "compromise" came as no surprise to the American administration and did not arouse anger in Washington. Shortly after Ottawa's decision had been announced, U.S. Ambassador to Canada T. Niles declared that it "will not have a negative effect on Canadian-American relations" and stressed that "the U.S. Government is striving for cooperation with Canadian companies." Admittedly, the Canadian "no" does not nullify, for example, the particular premises of the memorandum on the modernization of NORAD, signed by Mulroney himself in 1985, in accordance with which the United States and Canada pledged to cooperate in the research, development and introduction of advanced technology (including space technology) for reconnaissance, warning, communication and defensive purposes.

American military-industrial corporations and purchasing agencies had a slightly more angry reaction to Ottawa's announcement at first. Some of them saw the Canadian Government's refusal to participate officially in the SDI as "betrayal in the allied camp." In the first half of this year, however, delegations of Canadian businessmen, headed by representatives of the foreign trade office of the Canadian Ministry for External Relations, were already visiting the United States in search of possible contracts. According to Canada's FINANCIAL POST, the very presence of officials from Ottawa had a strong "calming effect" on American arms manufacturers and purchasers, who regarded this as evidence that Canada's feelings about the SDI were "not all that negative."

At the same time, members of Canadian ruling circles are considering the adoption of an independent military-space R & D program, focusing only on communication, early warning and reconnaissance systems, in contrast to the American space strike weapons. The standing Senate Committee on Defense put forth this proposal back in January 1985.

The expansion of existing civilian space programs in Canada has also been proposed. This proposal stresses the need to use Canada's space potential

exclusively for peaceful purposes, for the needs of the national economy and international cooperation. This recommendation was made, in particular, in a report prepared by the Liberal Party in summer 1985. It is indicative that the Soviet initiatives, submitted to the UN General Assembly, on the basic guidelines and principles of global peaceful cooperation in space research evoked a positive response in the Canadian academic community. For example, University of Toronto Chancellor G. Ignatieff said that Canada should immediately become involved in the implementation of the idea of "star peace." The idea of international cooperation in the peaceful use of space is all the more appealing to Canadian specialists because they already have experience in this field. One example is the KOSPAS-SARSAT (satellite-aided search and rescue system) project, in which the United States, the USSR, France and Canada have participated. In 1983 and 1984 alone, 247 people were rescued with the aid of this system. Many Canadian scientists support the Soviet proposal regarding the creation of a UN-sponsored international space organization and the convening of an international conference for this purpose.

Appeals for more active participation in the preparations for "Star Wars" have recently been countered with increasing frequency in Canada by authoritative experts on strategic research and international politics, who advise Ottawa to step up its efforts in the sphere of arms limitation, including space weapons. According to these experts, at a time of extremely dangerous international developments, the so-called middle countries should assume the important function of mediating between the great powers--the USSR and the United States--and putting forth sweeping initiatives in the sphere of disarmament. Besides this, some researchers, such as Director T. Colson of the Center for Soviet and Eastern European Area Studies, also feel that Canada could, along with the other allies, have a "beneficial effect" on the United States with regard to the adoption of a more constructive approach to arms limitation. Ottawa's moves in this direction would be supported by the Canadian public. A public opinion poll conducted by the CBC television broadcasting company at the end of 1985 indicated that 62 percent of the respondents wanted Canada to do more to strengthen peace.

According to prominent Canadian specialists, the initiatives put forth by the Canadian prime minister in 1983 and 1984 could serve as the basis for a Canadian program in the sphere of arms limitation. Although P. Trudeau's proposals were quite limited, they reflected the mounting worries of Westerners with a realistic point of view about the scales and possible consequences of the nuclear arms race. One of the proposals of the former head of the Canadian Government was the prohibition of the deployment of anti-satellite weapons at high altitudes, including space.

The reinforcement of the 1972 ABM Treaty should, according to scientists, become an important area of Canada's activity at international forums and in bilateral Canadian-American relations. The Pentagon's tests of weapons systems within the framework of the "Star Wars" program are arousing serious worries in Canada. We repeat, there is no question that actions of this kind will violate the treaty. As these tests continue, Washington could demand the participation of Canada, which signed a bilateral agreement with the United States in 1983 on tests of American weapons within its territory and air space.

The discussion of Canada's attitude toward the SDI and of alternatives to the militarization of space reflects the controversy between the country's main political forces with regard to the main issue of the present day--the issue of war and peace. More than any other event in the past, the current discussion testifies to the growing awareness in Canada that the continuation and expansion of the arms race will undermine Western security, that the nuclear threat cannot distinguish between countries and continents and that there is only one effective defense against nuclear weapons--their complete elimination.

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SDI DEBATES WITHIN U.S.

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 68-73)

[Article by N. I. Bubnova]

[Text] The American administration's military-strategic plans, paving the way for an arms race in space, are alarming broad segments of the American public and are giving rise to acute conflicts in American government agencies. Not long ago, newspapers in the capital reported that the situation on Capitol Hill, where the legislators meet, could not be described as anything other than "a general state of confusion arising from disagreements within the administration about the goals of the Star Wars program." Heated debates are also going on in the academic community. The different points of view were expressed in two issues of DAEDALUS magazine (the organ of the American Academy of Arts and Sciences) under the heading "Weapons in Space."[1]

DAEDALUS offered 24 writers, including renowned physicists and U.S. experts on international and military policy and law, as well as experts from Western Europe and Australia, a chance to express their views. They evaluated three aspects of the SDI: its effect on international security; the technical feasibility and vulnerability of the projected ballistic missile defense system in space; and, finally, the legal ramifications of the connection between the SDI and the Soviet-American ABM treaty. Furthermore, the writers included opponents and obvious apologists of the SDI. A shortage of space precludes a thorough discussion of the "pros" and "cons" cited by all 24 authors. It therefore seems expedient to review only the main, most representative comments of the most prominent members of the American academic and political communities and the foreign authors. It also seems expedient to follow the format used in DAEDALUS--that is, to begin the review with the authors' opinions about the international politico-military implications of the SDI.

Renowned scientist Herbert York analyzes the history of the exploration of outer space by the United States and admits that American "space programs were primarily military programs, and not civilian or scientific ones, from the very beginning." This is not the first time the issue of systems of defense against nuclear weapons has been raised, he writes. The vigorous U.S. efforts to create BMD systems once gave rise to heated debates. The

revival of the idea of BMD was promoted to some extent by the latest technical achievements in computers, electronics, optics and laser engineering. Nevertheless, York says, the SDI cannot be regarded as a "natural" result of the development of modern technology. The present and even the future capabilities of military equipment are still far below the requirements of this program. Its announcement was a political action, and not a technical one, and was motivated by the interest of certain groups in the United States in the militarization of space and by their nonacceptance of the limitations stipulated in the Soviet-American ABM treaty.[2]

The dangerous political implications of the "Star Wars" project are pointed out by renowned specialists from the Massachusetts Institute of Technology--Jack Ruina, former director of the Defense Department Advanced Research Projects Agency, and George Rathjens, a former official of this agency and of the Arms Control and Disarmament Agency. Calling the SDI a factor with a negative effect on strategic stability, these authors frankly assert that an "ideal" ABM system is impossible. They describe the optimism of the American administration as the "triumph of hope and imagination over reality." Noting that the work on the SDI would be most likely to escalate tension in Soviet-American relations, intensify the arms race and complicate arms control, J. Ruina and G. Rathjens pointedly criticize the very attempt to substitute military and technical measures for political solutions to the complex issue of security.[3]

The chief political editor of the West German weekly DIE ZEIT, Christoph Bertram, who headed the International Institute for Strategic Studies (London) for several years, also takes a negative stand on the idea of "Star Wars." In particular, he feels that the SDI would have an extremely undesirable effect on West European countries and on their relations with the United States.[4]

Several authors are less critical of the new program and express some interest in it. One is Gerold Yonas, a prominent physicist who was once the director of a department of the Sandia National Laboratories and is now the chief scientist of the Pentagon's SDI organization.[5] A similar point of view is expressed by Alexander Flax, president emeritus of the Institute for Defense Analyses.[6]

The "Star Wars" program is unconditionally supported by retired General John Toomay, a member of the Air Force Scientific Advisory Board, and John Wilkinson, chairman of the Conservative Parliamentary Aviation Committee and vice chairman of the Conservative space and defense committees. These authors distort the facts of history and current international events and falsely accuse the Soviet Union of a weapons buildup and of stepped-up efforts to develop space weapons. They do not conceal their wish that the extension of the arms race to space will make the West militarily superior to the USSR.

