

THE WISDOM OF ANDREI SAKHAROV

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The Wisdom of Andrei Sakharov

A few days after the death of Andrei Sakharov in December 1989, 50,000 people honored his memory in a freezing rain at Moscow's Luzhniki Stadium. Then and later, friends commented on his "wisdom, tolerance, and honesty."¹ David Remnick, a *Washington Post* correspondent in Moscow, later wrote, "Sakharov was just better than the rest of us. His mind worked on an elevated plane of reason, morality, and patience."² For two decades this distinguished Russian physicist (born in 1921) had been a leading voice championing freedom and human rights in the USSR and beyond. In 1975 he was awarded the Noble Peace Prize. In the United States both those on the Left and Right praised him. Early in his presidency, Jimmy Carter sent a letter to him assuring him of his support for human rights, and later in 1980, after Soviet authorities exiled Sakharov to the city of Gorky, he issued a statement protesting the exile and referring to him as a "great man."³ On May 21, 1983, which Ronald Reagan designated as "National Andrei Sakharov Day," he also called upon Soviet leaders to free Sakharov from his exile and added that "the world needs his learning, his wisdom, his nobility."⁴ The following year a U. S. television movie about him appeared entitled *Sakharov*.

Earlier in his career, however, Sakharov had been one of the leading developers of the Soviet hydrogen bomb, first tested in 1953. His life illustrates well several points about wisdom: how it often develops gradually; how its development can be influenced by socio-political and cultural conditions; how being a scientist can affect acquiring wisdom, and why the application of wisdom to science and technology is so significant. His biography also demonstrates the importance of possessing virtues like compassion, courage, perseverance, and self-discipline if one hopes to lead a wise life. After looking at the main events of his life, we shall examine how he developed and manifested the wisdom of his final decades, paying special attention to his political wisdom, for this is the area where his impact was greatest.

The Life and Times of Andrei Sakharov

Childhood and Youth

Andrei Sakharov was born the year Vladimir Lenin launched the New Economic Policy (NEP). It lasted from 1921 until Lenin's successor, Joseph Stalin, brought it to an end in 1928. Just four years before Andrei's birth, Lenin and the communists had come to power in Russia, and they had just prevailed against opponents in a civil war who were assisted by Allied Forces. But the toil of years of war (World War I and civil war) and revolution had exhausted the country, and

¹ Sidney D. Drell and Sergei P. Kapitza, eds., *Sakharov Remembered: A Tribute by Friends and Colleagues* (New York: American Institute of Physics, 1991), 291 (hereafter cited as *Sakharov Remembered*).

² David Remnick, *Lenin's Tomb: The Last Days of the Soviet Empire* (New York: Vintage Books, 1994), 289. Ch. 19 of this book is devoted to Sakharov and provides a good description of his death and funeral.

³ Carter's letter to Sakharov is reprinted, along with KGB (the Soviet political police) comments about it, in Joshua Rubenstein and Alexander Gribanov, eds. *The KGB File of Andrei Sakharov* (New Haven: Yale University Press, 2005), 222-23 (hereafter cited as *KGB File*); the 1980 White House Statement referring to Sakharov as a "great man" can be found at John T. Woolley and Gerhard Peters, The American Presidency Project [online]. Santa Barbara, CA: University of California (hosted), Gerhard Peters (database). Available from World Wide Web: (<http://www.presidency.ucsb.edu/ws/?pid=33078>). All web sites referred to in this essay were accessed between January 1 and August 1, 2009.

⁴ See http://people.bu.edu/gorelik/AIP_Sakharov_Photo_Chrono/AIP_Sakharov_Photo_Chronology.html.

rather than try to impose a full-scale communist order on Russia, Lenin had decided to compromise, at least temporarily, with capitalism. While the state controlled major industries, it allowed some small-scale private enterprise. And state controls over other aspects of society and individuals were not as oppressive as they would later become under Stalin.

Andrei's paternal grandfather, Ivan, was a founding member of a liberal party, the Kadets, which had opposed the communists. If Ivan had not died of typhus in 1918, he may well have ended up like some of the other Kadet Party members, a victim of the new political police, then called the Cheka, or living abroad in exile. His widow, Maria, had a great influence on her grandson Andrei. She was an intelligent and compassionate woman who appreciated life's complexities and possessed a special talent for raising her six children to cope with the turbulent times. Andrei grew up living in the same Moscow communal apartment as his grandmother, she often looked after him, and he referred to her as "the guiding spirit of the Sakharov home." [6]⁵ In these years, most Moscow apartment-dwellers lived in such communal apartments, "where families had to share kitchens, bath and toilet facilities, and sometimes even a single living and sleeping room with other families. . . . Although most families had a room to themselves, in 1935, there were about four times more Moscow renters (usually families) that occupied only *part* of a room than there were renters residing in more than one room."⁶ Andrei, his mother, father, and younger brother, Georgy, however, were better off than most Muscovites—they had two rooms to themselves.

