Sakharov: Teetering at the Brink

I. Survival Depends on a Delicate Political Balance

For more than 5 years now, Andrei D. Sakharov has been a trenchant and outspoken critic of the Soviet regime, and, in light of that, the surprising thing is that the government has not long since gone beyond harassment tactics and acted to silence him. The government may yet take severe action against this famed physicist, either by bringing him to trial for "defaming" the Soviet state or perhaps by denying him a livelihood by expulsion from the Academy of Sciences and dismissal from his job as a senior researcher (the novelist Aleksandr Solzhenitsyn was expelled from the Soviet Writers' Union 4 years ago). But the fact that the regime has thus far stopped short of such action may offer an important insight into the slow, grudging evolution of the Soviet system since the years of the Stalinist terror.

The government's cautious behavior in this case seems to point up the important place scientists now have in the Soviet system, the extraordinary prestige of the Academy of Sciences (in which Sakharov has close friends and supporters as well as critics), and the strength of Sakharov's personal reputation. Indeed, there is perhaps reason to think that the Soviet regime is not quite as monolithic as most Westerners have believed, and that those Americans who feel U.S. bargaining leverage can be usefully applied on behalf of Sakharov and other Soviet dissidents perhaps are not championing an entirely hopeless cause.

Sakharov, together with Solzhenitsyn, offers the most visible current manifestation of a Russian tradition that long predates the revolution of 1917—the tradition of the untamed intellectual who acts with a strong sense of social responsibility even though this brings him in conflict with established authority. Sakharov is as much a part of this tradition as were the 19th century novelists of political protest and the intellectuals who took a leading part in the revolution. The Bolsheviks, especially under Stalin, sought to have scientists, writers, teachers, and other members of the Russian intelligentsia become compliant instruments of the Soviet state and Communist party. Many who were suspected, rightly or wrongly, of being unwilling to accept such total intellectual servitude became victims of Stalin's secret police.

The tension between the natural desire of scientists and other intellectuals for free expression and the demands for continued obedience to the aims of the state was of course to grow enormously once the Soviet regime began its repudiation of Stalin with Nikita Khrushchev's famous "secret" speech to the party congress in 1956. If the intellectuals have for the most part remained in harness, acts of independence and defiance by Sakharov and others have nevertheless been common. Meanwhile, at the same time that the Soviet system was becoming less harshly repressive, it was also becoming ever more dependent on science and technology for its status as a superpower. This latter evolution is pointed up by Sakharov's own career and its circumstances.*

Leader in H-Bomb Research

Sakharov's promise as a scientist was recognized early, and, even as millions of other young Russians were being called to military service, he was allowed to complete his studies at the University of Moscow, where he was graduated in 1942. He then joined the talented group of young scientists working under Igor Y. Tamm at the Lebedev Institute of Physics. Sakharov and Tamm were not to be involved in the Soviet Union's crash effort in fission physics research that finally led, in late 1949, to the testing of an atomic bomb. Their contribution was to be in the far more important field of fusion physics, where their discoveries would allow the Soviets to shorten the long lead the United States had held in nuclear weaponry. The first Soviet test of a device producing thermonuclear reactions was to come in August 1953, less than a year after the first full-scale U.S. test of a thermonuclear device—an achievement for which Tamm and Sakharov, especially the latter, received most of the credit.

Later in 1953, Sakharov received a signal honor. He was admitted to the Soviet Academy of Sciences at the age of only 32, without going through the usual intermediate phase of being a corresponding member. Tamm also was admitted, but this was a case of conferring formal recognition on a long-established senior scientist. The Soviet Academy bears little comparison to the National Academy of Sciences in the United States. Although membership in the U.S. academy is an honor among scientists, for most citizens the academy is an obscure institution, with probably not one person in 100 ever having heard of it and its governmental advisory role. The Soviet Academy, now a large bureaucratic establishment comparable in size to a federal department in the United States, is itself a preeminent research institution, with numerous institutes attached to it.

The academicians, numbering a few hundred (there are about 1000 members of the U.S. academy), are themselves public notables. They are paid a salary generous by Russian standards (Sakharov receives 750 rubles a month, 400 as an academician plus 350 as a researcher at the academy's physics institute—this is better than 5 times the pay of the average Russian worker); biographies are written about them; and, when they die, they are buried in a special place. Therefore, for Sakharov to have become an academy member at so young an age marked him as a figure of high rank in Soviet life.