The announcement of the "Star Wars" program was accompanied in the United States by a spirited anti-Soviet campaign, and its echoes can be heard in several of these articles. The stereotypical statements about the "Soviet military threat," as a result of which "U.S. national interests are in greater danger today than 10 years ago" (as G. Yonas asserts), have been supplemented with new ones. The Americans are being told that the Soviet

Union is acting in violation of the ABM treaty by making an intense effort to develop "strategic defense systems" before the United States. These lies are refuted, however, by an analysis of USSR military activity in the same set of articles. For example, D. Holloway concludes that "there is no evidence that the Soviet Union violated the treaty or plans to do so in the near future."[7]

In an attempt to lay a foundation for the "Strategic Defense Initiative," the Reagan Administration formed three research groups in June 1983, and some of the authors of the DAEDALUS articles were members of these groups. They are D. Hafner, J. Toomay, D. Holloway and G. Yonas. The first group, which was supposed to study political issues, consisted of civil servants and was headed by F. Miller, the Pentagon's director of strategic forces policy. Another group with a similar range of functions, headed by F. Hoffman, consisted of specialists from organizations outside the government. The third group, headed by former NASA Director J. Fletcher, studied the technical aspects of the plans for the militarization of space.

The research findings of the second and third groups were published (the report of the Miller Commission was never published in its entirety). Donald Hafner, former Arms Control and Disarmament Agency staffer and adviser to the American delegation at the talks on the limitation of nuclear arms in Europe, analyzes these reports in one of the issues. He begins with the observation that they were extensively "retouched" in a speech presented by Pentagon chief C. Weinberger in March 1984, which was supposed to be based on the conclusions of the Miller, Hoffman and Fletcher commissions. The result was the impression of broad agreement between the President's point of view and his advisers' appraisals of the possibility of creating an "effective defensive system." But this was not the case. The conclusions of the Hoffman and Fletcher groups diverged greatly. Their only common feature was that both expressed some doubts about the President's idea that an effective "space shield" could be developed. "The reports of the groups were less a confirmation of President Reagan's point of view than a reflection of an extremely skeptical view of its fundamental premises,"[8] Hafner remarks. Evaluating the conclusions of the Fletcher group, which concentrated on the technical complexities of a broad-scale ABM system, he goes on to say: "The report is a guarded but fairly frank document compiled by experts who made every effort not to put the President in a difficult position, but who nevertheless knew from their own technical experience that they could not promise the feasibility of the final goal."[9]

In the brief report of the Hoffman Commission, the broad-scale ABM system is examined only as a remote and vague prospect, and not as a means of radically changing politico-military strategy, but primarily as a means of exerting political pressure on the Soviet side. The experts in this group stress that they did "not know how the strategic defense of our society could be constructed in such a way as to make nuclear weapons 'powerless and obsolete,' in line with President Reagan's idea," and suggested, as an alternative to "absolute defense," the more modest objective of "reducing the nuclear threat" by deploying "limited systems or systems with more modest technical goals," Hafner writes. "It is difficult to call the Hoffman report anything other than a skeptical rejection of the broad-scale defense system President Reagan has offered the American people."[10]

The authors express interesting opinions about the scientific and technical parameters of the SDI. The most detailed criticism of the technical aspects of the "Star Wars" program is presented by Hans Bethe, winner of the Nobel Prize and one of the administrators of the Manhattan Project, in an article co-authored by physicist Richard Garwin and Harvard University staff associate Jeffrey Boutwell.[11]

There is the assumption, they write, that the broad-scale ABM system will consist of several layers, or echelons, for the interception of intercontinental ballistic missiles (ICBM's), corresponding to different stages of their delivery. They distinguish between four stages: the boost (or launch) phase, from the launching of the missile to the separation of the missile from its booster; the post-launch phase--from the end of the launch to the release of warheads and decoys; the ballistic phase--the stage of free flight outside the earth's atmosphere; and the terminal phase--from re-entry to the destruction of the target. The authors note that, "in contrast to the ABM systems of the 1960's, which covered only the terminal stage of delivery, the multi-layered antimissile system envisages the destruction of hostile missiles in all four phases of flight."

The optimal phase for the interception of ICBM's is considered to be the launch or boost phase (in this phase the missiles are more vulnerable for several reasons: first of all, the booster represents a large and relatively flimsy target; secondly, the heat emitted by thrusters greatly facilitates their detection). Two types of weapons are to be developed for the interception and destruction of missiles during the first two phases: directed-energy and kinetic-energy weapons. The authors thoroughly analyze both types and conclude that the successful performance of the functions of each layer of the antimissile system and the entire system as a whole will entail tremendous difficulties. These will include the development of new types of highly accurate weapons for the destruction of objects in space, the emplacement of huge power generators in orbit, the need to secure the superfast interaction of components of the system in combat, the vulnerability of the components and so forth.[12]

The creation of command, control and communication systems will be an equally complicated matter. These systems will have to detect the launching of missiles and decoys, manage the combat operations of a tremendous number of weapon carriers, estimate the kill factor, transmit commands to subsequent "defense layers" and so forth. All of this will have to be done within an extremely limited time period, which virtually excludes the possibility of human participation. Command and control will be the responsibility of computers, which should secure the automatic functioning of the ABM system. The combination of all its elements in a single and highly reliable system guaranteed to be failsafe will necessitate the development of computers capable of literally instantaneous action, and this is "far beyond the range of present capabilities,"[13] the authors stress. Particularly high requirements have been made on the development of software for the analysis, transmission and repeated verification of large quantities of information.

The next group of problems in the deployment of a broad-scale antimissile system stems from its high degree of vulnerability. This applies to the huge mirrors, precision lasers and computers.

Finally, the work on the SDI is connected with the colossal expenditures required for the development of each component. I will cite just one estimate, but it is an impressive one: "Each satellite with laser equipment will cost approximately the same as a Trident submarine--that is, several billion dollars." Experts estimate the cost of the deployment of the entire system at over a trillion dollars.[14]

The factor of potential countermeasures introduces more uncertainty into the question of the effectiveness of the system and its survivability. This question is discussed at length in the magazine articles. Bethe, Boutwell, Garwin, Hafner and others are convinced that countermeasures could be much simpler in the technical sense and, consequently, much cheaper than the space-based elements they counter.

Interacting with one another, the technical problems in the creation of the broad-scale antimissile system are shaking the weak foundation of the SDI and are thereby giving rise to "great doubts about the feasibility of the deployment and use of antimissile strategic systems."[15] Some authors stubbornly defend the idea of the SDI, insisting on its practicability. But even they do not agree on all aspects of the matter. For example, General Toomay writes: "When I say that the new technologies are promising, I am not guaranteeing their success."[16]

Besides this, the broad-scale antimissile system envisaged in the SDI will be directed primarily against ICBM's--only one of the three main components of U.S. and USSR strategic forces. American experts Boutwell and Long make the accurate observation that the genuinely comprehensive defense of national territory is unthinkable unless effective measures are taken against ballistic missiles on submarines and strategic bombers carrying cruise missiles.[17]

Finally, the third, legal aspect of the work on the SDI was also debated in DAEDALUS magazine. The connection between the SDI and the ABM treaty is the subject of an article by Harvard University research associates Abram and Antonia Chayes and attorney Eliot Spitzer. In an attempt to circumvent the treaty, the Reagan Administration is trying to misinterpret the text of this document, distorting its goals and purpose with the aid of verbal acrobatics, they write. Relying on the notorious argument that the SDI program is confined to research, its supporters are manipulating the concepts of systems "research" and "development." Arguing that the program is not subject to the limitations stipulated in the treaty, they assert that the elements of the antimissile system are not its components. This is also the purpose of the false interpretation of the statement on antimissile systems based on different physical principles. Distorting the aims of the treaty, the SDI's supporters argue that its limitations do not extend to systems using "exotic" technology, such as lasers and particle beam weapons. Refuting this assertion, the authors of the article cite a remark made by Secretary of State W. Rogers during Senate hearings. When the ratification of the treaty was being discussed in the Senate, he unequivocally acknowledged that "the sides have agreed that future exotic ABM systems--for example, those using such devices as lasers--cannot be deployed--even in authorized regions."[18]

Many experts in the United States have pointed out the danger of the dual- and multi-purpose technologies now being developed within the framework of programs for systems not covered by the treaty, such as antisatellite systems or systems for defense against tactical missiles. In the belief that "dual-purpose technologies represent the most difficult problem in the interpretation of the treaty and will eventually pose a more serious threat to the existence of the ABM treaty,"[19] the authors of this article conclude that there is an urgent need for agreements on antisatellite systems and systems designed for the destruction of tactical missiles.