Andrei's father, Dmitri, was a cultured man who taught physics, mainly at higher educational establishments in Moscow. He also wrote many books, primarily physics textbooks, one of which was printed in 13 editions. As Andrei was growing up, his father's writings provided the chief source of family income. His dad could not have kept his job or gotten his books published if he had publicly criticized the communist regime. Even Andrei seldom heard any outright criticism from his dad, recalling only one instance in 1950 when he heard him denounce Stalin. Andrei later commented, "This reluctance to reveal one's thoughts even to one's own son may be the most haunting sign of those times. But Father's indirect condemnation of the regime was continually surfacing in one form or another." [23]

Andrei's mother, Ekaterina (Katya), was the daughter of military man who eventually became a pre-WWI tsarist general. She grew up in privileged circumstances, liking to ride horses and sing folk and military songs. She attended a Moscow finishing school for noble young women, and before marrying Dmitri she taught gymnastics at a Moscow school. Unlike her husband, she was a devout Russian Orthodox believer and taught Andrei his prayers and took him to church. Influenced by the atheism promoted by the Soviet government and his dad's non-believing example, Andrei stopped saying prayers at age thirteen.

His parents and relatives exposed Andrei to a great deal of literature and music. During most of his childhood years he was home-schooled, mainly along with his cousin Irena and a

⁵ All bracketed numbers after quoted material refer to pages in Andrei Sakharov, *Memoirs* (New York: Knopf, 1990).

⁶ Walter G. Moss, *A History of Russia*, vol. 2, *Since 1855*, 2d ed. (London: Anthem Press, 2004), 338 (hereafter cited as *HR*). Occasional material is taken in this essay from this book, and interested readers can consult this volume for more background concerning Soviet life and politics. In another book, *An Age of Progress? :Clashing Twentieth-century Global Forces* (London; New York: Anthem Press, 2008), I deal with many of the topics of great concern to Sakharov, such as human rights, progress, the relationship of science to society, and the environment. A review of the book, along with a link to an excerpt from it, can be found at <http://www.wisdompage.com/MossReview.html>. Another excerpt from it, on twentieth-century violence, is available at <http://www.michiganwarstudiesreview.com/2008/20081101.asp>.

friend Oleg by tutors, one of whom taught them German. According to Andrei, the main advantage of this home-schooling was his contact with Oleg, from whom he learned much (see the subsection below “Sakharov’s Path to Wisdom” for more on his early appreciation of the humanities and what he learned from Oleg). The main disadvantage of such schooling was that by depriving him of the social interaction of more formal schooling, it hindered his psycho-social development, especially his ability to communicate easily with others.

Most of Andrei’s childhood games occurred in the courtyard near their building. There he and other kids played hide-and-seek, Cossacks and Robbers, and other games. One of his best courtyard friends was a Jewish boy named Grisha, who like Andrei, liked to daydream, fantasize, and tell stories that were a mixture of fairy tales and science fiction. Although Andrei occasionally encountered neighborhood bullies, he generally shied away from confrontations.

Most summers his parents rented housing in the countryside. Although his dad often came only on weekends, his mother remained at the dacha (summer residence) for months overseeing the children. Andrei later recalled these summers fondly. Although he took no interest in hunting or fishing, and admitted he didn’t swim properly, he loved the wonders of nature. On a few occasions when he was in his teens, his father took him on trips farther away from Moscow. Together they traveled on a Volga River steamer and to mountains and the sea. Andrei enjoyed camping, hiking, and talking with his father, as well as their games of chess.

The times Andrei grew up in were hard for most Soviet citizens. In 1928-29 Stalin introduced the collectivization of agriculture and stopped NEP’s compromise with capitalism by beginning a command economy under which he increasingly tightened party-government control over all aspects of the economy. He also increased dominance over other aspects of Soviet life including culture and education. In 1928, almost four-fifths of the Soviet people were still peasants and many of them opposed his collectivization policies. Largely as a result of his actions, millions of Soviet citizens, especially in Ukraine, died of starvation. Most others faced harder economic times as he diverted increasing amounts of money to building up Soviet heavy industry and, especially after Hitler came to power in Germany in 1933, to strengthening the Soviet military. Opposition, or even suspected opposition, to Stalin’s policies got many people arrested. Millions were sent to forced-labor camps, others were shot.

The Sakharov’s extended family mirrored these tumultuous times. In his *Memoirs*, Andrei mentioned numerous relatives who were arrested and sent to forced labor camps and one who was shot. Yet, because of his father’s physics teaching position, writings, and political caution, Andrei’s immediate family was better off than most. Science and education were important to the Soviet state. In 1919, Lenin said, “We must take all of the culture which capitalism has left and build socialism out of it. We must take all the science, technology, all the knowledge and art.”⁷ From 1917 to 1937, literacy rates for those ages 9 to 49 increased from less than half to three-fourths of the population. Despite Andrei’s parents’ reservations about some of Stalin’s policies, like most Soviet families they had no way of knowing the full extent of the horrors he was perpetrating. When faced with the arrest of a relative or friend, many people thought that if only Stalin knew of the injustice, he would correct it. One young man later recalled how he felt in 1939 not long after his father had been executed:

⁷ Quoted in Gennady Gorelik with Antonina W. Bouis, *The World of Andrei Sakharov: A Russian Physicist’s Path to Freedom* (Oxford and New York: Oxford University Press, 2005), 24. An excellent new biography, Jay Bergman’s *Meeting the Demands of Reason: The Life and Thought of Andrei Sakharov* (Ithaca and London: Cornell University Press, 2009), was published after I completed this online essay.