Sakharov's entry into the top echelon of Soviet science came not long before the Soviet Union was to commit itself to massive programs of research and development in fields such as nuclear weapons, missiles, and space technology. By one estimate, the number of "scientific workers"—these defined as including everyone from academicians to research assistants and science teachers in higher education—more than doubled between 1950 and 1960, then increased by more than half again by 1963 when the total stood at 5.6 million.

With the entire scientific enterprise

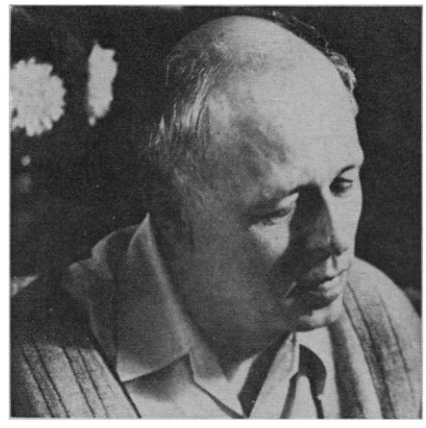
* Considerable information about Sakharov's career is contained in Harrison E. Salisbury's introduction to *Progress, Coexistence, and Intellectual Freedom*, Sakharov's celebrated essay of 1968, available in paperback from W. W. Norton & Company, Inc., New York.

burgeoning and enjoying the less repressive atmosphere of the post-Stalin era, some of the abler, bolder intellectuals were increasingly disposed to question and challenge official attitudes and Communist party shibboleths. For instance, whereas Khrushchev wanted senior pupils in Soviet schools to spend a third of their time in factory or farm work, Sakharov and one of his colleagues were advocating that the classroom education of pupils gifted in mathematics and science be accelerated. They also proposed a revitalization of mathematics and science teaching through major curriculum reforms, and this latter endeavor was rewarded with marked success. As further evidence of his wide-ranging concerns, Sakharov also would eventually become an outspoken participant in the successful campaign to rid Russian genetics and biology of the influence of Trofim D. Lysenko and the once officially sanctioned theory that hereditary characteristics can be altered by environment.

The 1950's were a time of reckless atmospheric testing by the nuclear powers, and, characteristically, Sakharov was among the first to try to have this dangerous activity stopped. In the late 1940's and early 1950's Sakharov had few qualms about his nuclear weapons research. "I felt, subjectively, that I was working for peace, that my work would foster a balance of power, and that it would be useful to the Soviet people and even to some extent to mankind as a whole," he recalled during one of his recent interviews with Western correspondents in Moscow. "That was the way I felt at the time. It was a natural point of view, shared by many, especially since we actually had no choice in the matter." Later, his views changed. "I gradually began to understand the criminal nature not only of nuclear tests, but of the enterprise as a whole. I began to look on it and on other world problems from a broader, human perspective."

In 1958 Sakharov began writing confidential memoranda against nuclear testing, and these no doubt contributed to the decision by the Soviet government that year to join in an informal moratorium on atmospheric testing. Sakharov also advised Khrushchev against resuming atmospheric tests in 1961 and 1962. This advice was not taken, and it apparently caused some higher-ups in Soviet science and government to mark him as a troublesome nonconformist.

During the 1962 test series, however,



Andrei D. Sakharov

Sakharov offered another idea that was to be well received. He proposed—through the Minister of Medium Machine Building (the cover name for the nuclear weapons development agency)—that the Soviet Union seek a ban on testing everywhere except underground. This concept of a partial ban on testing, first proposed by President Eisenhower in 1959, was to be embodied in the Limited Test Ban Treaty of 1963, entered into less than a year after the Cuba missile crisis, the most frightening episode of the Cold War.

Sakharov believes that his proposal had an important influence, and it may indeed have been critical. So poorly informed were officials in the Soviet foreign ministry about arms control questions during this period that, if intelligent proposals were to come from any source within the Soviet system, they almost necessarily had to come from scientists such as Sakharov.

In 1966, Sakharov, Tamm, and several other leading physicists—including Peter Kapitza, who during the Stalin era had once been subjected to house arrest for refusing to work on the atom bomb—joined in a letter by 25 leading intellectuals and artists opposing any attempt to rehabilitate the name of Stalin and excuse his reign of terror. Although it had been feared that a rehabilitation of this kind would indeed be undertaken at a forthcoming Communist party congress, no such campaign materialized, perhaps partly because of the intellectuals' timely letter.