Questions connected with the SDI's effects on strategic stability are closely related to the problems of arms control. The supporters of the SDI make optimistic predictions. The implementation of the "Strategic Defense Initiative," General Toomay asserts, "will certainly be consistent with the important goals of arms control."[20]

The majority of these writers realize, however, that stepped-up work on the SDI, as Holloway writes, "could lead to insurmountable obstacles in arms control talks."[21] Threatened by the disruption of parity, the other side can hardly be expected to agree to any reduction of its offensive forces. Furthermore, he says, it might respond with an increase in offensive arms, including weapons against which the defensive systems will be powerless, and even with the development of weapons capable of destroying the space-based antimissile system. The escalation of the race for offensive arms, the threat of breaking the ABM treaty and the addition of the issue of antisatellite weapons to the questions of strategic arms control will complicate strategic arms limitation talks and, under the conditions of work on the SDI, "could impede the negotiation of bilateral nuclear arms reduction,"[22] Holloway notes.

The differing reactions of the U.S. allies to the SDI are examined in the set of articles by prominent specialists from several West European countries and Australia. Despite the wide range of opinions, the authors' serious worries about the implications of the SDI are obvious. Christoph Bertram's opinion is indicative: "The Europeans regard any attempts to change the present structure of 'deterrence' with skepticism, if not outright disapproval. They are afraid of the effects the escalation of military rivalry in space might have on arms control and on East-West relations."[23] In Bertram's opinion, many West European leaders have no wish for an open confrontation with the Reagan Administration and have therefore chosen a temporizing policy. Although they have not objected to the SDI research in the United States and have expressed a purely external interest in the program, they are nevertheless underscoring their adherence to the ABM treaty. In Bertram's opinion, however, the stepped-up militarization of space could lead to open disagreements and cause friction in U.S. relations with the European allies.

An analysis of the articles in DAEDALUS magazine provides some idea of the alignment of forces in the U.S. academic community in relation to the SDI program. The dangerous consequences of an arms race in space, according to the majority of authors, will lead to the continuation and intensification of the debates on "strategic defense" and will involve larger and larger groups of the American and world public in these debates. This was corroborated by,

for example, the protest petition sent to Congress on behalf of 1,600 American scientists, many of whom are working on weapons systems in the main government and private industrial laboratories. It calls the SDI program a "waste of money, which could also escalate the arms race."

It is probable, however, that the supporters of "Star Wars," and these are mainly members of the American military-industrial complex and military-political elite, will not give up so easily.

The critical analysis of various aspects of the program by scientists and experts proves once again that the prevention of the militarization of space is the paramount objective of our day.

FOOTNOTES

1. DAEDALUS, "Weapons in Space," Spring, Summer 1985.
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3. G. Rathjens and J. Ruina, "BMD and Strategic Instability," ibid., Summer 1985, p 219.
4. C. Bertram, "Strategic Defense and Western Alliance," ibid., p 279.
5. G. Yonas, "The Strategic Defense Initiative," ibid., Spring 1985, p 73.
6. A. Flax, "Ballistic Missile Defense: Concepts and History," ibid., p 33.
7. D. Holloway, "The Strategic Defense Initiative and the Soviet Union," ibid., Summer 1985, p 257.
8. D. Hafner, "Assessing the President's Vision," ibid., Spring 1985, p 92.
9. Ibid., p 95.
10. Ibid., p 97.
11. H. Bethe, J. Boutwell and R. Garwin, "BMD Technologies and Concepts in the 1980's," ibid., p 55.
12. Ibid., pp 53-71.
13. Ibid.
14. J. Boutwell and F. Long, "The SDI and U.S. Security," ibid., Summer 1985, p 315.
15. H. Bethe, J. Boutwell and R. Garwin, Op. cit., p 70.

16. J. Toomay, "The Case for Ballistic Missile Defense," DAEDALUS, Summer 1985, p 236.

17. J. Boutwell and F. Long, Op. cit., p 317.

18. A. Chayes, A. Chayes and E. Spitzer, "Space Weapons: The Legal Context," DAEDALUS, Summer 1985, p 200.

19. Ibid., p 206.

20. J. Toomay, Op. cit., p 233.

21. D. Holloway, Op. cit., p 257.

22. Ibid., p 275.

23. C. Bertram, Op. cit., p 286.

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TROFIMENKO REVIEWS BOOK ON DETENTE, CONFRONTATION

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 93-99

[Article by G. A. Trofimenko and A. I. Utkin: "An Interpretation of the Detente Experience"]

[Text] It is not uncommon for writers of memoirs and researchers to analyze Soviet-American relations. Nevertheless, Raymond Garthoff's book "Detente and Confrontation. American-Soviet Relations from Nixon to Reagan,"[1] published under the auspices of The Brookings Institution, could never be categorized as commonplace or called "just another" interpretation of this topic. Two features will always distinguish this work from the rest. First of all, its author, a well-known American diplomat, was directly involved in the engineering and conduct of American policy when it encompassed the idea of detente in the early 1970's. Garthoff was a member of the American SALT delegation. Later he was the U.S. ambassador to the People's Republic of Bulgaria. Secondly, R. Garthoff has made a colossal (and this is no exaggeration) effort to analyze the most diverse materials. We do not know how many years he spent gathering information, but we do know that he spent at least 5 years analyzing all of these materials in the prestigious Brookings Institution, where he became a senior research associate at the beginning of 1980. This is probably the most detailed analysis of Soviet-American relations between the end of the 1960's and the early 1980's--a period covering, according to Garthoff's definition, the birth (1969-1971), establishment (1972-1975) and stagnation (1975-1979) of Soviet-American detente and its crisis (from 1980 on), which was the result of the American side's abrupt reversal from the line of negotiation with the USSR to the line of confrontation. There is probably no need to point out the fact that the American account of the causes and characteristics of the birth, development and subversion of detente in the 1970's is of indisputable interest to us. This was probably the best period in the history of postwar Soviet-American relations, a period marked by many of the achievements that are contributing to international stability and are the cause of many of today's realities in the world. And this is not merely the American side of the story, but an account presented by a member of the U.S. establishment, a scholar and a diplomat.

An assessment of the significance of Garthoff's book requires an examination of the prevailing atmosphere and ideological climate in America today. The

current President took office as a confirmed opponent of the policy of detente, the main achievements of which--the SALT accords--he described as "fatally flawed." At a time when the detente of the 1970's is being described by many U.S. officials as a "Russian trick," supposedly intended to deceive America and lull it to sleep for a decade while the Russians strove for decisive strategic advantages during this period of "hibernation," Garthoff's detailed and scrupulously documented arguments tell a different story.

We must immediately say that one of the most regrettable features of the present ideological climate in the United States is the series of fierce attacks on the policy of improving relations with the USSR, and these attacks are being made not only by those for whom the struggle against detente was natural, because detente undermined their "vested interests" in the sphere of military business or "strategic" mythmaking or their position in the bureaucratic power structure. Unfortunately, attacks are also being made by such statesmen as Nixon and Kissinger, in whose political biographies the best pages are those describing their efforts in support of detente. Their own memoirs and books provide amazing evidence of their self-flagellation and doubts about something that essentially constitutes their main contribution to history.

In this context, Garthoff's book is distinguished by the absence of attempts to play up to the rightwing forces that began to dominate the national scene in the 1980's. Garthoff (just as some other participants in the talks of the 1970's, such as G. Smith) has remained loyal to the ideals and policies that many members of the U.S. establishment applauded in the 1970's and then ostentatiously rejected in the 1980's. The notorious pendulum of American politics has swung to the right. But a pendulum has to eventually begin moving in the opposite direction, and this means that there is a chance that the forces regarding detente and the normalization of Soviet-American relations as a positive development will gain the upper hand. These forces have already expressed their feelings and even made it necessary for President Reagan to go to Geneva to speak with General Secretary of the CPSU Central Committee M. S. Gorbachev. To make the new process of the improvement of Soviet-American relations more stable--and we believe in this possibility--past experience must be carefully studied. In this connection, Garthoff's book is an important source of factual information and sober analysis.

The work is distinguished by its wide historical scope and its logical and reasonable conclusions. The structure of the work is simple, despite the broad range of events it covers. In chronological order, the author reveals the preconditions for detente, thoroughly analyzes its achievements, assesses the influence of circumstances outside the sphere of Soviet-American relations, scrupulously traces the growth of the conservative opposition in the United States and expresses sound opinions with regard to the causes of the onset of harder times.