For me, a youth of nineteen, Stalin's name was sacred. As for the executions of enemies of the people, what could you say? The state had the right to defend itself. Errors were possible in such matters, but Stalin had nothing to do with it.⁸

In many societies, even ones in which public opinion is not manipulated and controlled to the extent it was in Stalinist Russia, most young people do not seriously question the basic premises of their socio-political order. In his memoirs Sakharov recalled, "I was content to absorb Communist ideology without questioning it," [23] and "it never entered my head to question Marxism as the ideology best suited to liberate mankind." [36] Outside of his family circle, the media and schools reinforced Stalin's views, including his increasing emphasis on Russian national heroes and possible dangers from abroad. Over a neighbor's radio, Andrei heard the ranting of Hitler and the warnings and reassurances of Stalin. In 1937, one hundred years after Alexander Pushkin's death, Andrei enthusiastically listened to various broadcasts about this writer most dear to him.

By the fall of 1938, when Andrei entered Moscow University, he had decided to be a physicist. His admiration for his father, his example, and the Soviet state's support of physics all played a part in his decision. "After I reached the age of twelve, Father would sometimes take me to his laboratory, where he would show me experiments — dazzling 'miracles,' but miracles I could *understand*. I soon began performing my own experiments at home." [12] During his teen years at a Moscow school before entering the university, his enthusiasm for science and math continued to develop, and he joined a math club. When he graduated he was one of only two honors students in his class. But his shyness (especially around girls) kept him from developing many friendships at the school, and this drawback continued to hamper him—"I didn't make a single close friend during my first three years at the university." [37]. Instead, he devoted all his energy to math and physics.

In previous decades physicists such as Albert Einstein, Werner Heisenberg, and Niels Bohr had made great advances, primarily in the areas of quantum mechanics and relativity theory. The first dealt with the behavior of the microphysical (very small), such as molecules, atoms, and subatomic particles, and the second with the relation between energy, mass, and motion, most famously expressed in Einstein's equation $E=mc^2$ —E for energy, m for mass, and c for the speed of light. Although they would not become as renowned as some of the Western physicists, Russia had also produced some physicists of note, especially Pytor Lebedev (1866-1912), Leonid Mandelshtam (1879-1944), and Igor Tamm (1895-1971), who would be a co-recipient of the Noble Prize for Physics in 1958. All three Russians had spent time studying and/or working in Western Europe and were thoroughly familiar with the work of Western physicists.

World War II and the Postwar Stalin Years

The pre-WWII work in physics, made possible the development of nuclear weapons that occurred during and after the war. Einstein emigrated from Germany to the United States in 1932, and in 1939, fearing Germany might develop an atomic bomb before the United States did, signed a letter encouraging President Roosevelt to begin work on such a weapon. In the latter stages of the war, Bohr escaped from his native Denmark, then under German occupation, and

⁸ This passage is quoted in my *HR*, 260, as part of a section where I deal with the "Stalin cult" and why many people, especially in urban areas, supported Stalin despite his oppression.

ended up in the United States, where he helped to develop the A-bomb. Heisenberg remained in his native Germany, and did wartime work on Germany's unsuccessful nuclear weapons development. After the war, Tamm was a key figure in developing the Soviet hydrogen bomb, as was one of his pupils—Andrei Sakharov.

As with most Soviet citizens, the war had a strong impact on Andrei. The Nazi attack, begun in June 1941, soon threatened Moscow. Although he did not volunteer for military service—he later mentioned a heart condition and that he had no wish to rush his fate—he did repair radio equipment for military use, performed volunteer air-defense tasks, and unloaded military equipment from trains. As German troops neared the outskirts of Moscow in October, Stalin ordered government ministries evacuated to Kuibyshev (now once again called Samara, a city along the Volga River). Sakharov later recalled the October “Moscow panic” and that when he and other students asked a Communist Party official if there was anything special they could do, he replied, “It’s every man for himself.” [43] On October 23, Sakharov and other Moscow University students were evacuated by train from the capital and sent eastward.

It was not until December 6th (a day before Pearl Harbor brought the USA into the war) that Andrei and his fellow students reached their final destination in Ashkabad (now Ashgabat), capital of the Turkmen Soviet Republic and near the Iranian border. Along the way Andrei read physics books, learning more about quantum mechanics and relativity theory. Later riding in a freight car, he asked another student if he had any physics material he could read. His fellow student thought it was a ridiculous request under the circumstances and that the tall, thin Sakharov was a “mama’s boy.”⁹ Although it was true that compared to many of his country’s people, and even to many of his fellow students, Andrei had led a sheltered existence, the trip to Ashkabad and his experiences there helped to mature him.