In 1968, Sakharov, in his boldest venture yet, circulated privately his 10,000-word essay *Thoughts on Progress, Coexistence, and Intellectual Freedom.* Sakharov foresaw the eventual "convergence" of the socialist and capitalist countries, with their economic and political systems becoming increasingly compatible. A strategy of peaceful coexistence and collaboration, based on scientific principles, would hasten this convergence and lead to cooperative efforts by the U.S. and U.S.S.R. on behalf of the poor countries.

As for the current scene, while the United States came in for criticism (especially for tolerating racism and for the intervention in Vietnam), Sakharov was particularly frank and detailed in his criticism of the Soviet Union for the suppression of intellectual freedom and for a failure to acknowledge fully the crimes of the Stalin era. Here, however, it is an interesting commentary on the relative independence of the Academy of Sciences from Communist party control that Sakharov was able to report that Sergei P. Trapezkikov, director of the science department at the party's Central Committee and a close associate of party Secretary Leonid I. Brezhnev, had been considered by the academy for full membership but was rejected by a substantial majority.

Although the essay never was published in the Soviet Union, at least 2000 typewritten copies of it were reported to be circulating in the U.S.S.R. by late 1968. Moreover, it was being widely read in the West (the *New York Times* of 22 July 1968 carried the full text) at the very time the Soviets were preparing to invade Czechoslovakia and overturn the liberal Dubček regime that Sakharov had praised.

The official reaction to the appearance of Sakharov's provocative essay was prompt, but probably milder than it would have been had the author been anyone else. Sakharov was dismissed from all positions and consultantships involving secret military work. No attempt was made to expel him from the Academy of Sciences, perhaps because the dismissal of an academician (and especially one of Sakharov's fame) might have caused wide reverberations. There apparently is no precedent for the expulsion of an academician, and the procedures that would have to be followed in such an action are understood to be complicated and demanding. Some of Sakharov's fellow academicians might have been pleased enough to be rid of him, had this been possible. Indeed, in discussing the lack of intellectual freedom in the Soviet Union, Sakharov had denounced a speech by M. V. Keldysh, the president of the academy, as "disgraceful" and a sign of either political intimidation or dogmatism.

During the last few years Sakharov's "internal disquiet" (his phrase) has been such that his research work has been quite unproductive. Also, although going regularly to work at the academy's Institute of Physics, ties with scientific colleagues have been weakened, as he has seen few of them and seen even those less than in the past. But until recently, at least, few of his colleagues sought to dissuade him from speaking out for other dissidents or from campaigning for causes such as amnesty for political prisoners and the abolition of the death penalty. (Sakharov's altruism was most strikingly illustrated in 1969 when he gave his entire personal fortune of 139,000 rubles—about $154,000—to the Red Cross for the construction of a hospital.)

Sakharov's present round of difficulties with Soviet authorities began after he granted an interview to a Swedish radio correspondent in July. On 15 August, Mikhail P. Malyarov, the First Deputy Prosecutor General of the U.S.S.R. (an official roughly equivalent in rank to the Deputy Attorney General of the United States), called Sakharov to his office to warn him personally that, should he continue his contacts with Western journalists, he would risk prosecution. The discussion with the prosecutor, reconstructed from memory by Sakharov and published in the *New York Times*, included the following exchanges:

MALYAROV. When you began a few years ago to engage in what you call public activity, we could not possibly ignore it and we paid close attention. We assumed that you would express your opinions as a Soviet citizen about certain shortcomings and errors, as you see them, without attacking the Soviet social and political system as such. To be sure, even then your statements were being published in the anti-Soviet press abroad and they caused noticeable harm to our country. Lately your activity and statements have assumed an even more harmful and openly anti-Soviet character and cannot be overlooked by the Prosecutor's office. . . . You are seeing foreigners and giving them material for anti-Soviet publications. That applies in particular to your interview with the Swedish radio.

SAKHAROV. . . . There [in that interview] I spoke about the desirability of gradual change, about democratization within the framework of the present system. Of course, I am also referring to what I consider serious faults in the system and I do not conceal my pessimism with regard to changes in the near future. . . . I would be very glad to have my writings published in the Soviet press . . . but that is obviously out of the question.

MALYAROV. You seem to like the American way of life, even though they permit the unrestricted sale of guns, they murder their presidents, and now they've got this demagogic fraud of the Watergate case. Sweden, too, is proud of her freedom, and there they have pornographic pictures on every street. I saw them myself. Don't tell me you are for pornography, for that kind of freedom?