The author does not put on any airs, indulge in didacticism or try to gratify wounded pride. He deliberately lets the facts speak for themselves, giving the reader a chance to make up his own mind by presenting him with all of the necessary information. This does not mean that Garthoff has ostentatiously

chosen to "stay out of the fight" or that he is an impartial chronicler. On the contrary, his work is permeated with the idea that the processes which enveloped the entire system of Soviet-American relations in the first half of the 1970's were healthy ones. The positive experience of the past must be taken into account--this is the message of this book, which is filled with the mature judgments and deep concern of its author.

Garthoff's work contains a detailed analysis of the essence of detente, which was not the result of "the deliberate deception of the naive Americans by the insidious Soviets," but represented the greatest international compromise of our time for the sake of a healthier international atmosphere. This compromise was based--on each side--on the realization of the impermissibility of nuclear conflict and on a sober assessment of the long-term national interests of the USSR and United States. The conclusive nature of this interpretation of detente is Garthoff's greatest achievement in this work. The author asks the reader, indirectly at times and even directly in some places, to free himself of false and far-fetched propaganda stereotypes and take a careful look at the complicated diplomatic work that gave rise to detente and all of the related efforts to curb the arms race, to define the rules of behavior in the nuclear age and to secure favorable conditions for peaceful competition and cooperation by the two great powers.

The researcher methodically and analytically traces the "rise and fall" of detente. It is not important that different theories and a different view of the 1970's prevail in America today. The author prefaces his book with Machiavelli's words: "To know the future, study the past." And the experience of the 1970's, the relaxation of international tension, is particularly valuable in the difficult task of preserving civilized life, and life in general.

The author analyzes the three spheres in which Soviet-American relations were developed: national security, global geopolitical competition and economic ties. The author deliberately omits one of the favorite topics of those who oppose the improvement of Soviet-American relations--the USSR's domestic problems. This is evidence of the author's principled position. In his opinion, these problems, "by their internal nature, are not part of the United States' relations with the USSR. The conflict of ideological outlooks and values between the Soviet Union and the United States is deep-seated, but it represents the reality to which policy must adapt" (p 1123). This is a sensible approach. He mentions the differences in the internal social nature of each of the two systems, but does not make the normalization of governmental relations conditional upon a change in either direction. It is only on this basis that normal relations can be built.

An essentially fundamental characteristic of the detente of the 1970's, a characteristic which could be said to have made detente itself possible, was the American side's willingness not to link the domestic problems of each society with foreign policy problems (this was also the approach of the American administration in the 1930's--at the time of the first period of American-Soviet detente, connected with the establishment of diplomatic relations between the two countries). And the crux of the matter in both cases

was the American side's willingness to display this kind of realistic approach, because the Soviet doctrine of peaceful coexistence, formulated by V. I. Lenin, the founder of the Soviet State, proceeds precisely from the deep-seated differences between the socialist and capitalist systems but also postulates that these differences cannot and should not impede the peaceful coexistence of socialist and capitalist states.

It is also indicative that each time the American leaders began to depart from detente and from peaceful coexistence, they began making American policy toward the USSR dependent on internal changes in the Soviet society, as if they were seeking "grounds" for the renunciation of detente by encumbering the normal development of this process with all sorts of obstacles.

In response to the main question of why it was impossible to preserve the achievements of detente and to make it a lengthy process, Garthoff mentions the "mutual inability of the sides to acknowledge and accept the goals and actions that were assessed in different ways by the two sides, contradicted joint efforts and ultimately stifled them" (p 21). Whatever else we might think of this verdict, it is far removed from the accusing finger of those who began "convicting" the USSR, from about 1975 (and more intensely as the practice went on), first for the liberation of South Vietnam, then for the events in the Horn of Africa, then for some kind of brigade in Cuba and then, it goes without saying, for the Afghan revolution and its consequences.

Although the prevailing view in the United States is that detente was an unjustified American concession to the Soviet side, Garthoff offers a dispassionate review of the facts. He professionally (in the best sense of the term) analyzes the main accords of the 1972-1979 period and informs the reader that presidents Nixon, Ford and Carter, who were elected by the American people, once confidently and publicly declared that the agreements with the USSR were good for the United States and were in the national interest.

Many sections of this monumental study are interesting precisely because the author witnessed the establishment of the process of detente from within. Garthoff shows that the 3-year journey to the policy of detente was difficult and often paradoxical, and that many of the American side's decisions were absolutely necessary. This is how he describes the preliminary phase of the process. Vietnam was a nightmare looming over American politics, and many of the decisions of those years were connected with Washington's desire to emerge from the Vietnam crisis "without losing face" and to avoid new Vietnams in the future. This was the specific purpose of the "Nixon Doctrine," which advised American allies among the developing countries not to count on U.S. military contingents (p 74), and the development of the new view of trade as a means of diplomacy (p 91).

Garthoff discusses the main factors stimulating the U.S. transfer to the channels of detente, listing the West European example of better relations with the Soviet Union, the settlement of the West Berlin question, the desire to avert a nuclear catastrophe, economic and trade considerations, and the hope that better relations with the USSR would promote the quicker resolution of the most pressing problem of that time--the Vietnam problem--by peaceful means (p 105).

Looking back over the reasons for the vulnerability of the policy of detente to criticism from the right, Garthoff assigns special importance to the different approaches of the two sides to the Basic Principles of U.S.-Soviet Relations, signed on 29 May 1972--the "charter of detente," in the author's words. This was the first document to stipulate the immutability of the principle of peaceful coexistence ("in the nuclear age there is no other basis for the maintenance of relations") and the need to acknowledge the security interests of the sides, based on the principle of equality. The Soviet side rightfully saw the document as a genuinely solid basis for a new system of healthier relations with the United States. The Soviet Union's American partners saw it as something else. In his memoirs, R. Nixon devotes only two sentences to the Basic Principles. Garthoff suggests that "Nixon actually might never have read the document in its entirety" (p 292).

Therefore, there is some doubt as to whether the American side was aware of the significance of the document it had signed, a document which established something like a code of behavior for the two great powers in the nuclear age. Judging by all indications, it did not pay it the attention it deserved. Incidentally, this is corroborated by the odd--in our opinion--fact that this fundamental document was not included in the collections of existing treaties and agreements published by the U.S. State Department, although less significant Soviet-American agreements were included in them. The Republican administration appears to have been embarrassed by its acknowledgement of the Leninist principle of peaceful coexistence as the basic compromise in Soviet-American relations in the nuclear age. And when the period of "misunderstandings" began, people in Washington referred to the Basic Principles only in connection with imaginary violations of them, and never in positive terms, the American researcher stresses.

Garthoff believes that the two main documents of the period of detente, intended to summarize the principles of USSR-U.S. interaction--the Basic Principles (1972) and the Agreement on the Prevention of Nuclear War (1973)--"contributed to the development of the detente process, but also became preconditions for the failure of this process" (p 338). What was the reason for this paradox? Garthoff has enough civic fortitude to admit that this was the United States' fault. On the one hand, it mistook hopes for realities and, on the other, it allowed these "hopes" to be governed by an egotistical interpretation of its own interests, and not a desire to seek realistic compromises to serve common interests.

The nature of the author's opinions and beliefs unavoidably causes him to argue with H. Kissinger, who reduced the significance of the Agreement on the Prevention of Nuclear War to almost nothing in his memoirs.[2] The tendency to ignore this serious document as a factor of mutual deterrence, in Garthoff's opinion, hurt the policy of detente from the very beginning (p 343).

It is completely understandable that Garthoff makes use of all of the information in the extensive and detailed memoirs of the main American politicians of that time (R. Nixon, H. Kissinger, H. Haldeman and others). He compares and contrasts their points of view (which are sufficiently contradictory to begin with), compares them with some declassified documents and, as a result

of the subjectivity characteristic of all memoirs, especially political ones, is able to step into the background and examine a historical canvas with a closer resemblance to reality. Here is one example of how the author does this. In the second volume of his lengthy memoirs, H. Kissinger describes the choice of time and place for the first summit meeting as "almost ideal" in a fairly cynical tone. But what do the other "eye-witnesses" have to say about this? Garthoff quotes Nixon and White House Chief of Staff Haldeman: Both recall that National Security Adviser H. Kissinger insisted on the postponement of the meeting in general, and that only the opinion of the authoritative Secretary of the Treasury J. Connally convinced the President to ignore Kissinger's point of view. In light of this testimony, the statement of the latter, who was allegedly able to masterfully create the "ideal conditions" for the American mission to Moscow in May 1972, sounds at least dubious.