He later stated that the “train ride was my first real adventure beyond the confines of my family circle and almost the first social contact I had with companions of my own age, especially girls.” [45] On the journey, he was usually in crowded freight cars, transformed by jamming each one with bunk beds and a stove; but on one occasion, missing his train, he travelled on an open coal car, laying flat on his stomach. He saw soldiers, some wounded, coming back from the front and heard of some of their experiences, and he and his companions talked, sang songs, and scrounged for food and fuel. While in Murom, he was put up at the house of a woman who hoarded food and at night “was visited by a succession of soldiers.” [44]

In Murom, he also heard Stalin, who had decided to remain in Moscow, give his November 7th speech on the anniversary of the Communist revolution of 1917. He told his listeners on Moscow’s Red Square and via radio that they should be inspired by Russia’s past defenders from Alexander Nevsky to General Kutuzov, who drove Napoleon’s forces from Russia. He also mentioned some of Russia’s past cultural giants such as Pushkin and Tolstoy. The speech had a strong impact on Andrei and millions of other Soviet citizens. And aided by Soviet troops brought from Siberia and fierce weather that in December reached lows of about 30°C (−22°F) and wreaked havoc on German troops, vehicles, and weapons, Soviet troops stopped the Germans attack on Moscow and began pushing them back. The Battle of Moscow was an important victory and morale boost. Combined with the simultaneous U.S. entry into WWII, it gave new hope to the Allied cause.

Sakharov studied in Ashkabad up until his graduation the following summer. He made a few friends, one of them Jewish, and experienced instances of anti-Semitism (sometimes being mistaken for a Jew himself) and Russian workers’ hostility toward intellectuals. Because of the

⁹ Iosif Shklovsky, *Five Billion Vodka Bottles to the Moon* (New York: Norton, 1991), 41.

war, there was a shortage of professors. But one of them who taught the basic course in quantum mechanics had been a student of Igor Tamm, who within a few years would exert a great influence on the young Sakharov. Still moved by the wonders of nature, in the spring he often slept on the roof of his dormitory and loved looking at the star-filled sky and the morning's rising sun lighting up nearby mountains. Although asked to remain on as a graduate student, Andrei declined because he believed he should contribute directly to the war effort by working in a munitions factory. In September 1942, he arrived in Ulyanovsk (formerly Simbirsk), the Volga River city where Vladimir Lenin (Ulyanov) had been born. Less than two weeks earlier, German troops had reached the outskirts of a Volga city several hundred miles to the south—Stalingrad—and had begun bombing it. One of the most pivotal battles of WWII had begun.

After a brief assignment cutting timber in the nearby countryside, Sakharov spent the next two years working at the Ulyanovsk Cartridge Factory. By the time he left in January 1945, the tide of war had turned in the Allies' favor. The Russians had won the Battle of Stalingrad and pushed the Germans back out of the USSR, ending the 872-day German siege of Leningrad in the process. The conditions at the plant were initially harsh for Andrei. Like most others, he worked an eleven-hour shift, seven days a week, and had to exert extra effort to obtain sufficient food. Being at first single, he lived almost a year in a dormitory with only an outdoor toilet. Eventually, however, he was put to work improving the process for producing anti-tank ammunition. The improvements he made heightened his reputation for innovative lab work and he gained greater freedom in his job. He later summed up his plant work as follows:

I worked as an engineer and inventor right until 1945. At the factory I made a number of inventions in the field of production control. But in 1944, while still employed at the factory, I wrote some scientific articles on theoretical physics and sent them to Moscow for appraisal and comment. These first works were never published, but they gave me the self-confidence so essential to every researcher.¹⁰

Andrei and his fellow munitions workers throughout the USSR played a crucial part in the war effort; and 1944, Soviet military production was about four times as large as in 1940 and was outproducing the German war industry.

His Ulyanovsk years also brought about another important change in his life—he met and married (in July 1943) Klavdiya (Klava) Vikherava. She was a local woman who also worked in the munitions factory and lived with her parents. Earlier she had studied chemistry and glass production for four years in Leningrad. Her dad also worked in the factory and got along well with Andrei, who moved in with the Vikherava family.

In January 1945, Andrei returned to Moscow to interview with the physicist Igor Tamm about possibly beginning graduate study at the Lebedev Physics Institute of the Academy of Sciences (FIAN). Andrei's father knew Tamm and had arranged the interview. Although pregnant and due to have their first child the following month, Klava encouraged him to go for the interview and then remain to begin his graduate work. He did so, but missed and worried about her until she and their newly born daughter, Tanya, were able to join him in Moscow in mid year.

Andrei met with Tamm at his apartment and the physicist agreed to accept him for graduate study. Andrei noticed there a large photograph of Leonid Mandelshtam, whom Tamm

¹⁰ Taken from the autobiographical sketch Sakharov submitted to the Nobel Prize Foundation, at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-autobio.html.

thought of as his great mentor. Lebedev, Mandelshtam, and Tamm were all not only brilliant physicists, but also men of integrity who shared the best qualities of the pre-Soviet Russian intelligentsia—“a specific social grouping, something between a class and a clan . . . educated people whose sense of honor and duty compels them to take action against injustice.”¹¹ Lebedev had taught Andrei’s father at Moscow University, but eventually resigned from there in protest in 1911 when he thought the tsarist government had violated its academic freedom. Mandelshtam thought that modern physics was dependent on philosophy, but refused to let the ruling Marxist-Leninist-Stalinist philosophic interpretations pollute his own philosophic and scientific views. His student Tamm had been an ardent socialist as a youth, and continued to believe in socialism as a pure goal until his death. But even during the late 1930s when the Stalinist terror was at its height and some of his friends and own brother were arrested, Tamm refused to disown them. In 1956, after the Soviet leader Nikita Khrushchev had criticized Stalin at a Communist Party conference, Tamm would tell Sakharov that he would like Khrushchev better if he were even more unlike Stalin. Yet even though Stalin interfered with some fields of science, most disastrously in the area of genetics, he was willing to allow physicists more leeway than most other scientists. One former Soviet scientist has quoted Stalin as saying: “Do not bother our physicists with political seminars. Let them use all their time for their professional work.”¹² At Andrei’s meeting with Tamm, the physicist asked his prospective student what languages he knew, and Andrei replied that he could read German, but not English. Tamm gave him two books in German, one on relativity theory and the other on quantum mechanics, plus an article on the latter subject by Mandelshtam. He also told Andrei that he had to learn English.