SAKHAROV. I am not familiar with either the American or the Swedish way of life. They probably have their own problems and I would not idealize them. But you mentioned the Watergate case. To me, it is a good illustration of American democracy.

MALYAROV. It is calculated to be just a show. All Nixon has to do is show a little firmness, and the whole thing will come to nothing. That's their democracy for you, nothing but fraud.

On 21 August, a week following the warning from the prosecutor, Sakharov conducted one of the most unusual press conferences ever to occur in Moscow. With 11 Western correspondents gathered about him in the bedroom of his flat, Sakharov denounced the "institution of warnings" as contrary to democracy, the right of one's convictions, the law, and the spirit of humanity. In his most provocative statement yet, Sakharov referred to "détente without democratization" as a dangerous delusion. The West should not, he indicated, help the Soviet Union with its economic problems through increased trade or other means while at the same time allowing it to remain a closed society. "By liberating [the U.S.S.R.] from problems we can't solve ourselves, we could concentrate on accumulating strength, and, as a result, the whole world would be disarmed and facing our uncontrollable bureaucratic apparatus," he said.

According to Sakharov, the United States should, at a minimum, make free emigration by Jews and others a condition of increased trade, as contemplated in the pending amendment first proposed in April by Senator Henry M. Jackson (D-Wash.) and cosponsored by 76 other senators and more than a majority of the members of the House of Representatives.

A bitter campaign of denunciation against Sakharov began in the Soviet press following his news conference. Probably the most significant attack on him came on 29 August in the letter, published in *Pravda*, by 40 members of the Soviet Academy of Sciences, Keldysh (the president of the academy) among them. For this many academicians to have been brought so quickly into the campaign against Sakharov is a clear sign of the intense pressure which, in this matter, the academy must be under from the Soviet leadership. The academicians accused Sakharov of "crude distortions" of Soviet activity, of "coming out actively against the course of peaceful coexistence," and of becoming a "weapon of hostile propaganda against the Soviet Union and other socialist countries." Furthermore, his activities and statements were denounced as "alien to Soviet science" and a "discredit to the honor and dignity of a Soviet scientist."

Such words might be the kind that could be used should an attempt be made to expel Sakharov from the academy. And, paradoxically, while the academy is said to cherish its relative freedom from party control, many of its members could come to feel that Sakharov must be expelled to protect the academy from political domination. It is true, certainly, that, as détente brings growing contact between the Soviet Union and the West, the Soviet leadership appears increasingly on guard against ideological penetration.

If any Soviet dissident can avoid being broken and silenced it is likely to be Sakharov, for probably no other (except possibly Solzhenitsyn) has enough of a reputation and following inside Russia and internationally to give the Soviet leaders pause if they believe silencing to be necessary. Furthermore, as long as his voice is heard, Sakharov may provide a measure of protection for lesser known dissidents by drawing the West's attention to their harsh and unfair treatment at the hands of the authorities.

There are two points of view as to how the United States should respond to the plight of Sakharov and other Soviet dissidents. The Nixon Administration view is that, while quiet representations on behalf of such dissenters are in order, the United States should not overtly demand a less repressive policy as the price of cooperation in any area of U.S.–Soviet relations. The argument here is that, since the primary goal is to reduce the possibility of nuclear war, the pursuit of secondary goals must not be allowed to interfere.

The other view, reflected in the Jackson amendment as well as in Sakharov's own statements, is that liberalization of the Soviet regime is important enough to American security that the United States should apply

leverage judiciously on behalf of dissenters. Philip Handler, president of the National Academy of Sciences, is of that persuasion. "I share Sakharov's view that a government-to-government détente is not enough if the two societies are unable to live with one another." Handler says.

Far more is at stake in the Sakharov matter than in the usual civil liberties case. The fact that this courageous scientist has been harassed but not yet silenced reveals an ambivalence in the Soviet system. Sakharov is hoping that his sympathizers in the West will seek to tip the balance in the favor of greater freedom in the U.S.S.R.—LUTHER J. CARTER

II. How NAS Stepped into Furor over Soviet Dissenter

Highlighting what could be the worst problem yet in United States–Soviet Union scientific relations, the National Academy of Sciences (NAS), on 8 September, sent a long, eloquent telegram to its Soviet counterpart protesting the harassment of Russia's most prominent scientist and dissident, Andrei D. Sakharov. The cable, of which *Science* published the text (21 September), was the culmination of a chain of events that, since February, had led a small number of prominent U.S. scientists to become increasingly concerned for Sakharov and his family.