Garthoff also expresses an interesting opinion about the national ABM system project, which was widely discussed in the United States at the beginning of the 1970's and which resulted in the ABM Treaty (1972) when the idea was rejected. Now that the "Strategic Defense Initiative" is one of the bases of the Reagan Administration's militarist policy line, these chapters of the book acquire additional significance. According to the direct observer and participant in the talks, "the ABM Treaty was a great achievement in the sphere of arms control and effectively limited ballistic missile defense to a strategically negligible scale. It contributed to the elimination of one important area of competition in the arms sphere by preventing a race in the area of defense against ballistic missiles. The treaty probably also had a limiting effect on the race for strategic offensive arms" (pp 188-189).

Garthoff proves conclusively that this curtailment of the arms race would serve the fundamental national interests of both countries.

The Reagan Administration, however, does not believe this. It is presumptuously striving for American strategic superiority by undermining the ABM treaty and trying to create a broad-scale antimissile system with space-based elements. The persistence of neophytes is nothing new to the author, their opinions are familiar to him, and he thoroughly analyzes the arguments of the SDI's supporters from a decade ago, conclusively demonstrating that there is nothing new in their arguments to justify the revision of the joint decision of the two countries not to compete in the ABM sphere. Expert knowledge in this case effectively counters the unbridled imagination of the adherents of "High Frontier"[3] and the transfer of the arms race to space.

In general, Garthoff was and is a supporter of the point of view that "the SALT experiment was an absolute success in ushering in the era of negotiation.... It was the paramount achievement in essentially the central sphere of security and arms control" (p 198). And this is not a case of nostalgic loyalty to a cause in which he was personally involved, but a responsible view of the interests of his country and of realistic ways of safeguarding its security, and a respectful tribute to the many years of work by the experts who were able to find a mutually acceptable and mutually beneficial compromise.

Garthoff correctly names the "Schlesinger doctrine," which became part of official policy in 1974, as one of the factors impeding the development of

detente. The instructions to increase "counterforce" potential and gain the ability to fight a protracted nuclear war certainly had nothing in common with the officially declared goals of American-Soviet rapprochement and stronger mutual understanding. The changes in American doctrine and the emphasis on "counterforce" capabilities had an extremely negative effect on the American-Soviet dialogue within the SALT framework, the author reports.

We should recall that in 1971 the American SALT delegation stressed, in response to a Soviet question, that the United States had no intention of improving its "counterforce" capabilities and that this process would have a destabilizing effect. But just 3 years later, this destabilizing line was declared to be official U.S. policy. It is obvious that this was another of the mines planted under the detente structure.

Looking back at the days when U.S. rightwing forces began attacking detente more vigorously, Garthoff recalls certain cases in which the "architects of detente" on the American side fanned the flames of the dangerous fire that threatened to destroy their diplomatic successes. Kissinger's position on Angola in 1975-1976 is a typical example. The secretary of state did not assign any special strategic importance to this distant African country (as the author says, he "felt contempt for American interests in Angola, including strategic ones," p 525), but nevertheless departed from his usual rational line of reasoning and adopted a quite uncharacteristic tone in a speech on Angola (March 1976), declaring that "detente will not survive another Angola" (p 525). Garthoff believes that the secretary of state did not foresee the impact his fiery speech would have on Americans. After all, the U.S. administration had staked its honor on the promise that it would "never yield to pressure again!" "Statements of this kind," Garthoff writes, "restricted the flexibility in the future process of decisionmaking that Kissinger himself called essential" (ibid.).

The U.S. decision to deploy intermediate-range nuclear missiles in Europe played a special role in the subversion of detente. As Garthoff says, at first "the American administration had a cool response to the idea that NATO needed new intermediate-range weapons" (p 857). But the desire to acquire an additional means of pressure on the USSR and on the United States' own allies gained the upper hand, and action was taken on the idea.

A shortage of space prevents the discussion of several other interesting statements the American author makes about the pernicious effects of certain events in 1978-1979 on the process of detente, such events, for example, as the propaganda storm the opponents of detente created on the pretext of a mythical Soviet brigade in Cuba. The Americans who were held hostage in Iran provided an exceptional opportunity to fuel chauvinistic feelings within the United States and contributed to the essential capitulation of members of the ruling elite with a realistic outlook. The upper hand was gained by self-assured, "unconvinced by Vietnam," as the author writes, advocates of the new global activism of the United States, proclaiming that the policy of detente would unseat the United States from its position as leader of the West and would promote the self-assertion of the huge developing world.

Garthoff describes the policy of the USSR as "active" but "selective and cautious." A distorted image was planted in the minds of average Americans and political leaders. The belief in Soviet expansion in the Third World in the 1970's was exaggerated beyond all reasonable limits (p 1101). This, in Garthoff's opinion, was what put the Reagan Administration in power and led to its adoption of measures "incommensurate" with the USSR's actions--new military programs instead of more prudent diplomacy in developing countries, and accusations of the USSR instead of a search for mutual accord.

Garthoff realizes that the USSR and the United States have always had, and will always have, different interests. He feels that detente was unique because an attempt was made to agree on rules of behavior in world affairs and to conclude agreements to restrict processes with a potentially lethal effect on the world. With obvious approval, the author examines the period of detente, the time when reason, and not emotion, seemed to finally gain the upper hand in the interrelations of the two powers. With his past experience as a professional diplomat, which comes to fruition in this research work, Garthoff makes a contribution to the most necessary task, the task of achieving mutual understanding--the basic prerequisite for survival and good-neighbor relations in our world.

We are not saying that Garthoff's fundamental work is an exhaustive and irreproachable analysis of the complex process of international detente. Some of the documents of this period have not been made public yet, and not all participants have expressed their views (and those who have did not always do this as objectively as they should have). There is also no question that the vantage point from which Garthoff views this process is subjective to a certain extent and has some flaws. The American author is certainly protecting the interests of his political group. He sees the USSR as the historical opponent of the United States and cannot be suspected of pro-Soviet leanings. Striving to serve his own class and his own political group, he stresses the need for a more astute, more discriminating American diplomatic approach to the extremely complex issue of interrelations with the USSR.

Judging by some of his comments, Garthoff is also a skilled advocate of American capitalism and a defender of Washington's claims to special conditions for the United States in the world arena. But this is not what interests us in the book. It is important for another reason: His inner sense of justice is outraged by the methods Washington adopted when it departed from detente. Striving for an objective and dispassionate analysis of the process of detente, aimed at the improvement of Soviet-American relations, the author warns American policymakers against false moves which would be difficult to correct in relations with the USSR, on which so much depends even as far as the United States is concerned. Garthoff is certain that the goals of detente coincide with U.S. national interests. We can add that its principles and goals would certainly serve the interests of not only the United States and the USSR but also of the world as a whole.

In the Political Report of the CPSU Central Committee to the 27th Party Congress, M. S. Gorbachev said: "Security, as far as relations between the USSR and the United States are concerned, can only be mutual, or, in the

context of international relations as a whole, can only be universal.... The world today is too small and fragile for wars and power politics. It cannot be saved and preserved unless we break--resolutely and irrevocably--the habits of thinking and action that were based for centuries on the acceptability and permissibility of wars and armed conflicts."[4]

Of course, healthier relations between the two countries will necessitate the careful analysis of the recent past with all of its successes and failures.

Four summit meetings, 11 bilateral commissions and more than 150 Soviet-American agreements, from strategic arms limitation to public health and culture--these are quite impressive results of U.S.-USSR interrelations during the period of detente. These quantitative indicators reflected the mutual realization of the need to minimize the potential risks of confrontation. A move from hostile confrontation to the policy of peaceful coexistence is the only choice today. Garthoff's book is interesting and helpful because the author bases his study on a simple but self-evident fact: "The resumption of confrontation and denial of detente did not constitute a viable alternative" (p 22). And in view of this, "the present uncertainty and difficulties of American-Soviet relations and the characteristic lower level of contacts and high level of confrontation than ever before in the past two decades have only obscured, and not eliminated, the still-present need to alleviate contradictions and conflicts through the resumption of cooperation" (p 21).

Another of the author's extremely significant conclusions warrants attention: "The joint acceptance of strategic parity in the 1970's as a standard for the two sides was an important achievement..,and laid a conceptual foundation for potential agreements" (p 68). The USSR still regards the principle of equality and equivalent security as the basis for the normalization of relations with the United States. The United States, on the other hand, has departed from this mutually acknowledged premise. In a calm and academic tone, Garthoff presents an unequivocal reply to the question of who actually departed from detente, citing documented evidence.

This departure did not put the United States in a superior position, did not strengthen its security and did not solve a single major international problem. The Americans had to carry the new burden of financing another round of the arms race and of militarist actions abroad. It is completely obvious that broad segments of the American public cannot agree with this method of restoring the United States' international prestige.