Sakharov spent the next two years on his graduate work, while he and Klava attempted to carve out a satisfying life for themselves in the capital of a country that, although victorious, had suffered great losses in WWII. In one city alone, Leningrad, the USSR had lost about a million lives, about twice the total of *all* U.S. lives lost in the war. In all, the war left about 27 million dead in the USSR and devastated or destroyed many thousands of towns, villages, farms, plants, schools, libraries, railway tracks, locomotives, bridges, and boats, as well as killing millions of livestock. Millions of buildings were also destroyed, leaving many homeless or more crowded in communal apartments than ever. As late as 1947, for example, about one-third of the people in the city of Novgorod were still living in earthen dugouts, basements, or temporary barracks. In Moscow, Andrei, Klava, and Tanya either rented scant space for brief periods (“never able to remain anywhere longer than two months”) [76] or moved in with Andrei’s parents. His mother, however, apparently thought that Klava was not good enough for her beloved son, and moving in with her in-laws just created more friction in the Sakharov household. Finally, in mid 1948, Andrei, Klava, and Tanya obtained a separate room of 150 square feet in a Moscow communal apartment where they had to share a kitchen and toilet facilities, but with no bath or shower, with

¹¹ Richard Lourie, *Sakharov: A Biography* (Hanover, NH: Brandeis University Press, 2002), 27; During the Soviet period the government defined intelligentsia much more broadly as a synonym for mental-workers and numbered 42 million people in that category in 1984. Ludmilla Alexeyeva and Paul Goldberg in *The Thaw Generation: Coming of Age in the Post-Stalin Era* (Boston: Little, Brown, and Company, 1990), 97, wrote that “the old intelligentsia no longer existed,” in the late 1950s but that the two of them and their friends wanted to recapture their values. Vladislav Zubok, *Zhivago's Children : The Last Russian Intelligentsia* (Cambridge, MA: Belknap Press of Harvard University Press, 2009), thinks that they and others who thought like them succeeded in many ways and entitles Ch. 5 of his book “The Intelligentsia Reborn, 1959-1962.” Like Zubok, in writing of the intelligentsia, I am generally referring to Russian intellectuals who attempted to maintain the values they believed the best of the pre-Soviet intelligentsia had displayed

¹² Quoted in Zhores A Medvedev, *Soviet Science*, (New York: Norton, 1978), 46.

other families. Nevertheless they were elated. Obtaining enough money for food, which remained scarce, was also not easy for a graduate student and his small family, and Andrei taught some physics courses to help earn enough.

In 1947 he defended his Candidate's thesis, thereby enabling him to earn his first advanced degree (in 1953, he would also obtain a doctoral degree). In 1948 he was *told* that he was to begin working with a group directed by Tamm that was to investigate the possibility of building a hydrogen bomb. Because of the very high temperatures required for such a fusion bomb, it is often referred to as a thermonuclear bomb, and requires a different scientific production process than the atomic (fission) bombs already developed (and twice used in WWII) by the USA. Aided by espionage data, other Soviet scientists were already preparing for a Soviet A-bomb test, but spies such as Klaus Fuchs indicated that the United States might also develop a much more powerful thermonuclear device, a "superbomb." Although Tamm and others were already aware of the possibility of creating such a device, espionage information helped spur the Soviet efforts that enlisted Sakharov in new weapons research. He later stated: "For the next 20 years I worked under conditions of the highest security and under great pressure, first in Moscow and subsequently in a special secret research centre. At the time we were all convinced that this work was of vital significance for the balance of power in the world and we were fascinated by the grandeur of the task."¹³ In early 1949, recognizing Sakharov's value as a researcher, Lavrentii Beria, the feared Soviet security police chief who also oversaw nuclear weapons research, ordered that Sakharov begin working at a secret research center (the Installation), several hundred miles east of Moscow. In June, he made his first trip to the site, which was in a large, remote area located around the small town of Sarov and protected by guards and barbed wire. During this postwar Stalinist period, Gulag prisoners, also under Beria's control, built most of the research and plant buildings, as well as housing for all the researchers and other workers. Sakharov's first visit there lasted only about a week, but in March 1950 he was transferred there permanently, remaining there for the next eighteen years, at times with his family, but at other times without them. He thought of himself as a "soldier in this new scientific war." [97]

In the months before his permanent move, the USSR had successfully tested its first A-bomb, and U. S. President Truman had issued a directive to create an H-bomb. These events were illustrative of the sharpening of Cold-War tensions in 1949-1950, which also included the formation of NATO, the Chinese Communist victory in their civil war, the start of the Korean War, increased anti-Americanism directed by Stalin in the USSR, and the beginning of McCarthyism in the USA.