Although unprecedented for the academy, the action was not unique: several other scientific societies have made formal protests, still others are considering such protests; also, a number of individual scientists have expressed concern. Stated in the NAS cable, and implied in many of the other statements which emanated from U.S. scientists last week, was the likelihood that U.S. scientists would withdraw from U.S.–U.S.S.R. scientific exchange programs, should the civil liberties of dissidents such as Sakharov continue to be threatened.

Like other Soviet citizens such as Jewish electrochemist Veniamin G. Levich and gerontologist Zhores A. Medvedev who have had difficulties with the authorities, Sakharov has from time to time communicated with the West. In fact, the academy's telegram, widely noted as a response to members' concern for Sakharov's personal welfare, was also a response to a letter Sakharov sent to the academy's president Philip Handler in July, appealing to him for help in obtaining exit visas for a stepson, a stepdaughter, and her husband.

Sakharov's appeals to Handler and others came in a roundabout way. In the fall of 1972, at a conference in Tblisi in the Soviet Union, John A. Wheeler, professor of physics at Princeton, talked with Sakharov about some of the latter's ideas on general relativity. Wheeler later mentioned Sakharov's ideas to colleagues at Princeton, and, on 1 March, the department chairman, Marvin L. Goldberger, wrote Sakharov inviting him to be a visiting professor for the academic year 1973–74.

In the meantime, through a member of the M.I.T. faculty with contacts among Soviet scientists, Jerome B. Wiesner, M.I.T.'s president, had learned that Sakharov wanted his three young relatives to leave the U.S.S.R. to attend school in the United States. All three had suffered reversals, which, although they could have been coincidental, are not unlike the misfortunes that have befallen the children of other dissidents, and have been viewed as a part of the government's harassment. Sakharov's wife's daughter, Tatyana Semenova, 23, had been expelled from her university; her husband, Alexy Semenov, had lost his job; and her brother Yefrem Yankelevich, 17, had been denied a place in college. After arranging M.I.T. scholarships for the two students and a job for the stepdaughter's husband, Wiesner wrote Sakharov early in the year to invite the three to M.I.T. In April, the three applied to the Soviet government for the necessary exit visas, but, despite repeated inquiries, heard nothing.

Early in the summer, Princeton received, indirectly, a message that Sakharov had been pleased by its invitation. But Princeton was informed that the physicist would not consider such an invitation unless it included his family. Goldberger was away, but the acting chairman of the department sent another offer explicitly including Sakharov's family. The president of Princeton, William G. Bowen, had also written encouraging him to come.

Observers close to these appeals are careful to note that at no time, even in later letters to Handler and to Harvey Brooks, current president of the American Academy of Arts and Sciences, has Sakharov expressed a desire to leave Russia. They point out that, although he has indicated that he would not leave the country without his family, he has not yet accepted any invitation, even conditionally. Philosophically, Sakharov has taken the position that the loyal citizen must "bear witness" to events by remaining physically present in Russia.

In July, as the official campaign to denounce dissidents mounted, Sakharov wrote two letters to the West: one to Brooks and one to Handler. The letters (in Russian, Sakharov does not use English) urged both men to use their offices and their respective academies to pressure Soviet representatives to help his family. The tone of the two appeals is fairly ominous. The longer letter, to Brooks and dated 23 July, stated at the outset that his family was finding it hard "to study, to work, or even [to maintain] their safety." Referring to the M.I.T. invitations to the stepchildren, he said, "There is no other road for them." Sakharov also encouraged others to telephone him, a way by which concerned Westerners can sometimes maintain contact with Soviet residents. "I am always at home on Tuesdays after 6 in the evening," he said, and gave his number.

Both Handler and the executive officer of the American Academy of Arts and Sciences, John Voss, stated that they interpreted Sakharov's letters as asking for nothing more than help for his relatives—at least until Sakharov himself dramatically altered the situation. In a surprise move, on 21 August, from the bedroom of his Moscow apartment, Sakharov gave an impromptu news conference with 11 Western journalists. He was quoted as having said, "Of course, something might be done to me personally, but you can't make any predictions." Some observers here described the press conference as "provocative" and suggested that it could heighten the chances that the authorities would retaliate against Sakharov or his family. To Handler and Brooks, the 21 August press conference signaled the need for a quick and vigorous response on the physicist's behalf. Handler, Brooks, Harrison Brown (Foreign Secretary of the NAS), and Paul Doty, professor of biochemistry at Harvard, all active in the Sakharov cause, were encouraged during the week after the