FOOTNOTES

1. R. Garthoff, "Detente and Confrontation. American-Soviet Relations from Nixon to Reagan," Washington, The Brookings Institution, 1985, XVI + 1147 pages.

2. "In retrospect I doubt whether the result was worth the effort" (H. Kissinger, "Years of Upheaval," New York, 1982, pp 285-286).

3. "High Frontier" is an ultra-rightwing organization headed by General Daniel Graham and representing the interests of the aerospace industry. The members of the organization are zealous apologists for the SDI. For more detail, see I. Ye. Malashenko, "The Politico-Psychological Aspects of the 'Star Wars' Program," SSHA: EPI, 1986, No 7--Ed.

4. "Materialy XXVII syezda Kommunisticheskoy partii Sovetskogo Soyuza" [Materials of the 27th CPSU Congress], Moscow, 1986, pp 64-65.

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CSO: 1803/01

BOOK ON NEW STAGE IN S & T REVOLUTION IN CAPITALISM

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 109-110

[Review by Yu. I. Bobrakov and A. Yu. Protopopov of book "Sotsialno-ekonomicheskiye protivorechiya NTR pri kapitalizme" [The Socioeconomic Contradictions of the Technological Revolution in the Capitalist Society], edited by V. I. Gromeki, Moscow, Mysl, 1985, 267 pages]

[Text] The 1970's were distinguished by the most severe economic upheavals since World War II in the capitalist countries. During this period, a new phase of the technological revolution was maturing in the depths of the structural and cyclical crises and is now one of the important determining factors in the development of the capitalist economy and its contradictions.

The subject of this review is an informative critical analysis of the essence of the most important changes occurring in today's capitalist economy under the influence of the latest scientific and technical achievements, a thorough study of the interaction of general economic and scientific-technical development, an assessment of current structural changes and a discussion of the contradictions of the current phase of capitalist economic development.

The authors examine the general tendencies turning science into an immediate productive force and assess the effects of major scientific and technical achievements on the state of the entire capitalist economy and on its different sectorial complexes. They also analyze the latest socioeconomic problems, the exacerbation of which is inevitably connected with the new phase of the technological revolution in the capitalist society.

The authors present a thorough examination of the distinctive features of the present phase of automation, reflected, as they point out, in the move toward flexible automated systems in the processing industry, in the more extensive use of microprocessors in industry and other sectors, in the further computerization of various spheres of human endeavor and in the development of robot engineering.

The book contains a convincing demonstration of the contradictions of scientific and technical development itself in a society dominated by monopolies, determining the process of accumulation and the use of the scientific and

technical potential of leading capitalist countries. This applies above all to the obvious "underinvestment" in basic research and to the "passion" for research and development projects with the aim of short-term "private" commercial profits, to the detriment of scientific achievements with a strong social impact over the long range. The thesis of the intensification of the contradiction between the increased collectivization of production and science and the private capitalist method of appropriating and distributing results is developed further. This thesis is confirmed by all of the practices of the giant monopolies, controlling more than 70 percent of all the funds invested in science and technology, and by government activity in this sphere and the contradictory nature of government regulation of the mechanism of market relations.

The book includes a particularly interesting analysis of the class essence, instruments and specific measures of the so-called "national technological policy" of capitalist states. Logical arguments are cited to demonstrate that the architects of this policy are not pursuing "national goals" but are serving the interests of monopolies, and this is particularly evident in the United States. Although the very nature of scientific and technical progress today demands a long-range policy, its basic directions change frequently, and less in line with the interests of the entire bourgeois class than the interests of the specific group represented by members of the administration. The militarization of R & D is a top priority of the Reagan Administration's scientific policy. As a result, federal expenditures on military R & D increased 2.3-fold in fiscal years 1981-1986, in spite of all the indisputable losses ensuing from the diversion of these funds from the civilian sphere (p 123).

The authors present an in-depth analysis of the present factors aggravating the employment problem in connection with the structural reorganization of the economy in the United States and several other capitalist countries, a problem so acute that it is even alarming members of the ruling class, because the growth of the reserve army of labor could exacerbate social conflicts.

The authors conclusively prove that unemployment is rising in the capitalist countries, the sociopsychological aspects and content of labor are deteriorating and the rate of job dissatisfaction is rising, in spite of attempts to "enrich" labor.

The authors make the accurate observation that American monopolies make use of their technological superiority in the capitalist world to export goods and capital to other countries and to strengthen their position in world capitalist markets, and that new technology serves as an instrument of U.S. foreign economic expansion.

The thorough and multifaceted analysis of the socioeconomic contradictions of the technological revolution in today's capitalist society in this book will be of indisputable interest to economists and to the general reading public.

8588
CSO: 1803/01

USE OF FIFTH GENERATION COMPUTERS IN SDI

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 112-117

[Article by B. D. Antonyuk: "The 'Strategic Computer Initiative'"]

[Text] The supporters of the nuclear arms race, who zealously defend the "Star Wars" program, have irrepressible appetites. The Office of Technology Assessment of the U.S. Congress estimated that by 1990 the SDI program will absorb around 15 percent of all Pentagon R & D allocations, or 5 percent of all national expenditures on science.[1] The SDI program is so huge that a special agency, comprised of part of the Defense Department Advanced Research Projects Agency, was set up to coordinate the work on various aspects of the program.

One of the most important elements of the SDI is the program for the development of new types of computer systems with features far superior to those of existing systems. For example, the Pentagon allocated around 300 million dollars for the development of "fifth generation" computers and the same amount for other projects connected with the SDI computerization program.

An analysis of the programs from this standpoint indicated that the attainment of these goals would necessitate a colossal amount of work in the sphere of basic research. This applies primarily to the development of new types of large computer chips, to the design of computers, to their software, etc. Calculations indicated that this work would cost more than a billion dollars. But it turned out that all of the SDI financial resources had already been distributed for other projects. There was only one solution: to take the new subprogram out of the SDI framework. This is how the "Strategic Computer Initiative" (SCI) came into being in October 1983. It was described as one of the new fields of research of the U.S. Defense Department Advanced Research Projects Agency.

The SCI program was drawn up for the decade starting in 1985. The amount allocated for 1985-1990 exceeds 600 million dollars--around 150 million for the first year and approximately 100 million for each subsequent year. Therefore, with the inclusion of R & D funds for other computer programs, the total allocations of just the Defense Department reached 300 million a year in 1986.[2]

The definition of the SCI program objectives lists three main fields of research: the development of an autonomous land vehicle, the creation of an expert "copilot" system and the creation of a battle-management system.

At first, these fields seem to have no direct relationship to the SDI. These are systems for conventional warfare. The SDI program is geared to space. A closer look at each SCI field, however, reveals the connection between the autonomous land vehicle and the autonomous laser in space and the connection between the expert copilot system and the guided military spacecraft, while the battle-management system is simply a part of the global SDI management system. After all, for a computer system endowed with artificial intelligence, it is not important where it distinguishes between "friendly" and "hostile"--in the air or in outer space.

Six types of systems are to be developed for the attainment of the goals of each of the three programs. Above all, these are systems of simulation, communication in natural language, visual observation, navigation, verbal command interpretation and combat planning.

Achievements in the sphere of artificial intelligence are the top priority in the SCI program because there is no point in creating these systems unless all of them have certain elements of "logical deduction," allowing the devices to make decisions. There is also another important practical reason for the use of artificial intelligence. New systems must be isolated from outside influences if they are to act like the best specialists in unpredictable situations. This presupposes the storage of a certain amount of knowledge in their memory. Their creation is being made possible by the development of so-called expert systems of artificial intelligence.

The expert system is an automated information system in which the experience and knowledge of leading specialists in a specific field are stored in coded programs. The main feature distinguishing them from traditional information systems is that the database of the expert system includes not only general information about the subject, but also data sometimes contradicting classic procedures, representing the result of the specialist's rich experience and based on the "sixth sense." For this reason, the expert system must be installed in powerful computers with high speed, online memory and adaptability, allowing for the quick "review" of all possible decisions and the choice of the one most suited to the given set of circumstances.

The natural language system presupposes the development of a unit allowing the user to ask informal questions in conversational language, after which the computer translates them into machine-oriented instructions and codes, processes them and then issues results in conversational language.

A separate program envisages the creation of new types of computers and operating systems designed for autonomous functioning and simultaneously equipped for high-speed communication with other information systems. The work on this program is concentrated in the following main areas: high-speed data processing, a high degree of reliability, character processors, operating systems and multiprocessor programming.

In microelectronics projects are being financed for the development of gallium arsenide and silicon crystal microcircuits and giant computer chip systems.