Meanwhile, Sakharov worked to get permission for Klava and his two daughters—the second, Lybov, was born in July 1949—to join him at the Installation. Before leaving Moscow, Andrei's work had earned him a greater salary and better housing, and in November 1950 Klava and the children were able to join him in his new location. In the intervening months he lived at a hotel within the Installation, where his mentor Tamm also first resided after arriving for work at the Installation. For the next three years the two men became even closer friends, working together and also spending many leisure hours in one another's company, especially before Klava and the children arrived.

A generation older than his younger protégée, Tamm was vigorous and outgoing, especially compared to the more reticent Sakharov, and he loved to read Agatha Christie mysteries. He arrived at the Installation with his skis and was soon organizing tennis and

¹³ Nobel Prize Foundation autobiographical sketch, at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-autobio.html.

volleyball matches, as well as hikes, chess, and other mentally challenging games. Another scientist recalled an occasion when Sakharov was persuaded to pick up a tennis racket, but then struck only air when he tried to return a serve. What he seemed to enjoy doing most with Tamm was taking long walks along the forest paths of the Installation and talking about all sorts of topics, including the most sensitive. He and Sakharov also did some research on possible peaceful uses of thermonuclear energy. Sakharov said that Tamm was guided by certain basic ideals that included “absolute intellectual integrity and courage,” a willingness to reexamine ideas in a quest for truth, and the belief that it is necessary to act, not just brood or talk. [122] He was generous with his money and in the help he gave to others. Despite growing political differences after Sakharov became a political dissident, the two men remained close friends until Tamm’s death in 1971.

At the Installation, the two men shared a passion for science and their work. Sakharov wrote of Tamm’s “phenomenal capacity for work.” [127] Another scientist at the Installation wrote that “Sakharov worked with exceptional intensity, arriving at the department before everyone else, and leaving last.”¹⁴ Both men thought their work was of utmost importance, as did the greatly feared security-police chief Beria. In 1951, he called Sakharov to the Kremlin to ask his advice on a thermonuclear idea of another man. After receiving Sakharov’s negative assessment, Beria asked him if he had any questions, and Sakharov responded by inquiring why the USSR always seemed behind the USA in the technological race. Beria gave him a respectful answer and shook his hand. Impatient himself with the pace of the work at the Installation, Beria came there in the summer of 1952 and threatened a high-ranking officer with prison if the preparations for a thermonuclear test were not speeded up. The successful U.S. test of an H-bomb several months later (in November), increased the pressure on the Installation scientists even more. Before any Soviet test occurred, however, Stalin died. The Russian poet Evgeny Evtushenko later recalled the copious tears and befuddlement that struck the country, and in his memoirs Sakharov admitted that he too was deeply affected by Stalin’s death. Even though aware of some of the evils of Stalin, he still thought of him as a great leader who was committed to making the USSR “strong enough to ensure peace.” [164] In the years after Stalin’s death, as he found out more about Stalin’s crimes and came to realize how Stalinist propaganda had helped mold his own opinions, Sakharov became embarrassed that he had not earlier realized what a despot Stalin had been.

The Khrushchev Years (1953-1964)

By the end of 1953, Beria was executed and Nikita Khrushchev emerged as most powerful. He remained first secretary of the Soviet Communist Party until removed from his position by other Soviet leaders in 1964. In the United States, Khrushchev was known for putting down the Hungarian Revolt of 1956, for approving of the construction of the Berlin Wall in 1961, and for fomenting the Cuban Missile Crisis of 1962. But Khrushchev was more complex than just these actions suggest. In 1956, in a “secret speech” to the Twentieth Communist Party Congress, he harshly criticized Stalin for some of his crimes. He also presided over the freeing of millions of people that Stalin had placed in camps, prisons, or exile and eased up on censorship. Partly in order to divert more resources into increasing Soviet housing and consumer goods, he reduced the size of the Soviet military. “Between 1955 and 1957 the USSR unilaterally reduced Soviet troop strength by more than 2 million men. In January 1958 another 300,000 were cut, and in

¹⁴ *Sakharov Remembered*, 138.

January 1960 Khrushchev announced a further reduction of 1.2 million troops."¹⁵ Khrushchev also pursued “peaceful coexistence,” a policy designed to avoid nuclear war—but not renounce the USSR’s efforts to advance the cause of communism by other means. In September 1959 he and his family came to the USA for a twelve-day visit.

Yet, to keep up with the United States in the arms race and to provide increased political leverage for both his domestic and foreign policies, he vigorously worked to develop thermonuclear devices and missiles. In 1957, the USSR tested an intercontinental ballistic missile (ICBM) and launched Sputnik I, the first artificial earth satellite. In 1961 its cosmonaut Yuri Gagarin achieved the first manned space flight around the earth. Yet, by 1962, the USSR was still far behind the USA in the number of bombers and missiles it controlled that could reach its rival’s territory. To help redress this imbalance was one reason Khrushchev placed Soviet missiles in Cuba.

Throughout these years, Sakharov continued to work on developing Soviet thermonuclear weapons; and he continued to believe, as many American scientists did who worked on such weapons, that he was furthering the cause of peace. But just as some U.S. scientists like Robert Oppenheimer became increasingly concerned about the consequences of their work, so too did Sakharov. In August 1953, almost a year after the first U. S. test of an H-bomb, Sakharov witnessed a similar Soviet test in Soviet Kazakhstan, and it was based primarily on his design. Its success led to a whole series of honors for him. At age 32 he became the youngest member ever elected as a full member of the Academy of Sciences; he received his country’s highest civilian honor (Hero of Socialist Labor); and he was given a Stalin Prize along with 500,000 rubles (about 40 times the yearly salary of a physician). He and some of his colleagues who had worked on the H-bomb were honored at a special Kremlin reception attended by the highest government officials. He also received an expensive dacha in a suburb of Moscow. After Tamm used the opportunity of the successful test to leave the Installation to return to FIAN, Sakharov took over Tamm’s leadership position as head of the Installation’s theoretical department and proved to be an excellent successor. His quiet, easy-going, confident manner, his openness to other’s ideas, and his lack of vanity or pettiness endeared him to his subordinates.

In November 1955, Sakharov witnessed an even more powerful H-bomb test in Soviet Kazakhstan, and again he bore a major responsibility for the bomb’s design. Its force was even greater than expected. Some windows were blown out a hundred miles away, and shock waves from the blast killed two people including a two-year old girl who was in an area the scientists thought was outside the danger zone. These deaths contributed to Sakharov’s fear that the weapon he was working on could “slip out of control and lead to unimaginable disasters.” [193] At a banquet that night Marshal Nedelin, the Deputy Minister of Defense, asked Sakharov to give the first toast, which he did by saying, “May all our devices explode as successfully as today’s, but always over test sites and never over cities.” [194] After a brief silence, the minister rebuked Sakharov by telling a crude joke indicating that how the H-bomb was used was up to the top political and military leaders, not those who had produced the bomb. Sakharov felt like he had just been lashed and was silent the remainder of the evening.

After this incident he became increasingly concerned about the harmful biological effects of nuclear testing. In 1957 his concern may have been heightened by an unreported explosion at a Urals nuclear site that blasted tons of radioactive material skyward, killed an unknown number of people, contaminated a large area, and forced the evacuation of thousands of peoples from

¹⁵ William Taubman, *Khrushchev: The Man and His Era* (New York: Norton, 2003), 379.

their homes.¹⁶ In 1958, his article “Radioactive Carbon from Nuclear Explosions and Nonthreshold Biological Effects” appeared in the Soviet journal *Atomic Energy*. A simplified version of it was translated into various foreign languages and distributed by Soviet embassies abroad. Soviet authorities encouraged Sakharov to publish both articles as part of a propaganda offensive against the U. S. claim, championed by enthusiasts of nuclear testing and development like Edward Teller, that a new U. S. “*clean bomb*” would produce very little radioactivity and that its testing (such a test occurred in July 1957) therefore need cause little worry. Sakharov argued, however, that even the cleanest thermonuclear atmospheric test would cause for every one megaton exploded 6,600 deaths worldwide over a period of 8,000 years. As for all the atmospheric nuclear tests that had been conducted by 1957, about fifty megatons in total, he concluded they had produced or would eventually do so 500,000 casualties.¹⁷ In his article distributed by Soviet embassies, Sakharov maintained that the Soviet Union had developed and tested nuclear weapons to guarantee its security, but that it did not wish an arms race but only peaceful coexistence and an eventual ban on weapons of mass destruction. He also praised the earlier announcement of the Soviet government (March 31, 1958) that it was unilaterally ceasing nuclear testing, and he encouraged other countries to follow its example.

The USA, however, did not do so and in the summer of 1958 carried out numerous nuclear tests. That autumn the USSR also resumed such tests. A few months before the resumption of Soviet tests, Sakharov and others at the Installation received word of the decision, which he found morally and politically unacceptable. He informed his Installation superior of his opposition and instead proposed postponing Soviet testing for a while longer to give the USA and UK the year they had earlier said they needed to complete their own testing. He also suggested greater investment in alternate methods that could substitute for testing such as using more computer data and devising new calculating techniques. His superior personally presented these ideas to Khrushchev, but the Soviet leader rejected them.

Nevertheless, after a rapid series of tests that autumn, neither the USSR nor the USA or UK carried out any further nuclear tests until the second half of 1961. Then, in July 1961, Sakharov was called back from a family vacation to Moscow for a conference between government and party leaders and atomic scientists. Khrushchev announced that in the fall the USSR was going to resume testing because of deteriorating international developments and because the USSR was behind the USA in testing. He then called on Sakharov and some of the other leading scientists to inform the meeting of their latest work. Sakharov got up and used his opportunity not only to comment on his research, but to state that he believed little was to be gained by resuming testing. His comments were noted but no response was made to them, at least until after he had returned to his seat and written Khrushchev a quick note. As he recalled later in his memoirs, it said something like the following:

I am convinced that a resumption of testing at this time would only favor the USA. Prompted by the success of our Sputniks, they could use tests to improve their devices. They have underestimated us in the past, whereas our program has been based on a

¹⁶ Kevin Klose, in his *Russia and the Russians: Inside the Closed Society* (New York: Norton, 1984), 149, states that he believes the disaster had a “profound impact” on Sakharov. As a Western correspondent Klose got to know Sakharov and Bonner well and devotes much of this book to them. See also Zhores A Medvedev, *Nuclear Disaster in the Urals* (New York: Norton, 1979).