In view of the fact that all of these systems must function within the single SDI infrastructure, the work on the improvement of the design, reliability and speed of computer networks and the interface of different computers and their prototypes will be continued.

Autonomous Land Vehicle

An autonomous vehicle for rugged terrain, capable of choosing the best route, determining the danger of enemy actions, assessing the situation and destroying hostile objects when necessary, is to be developed.

The contract for this system was awarded to the Martin-Marietta firm. The software will be based on a University of Maryland project. It was no coincidence that this university's artifical vision laboratory was chosen for the project, as it is responsible for the best television camera image processing programs. The first stage of the program envisages the perfection of the visual system allowing the vehicle to travel at a speed of 6 km per hour. The main limiting factor is the speed of the computer processing of visual information. The use of even a minicomputer as powerful as the VAX 11/785 requires the vehicle to stop every 6 meters for the complete translation of all new information.[3]

The most difficult task consists in determining the boundaries of the road the vehicle is traveling, because the computer chooses between two half-tones of gray. The use of a color television camera in the future could speed up this process. The system also must be able to discern obstacles in the road and make the appropriate decisions. For example, a change in the color of the road could be the shadow of a tree or clouds, or it could be an obstacle in the road. The vehicle must decide whether to surmount the obstacle or to change course. A five-frequency laser scanner is to be developed for this purpose and will determine the nature of the obstacle by measuring the intensity of frequency absorption and reverbration.

"Copilot"

The main purpose of this program is the processing of information transmitted to an airplane for the recommendation of possible actions to the pilot in each specific situation. An expert copilot system, consisting of four master units, will be developed for this purpose.

The situation assessment unit is being developed primarily for the analysis of external factors influencing the decision. These factors include topography, weather, targets, target defenses and the condition of the plane itself and its ability (or inability) to perform a specific task.

The tactical planning unit should aid in the choice of the correct sequence of operations with a view to the specific situation. These will include

recommendations on the choice of weapons, the flight trajectory for the destruction of the target and the existing dangers for the plane. In the assessment of a situation involving the possible destruction of the plane, the copilot arranges these external factors in order of danger and estimates reaction time to a sudden threat. If the pilot cannot assess the situation in time, the system will make the decision itself. It will also report what will happen if this instruction is not carried out and will list possible alternatives. The system is capable of making the choice if the pilot does not respond to its suggestions. At the same time, the pilot can cancel this decision if he does not agree with the computer's recommendations.

The operation planning unit is intended to adapt the mission plan to the specific situation. The mission plan is fed into the computer before a combat mission, and during the flight the copilot system compares it to the information received by aircraft systems and assesses the influence of the actual situation on the mission plan. After comparing this information, the system issues the necessary recommendations to the pilot for decisionmaking.

The flight survival unit is responsible for the functioning of all airplane systems, their monitoring, diagnosis, and the assessment of the general state of the system and the presumed state in the event of a change in flight conditions. It also detects inoperative components and decides which of the functions of this component can be distributed among other systems and what effect this situation will have on the pilot's performance. The functioning of all systems is also automatically reorganized in the event of an abrupt change in flight conditions due to sudden external danger. Therefore, the copilot system actually replaces the flight engineer, gunner, navigator and human copilot and thereby allows for the considerable enhancement of the effectiveness of single-seater planes. Its main distinction from traditional systems is its processing of the data recorded on different gauges and the issuance of information to the pilot. Traditional systems gave the pilot data (from many instruments and indicators on board), but the pilot processed the data himself and then issued instructions with the aid of various control devices.

These four units were chosen as the most important for the pilot from around 20 proposed by various universities and firms. The most complex and important is the tactical operation planning unit. The program is scheduled to be completed in 1995, when projected developments in electronics will allow for the creation of aircraft systems functioning in real time.[4]

Military Theater Management

This program presupposes the creation of support systems for decisionmaking and the preparation of combat scenarios for the next 96 hours in the "what will happen if..." format. Its nucleus will also be an expert system--or, more precisely, a set of expert systems--intended to assess situations arising under different conditions.

The program envisages the organization of a work center for 20-40 people. This group will be able to process all information even with a tenfold increase

in volume. The center will consist of several interconnected but independently functioning units: primary data processing, communications, coding, model assessment and a command unit in which all center functions will be integrated.

The naval battle-management system of the Department of the Navy was taken as the prototype. The expert system of the U.S. Navy operates parallel with the department's traditional information system, all decisions issued by the two systems are compared, and the best decision, obtained with the aid of the traditional system, then enters the database of the expert system.

Existing medical expert systems use from several dozen to several hundred instructions for their decisions. Furthermore, they "review" them at a rate of several hundred a second. For the creation of expert systems capable of performing the functions stipulated in the SCI program, computers must be able to "review" 15,000-20,000 instructions per second. What is more, the expert systems themselves must have from 30,000 to 50,000 instructions in their database.

Increasing the travel speed of the autonomous land vehicle from 5 to 20 km per hour will require a hundredfold increase in the operational speed of the computer, which will allow for the analysis of up to 7,000 instructions per second, and the number of instructions in the expert system must be increased to 6,500. The best expert systems today contain 600-800 instructions.[5]

The development of the expert copilot system will require at least eight powerful databases, each of which should contain the necessary information and the necessary instructions for its interpretation. All of this will include information on combat tactics, hostile planes, navigation equipment, enemy defenses, flight instructions, etc. For example, experts estimate that the flight monitoring database alone should contain several thousand instructions.

New Problems

The designers of the visual information analysis systems for operation in real time have an even more difficult job. The analysis of photographs taken by a modern telescope with the aid of minicomputers takes around 3 weeks. The transfer of the analysis to a supercomputer reduces the time to an hour. The analysis of visual information in real time requires the computer to perform from 10 to 100 billion operations a second.[6]

By 1990, computer production technology is expected to secure a speed of around 10-20 billion operations per second. But these will be large stationary machines requiring the appropriate facilities, special cooling systems and considerable energy expenditures. In other words, these systems cannot be used in the SCI program. A decision was made to finance R & D for the development of a new type of computer.

The contract for the development of the Butterfly multiprocessor computer was awarded to Bolt, Beranek & Newman. It is working on a computer consisting of 128 processor units connected by high-speed wide-band cable.

The TMC firm is working on the Connection Machine computer, consisting of 16,000 microprocessors. Each processor is attached to the common fiber optics cable and can exchange data with any of the processors in the computer. During the second stage of the project, 64,000 microprocessors will be united, and the figure will then be increased to a million.

Texas Instruments is working on the prototype of a new LISP microprocessor, which has been specially designed for artificial intelligence systems. Situated on a single crystal, the LISP will unite more than 2 million elements and perform the functions of several hundred of the microcircuits used in today's computers.

Carnegie-Mellon University scientists are working on a special processor with parallel data processing for mathematical operations, including rapid Fourier transformations, differential transformations and so forth. The speed of this processor reaches 100 million operations per second.

These projects, approved within the SCI framework, are based primarily on the assumption that achievements in microelectronics and artificial intelligence in the next 2 or 3 years will permit the creation of such systems. The 10-year period for which the SCI program was drawn up is based precisely on this projection. It is assumed that computers capable of performing 10-20 billion operations per second will be developed by 1990, and that expert systems based on artificial intelligence will be developed by 1995. This gives rise to the problem of control.

There is the possibility that the autonomous land vehicle would use a nuclear weapon in self-defense (in defense of a pile of metal) in situations of extreme danger. The same thing could happen with the expert copilot system. If the pilot is wounded, it will take full control and protect itself. In other words, the creation of military autonomous systems based on artificial intelligence means that the control of them could be lost in a real combat situation, and the consequences of their behavior are unpredictable.

Another group of questions arising during the analysis of the SCI concerns the reliability of software. A recently published AT&T analysis of the information systems of the 200 leading U.S. corporations indicated that 300 errors on the average are committed per 1,000 lines of information code (or instructions) in the program.[7] The operating systems of modern computer complexes number hundreds of thousands of lines of information code, and they are therefore debugged continuously right up to the time when they are replaced by new ones. And whereas errors in industrial information systems are corrected when they are discovered, an error in the program of an autonomous system cannot be corrected. The tragedy of the space shuttle "Challenger" is vivid confirmation of this. The programs of the shuttle computers did not envisage a booster malfunction and therefore did not secure the timely separation of the spacecraft. In 1983 a study of guaranteed defense against ballistic missile attacks was contracted by the U.S. Defense Department. One of its conclusions specifically said that the management of such a system would require a program consisting of 10 million instructions. As a basis for comparison, the text editing program for the personal computer contains around 5,000 instructions.[8]

But even if we assume the impossible, that all of these individual systems will work without a hitch, there is still the question of their integration into a single global SDI information system for the coordination of the operations of individual subsystems and the monitoring of the entire situation in emergencies.

For example, a system for the defense of naval targets within a radius of 300 kilometers and the interception of hostile missiles was developed within the framework of the combat planning system in the SCI program. After numerous simulations, the system was tested during combat maneuvers and was able to destroy only 6 of 16 "hostile" targets.[9] The main reason was the presence of programming errors which do not affect the operation of the entire system under ordinary conditions. In extreme situations, on the other hand, when all computer resources must be put to work and when the time factor becomes crucial, errors are revealed, and different ones each time. There are known cases of the malfunctioning of a U.S. automated ballistic missile defense system, in which only human intervention averted a catastrophe. These were cases, however, of false alarms or of exercises in which decisions were not critical. In a real situation, on the other hand, when a decision has to be made in just a few minutes, a search for programming errors is simply impossible.

In other words, the functions the Pentagon is assigning to computers in its SDI program, especially computers with elements of artificial intelligence, are too important to be completely entrusted to a computer, even if all of the SCI projects should be successful. This has been acknowledged by many scientists in leading U.S. scientific centers, who have refused to conduct SCI research.

The most serious concerns have been voiced by Professional Cybernetics for Social Responsibility, an organization uniting more than 600 scientists and engineers engaged in theoretical and applied computer fields. Chairman S. Ornstein of the organization declared that "serious scientists regret that the SCI was undertaken so early. It is amazing that some scientists who have worked in their fields for 20 years and have not obtained the results they anticipated are now agreeing to embark on something new and obtain results the next year."[10]

Stanford University Professor T. Winograd, a prominent scientist, amplified on this idea with regard to the ability of expert systems to perform many functions for the human. "The hope that a computer based on artificial intelligence will react 'correctly' to an unforeseen situation is dangerous, because an expert system intended to make decisions must make them at all costs. For this reason, in a situation not envisaged in database instructions, the system will react to the situation in the way it deems correct. In combat operations the results could be fatal."

In addition to the huge sums allocated for the arms race program, another extremely serious aspect disturbs the American public. According to the calculations of the American Council on Economic Priorities, by 1987 more than 18,000 highly qualified scientists and engineers will be working on the SDI and SCI. Furthermore, since 1984 the Pentagon has been hiring, and will

continue to hire, up to 30 percent of the nation's university graduates with engineering degrees.[11] What is more, one out of every eight will work on the SDI and SCI programs.

The number of computer programmers and specialists now being trained in the United States is far below the number needed by the national economy. The SCI program will exacerbate this problem even more within the United States and will make peace on our planet even more tenuous.

FOOTNOTES

1. "Science and Technology Data Book," Wash., 1985, p 5.

2. HIGH TECHNOLOGY, April 1985, pp 41-49.

3. COMMUNICATIONS OF THE ACM, July 1985, pp 690-704.

4. ELECTRONIC ENGINEERING TIMES, 28 October 1985.

5. Ibid.

6. Ibid., 5 August 1985.

7. THE NEW YORK TIMES, 23 October 1985.

8. Ibid., 4 July 1985.

9. TECHNOLOGY REVIEW, July 1985, pp 16-18.

10. HIGH TECHNOLOGY, April 1985, pp 41-49.

11. THE ECONOMIST, 7 September 1985, pp 93-95.

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OBITUARY OF AVERELL HARRIMAN

Moscow SSHA: EKONOMIKA, POLITIKA, IDEOLOGIYA in Russian No 9, Sep 86 (signed to press 19 Aug 86) pp 126-127

[Article by V. M. Berezhkov: "In Memory of Averell Harriman (1891-1986)"]

[Text] Sad news from New York: Prominent American politician, diplomat and businessman William Averell Harriman died on 26 July 1986 at the age of 94. His name is well known throughout the world. It is associated with many years of efforts to establish normal, mutually acceptable relations between East and West and between the Soviet Union and the United States.

As the son of a prominent railroad magnate, Averell Harriman belonged to the privileged U.S. ruling elite from the time of his birth. In his lifetime he not only augmented his family fortune but also contributed much to the work of the Washington administration. He occupied several important positions in the administrations of Presidents F. Roosevelt, H. Truman and J. Kennedy and was elected governor of the state of New York. In the Soviet Union, A. Harriman is known as a man who did much to organize the productive Soviet-American cooperation in the joint struggle against a common enemy in the years of the Great Patriotic War.

Harriman's interest in our country dates back to the last century, when he first stepped foot on Russian soil at the age of 8. His parents took him along on one of the long trips they regularly took. Their yacht dropped anchor in the Bering Strait, and the entire family went ashore briefly on its west coast. After the October Revolution, Harriman decided to enter into commercial relations with Soviet Russia. He was awarded the Georgian Manganese concession in Chiatura and made several trips to Moscow and the Caucasus in the 1920's in connection with these business affairs and met many Soviet leaders.

This is probably why he was the logical choice when President Roosevelt decided to send a personal representative to Moscow after Hitler's Germany invaded the USSR. Along with Lord Beaverbrook, Harriman headed the Anglo-American mission for talks with the Soviet Government on military shipments to the USSR. The success of this mission helped to strengthen the anti-Hitler coalition of the three great powers. The important agreements securing the victory of the anti-Hitler coalition over the common enemy, in spite of

the objective differences between the socialist Soviet Union and the capitalist United States and Great Britain, were partly the result of Harriman's work as the U.S. ambassador to the USSR from 1943 to 1946.

Harriman attended the Tehran, Yalta and Potsdam conferences. In 1946 he was the U.S. ambassador to England, and later that same year he became the secretary of commerce in the Truman Administration. From 1948 to 1950 he was the United States' special representative in Europe for the Marshall Plan.

Harriman's name is associated with several important international agreements, both bilateral and multilateral. As the under secretary of state in 1963, he made a positive contribution to the talks leading to the signing of the treaty banning nuclear tests in the atmosphere, outer space and under water.

Harriman was the chairman of the National Democratic Committee's foreign policy group for several years after 1974. Till the end of his days he was active in politics, invariably underscoring the importance of international cooperation and the normalization of U.S.-USSR relations in his speeches. He personally contributed 11 million dollars for the expansion of the work of the New York institute of advanced Soviet studies which bears his name.

Although Harriman was a believer in peaceful American-Soviet dialogue, we must never forget that he was always a confirmed advocate of the American way of life and the capitalist system. He favored the normalization of relations with the Soviet Union because he believed that this was in the interest of his own country. Furthermore, he always regarded "service to the nation"--that is, to the U.S. ruling elite to which he belonged--as an absolute public duty.

Between fall 1941, when A. Harriman first arrived in wartime Moscow, and Victory Day, I had several chances to observe him negotiating with Soviet leaders. I saw some tense moments, acute differences of opinion and elements of hostility. Carrying out Washington's instructions with firmness and persistence, Harriman had the ability--rare in an American politician--to assess a situation realistically and to seek and find mutually acceptable solutions, thereby demonstrating a profound knowledge of diplomacy as the art of the possible.

Later I had many meetings with Averell Harriman in New York and in Washington, in his mansion in Georgetown, the old neighborhood in the capital. These were always educative, useful and interesting conversations about the distant past, current events and future prospects. He was eager to explain the complex reversals of Washington policy, gave me advise and introduced me to interesting people. In the best and the worst of times, A. Harriman displayed uncommon fortitude, fought for cooperation with the USSR and never missed an opportunity to meet representatives of the Soviet Union.

He once defined his position on Soviet-American relations: "Looking back over almost 50 years of experience in dealing with the Soviet Union, I find that my own opinions have changed little, although the situation has undergone radical changes. I still believe, just as I did in 1945, that there is no possibility of a compromise between the Kremlin and us in the ideological sphere. But we should find ways of settling as many conflicts as possible, so that we can live together on this tiny planet without wars."

As THE WASHINGTON POST commented on 27 July 1986, the career of A. Harriman was "always associated with the hope of strengthening and stabilizing Soviet-American relations by a show of restraint in the approach to nuclear arms."

With his consistent belief in the importance of Soviet-American agreements, which he did not betray even in the most difficult years, Averell Harriman won deserved prestige as a diplomat and politician of the realistic school and gained the respect of the Soviet people and millions of people in all countries, all those who advocate peace and cooperation between nations.

All of this must be said in these sad days of mourning for an outstanding American. Averell Harriman will live forever in the memory of those who knew him and felt the deepest respect for him.

We convey our sincere condolences to his widow, Pamela Harriman, and his relatives and friends.

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