¹⁷ The 6,600 figure is from Gorelik, 213, who cites Sakharov’s article in *Atomic Energy*. The 500,000 is from Sakharov’s *Memoirs*, 202, where he summarizes some of the conclusions of his article in *Atomic Energy*.

realistic appraisal of the situation. . . . Don't you think that new tests will seriously jeopardize the test ban negotiations, the cause of disarmament, and world peace?" [216]

Khrushchev stuck the note in his pocket, but did not respond to it until a later dinner, when he stood up, displayed the note and, according to Sakharov's later memory, said:

Sakharov writes that we don't need tests. But I've got a briefing paper which shows how many tests we've conducted and how many more the Americans have conducted How can you develop new technology without testing?

But Sakharov goes further. He's moved beyond science into politics. Here he's poking his nose where it doesn't belong. You can be a good scientist without understanding a thing about politics. . . .

Leave politics to us—we're the specialists. You make your bombs and test them, and we won't interfere with you; we'll help you. But remember, we have to conduct our policies from a position of strength. . . . Sakharov, don't try to tell us what to do or how to behave. We understand politics. [216-17]

In his memoirs, Sakharov does not comment on how he immediately felt about this rebuke, but one can imagine his feelings amidst his scientific colleagues and the country's political elite. Only one of his fellow scientists privately offered his support following Khrushchev's sharp words.

The next month, shortly after the Berlin Wall had gone up, Khrushchev and Sakharov again met, when he accompanied one of his superiors at the Installation to brief the Soviet leader on the latest plans for a super bomb that would be the most powerful ever tested. During this meeting Khrushchev asked: "Does Sakharov realize that he was wrong [about his earlier objection to testing]?" Sakharov answered, "My opinion hasn't changed, but I do my work and carry out orders." [218] Although against continued atmospheric testing, he still believed that his weapons research was "crucial in preserving the parity necessary for mutual deterrence (or as it later became known: "mutual assured destruction" — MAD). [221] As a result of his work and others, on Oct 31, 1961 the most powerful bomb ever tested was dropped—its flash could be seen for 600 miles. Sakharov hoped that now no more testing would be needed. In early 1962, months before the Cuban Missile Crisis, he was showered with new honors and at a Kremlin banquet was given the seat of honor between Khrushchev and the man who would lead the coup against him two years later, Leonid Brezhnev.

Later that year, Sakharov worked hard to prevent more testing, even though by then the USA and UK had also resumed it. He was especially upset because of plans in September to test two variants of the same powerful warhead, and he figured that the eventual casualties from the fallout from *each device* would be in the six-figure range. To prevent at least one of the tests, he called Khrushchev and pleaded with him, but the test went ahead as scheduled. In his memoirs, Sakharov wrote: "It was the ultimate defeat for me. A terrible crime was about to be committed, and I could do nothing to prevent it. I was overcome by my impotence, unbearable bitterness, shame, and humiliation. I put my face down on my desk and wept. . . . I decided that I would devote myself to ending biologically harmful tests." [229]

By this time, he had already advocated an idea earlier proposed by President Eisenhower in the late 1950s to ban all but underground tests. Sakharov had gone to a government minister in the summer of 1962 and urged that the government resurrect the suggestion at Geneva arms talks

which were then deadlocked. The minister promised to pass the idea on to a deputy foreign minister and a few months later told Sakharov that “his idea” was being seriously considered. In July 1963, after the Cuban Missile Crisis had brought the USA and USSR to the brink of a nuclear conflict that previous October, Khrushchev proposed the limited test ban, and it was signed in Moscow in August by the USSR, USA, and UK. For this Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space, and under Water, others besides Sakharov deserve credit, including a fellow Soviet who suggested to Sakharov the idea of resurrecting the Eisenhower proposal. In his memoirs, Sakharov acknowledged this debt, but concluded that he was still proud of his contribution to the treaty and said he considered it of “of historic significance. It has saved the lives of hundreds of thousands, possibly millions, of people who would have perished had [the banned] testing continued And perhaps even more important, the treaty was a step toward reducing the risk of thermonuclear war.” [231] Partly because he believed that his staying at the Installation could at some crisis point be important, he remained there.

In the next several years, however, despite doing some work on military matters, like antiballistic missile systems, and on the nonmilitary uses of nuclear power, he increasingly turned his attention to pure science research relating to cosmology. The early 1960s, with the flight of Yuri Gagarin and other cosmonauts, was a time of increased attention to that field. Sakharov began exploring the “grand” cosmological questions of “Why the galaxies, stars, and planets are precisely as we observe them and not otherwise?” [244] In 1963-64, he wrote a paper on “The Initial Stage of an Expanding Universe and the Appearance of a Nonuniform Distribution of Matter.”

He also concerned himself with another scientific field—genetics. For about three decades T. D. Lysenko (1898–1976), an agronomist and biologist, had challenged more scientifically-based teachings about genetics and heredity. He claimed that environmentally changed plants could pass on their acquired characteristics and that his research could greatly boost crop yields. Stalin backed his views, and he became president of the Academy of Agricultural Scientists and helped purge more reputable geneticists. To a lesser extent, Khrushchev also generally supported him. Sakharov and his mentor Tamm, however, had long ago dismissed Lysenko’s ideas as bogus, and studying the genetic effects of radiation had just strengthened Sakharov’s contempt for Lysenko’s ideas. In June 1964, the biologists of the Academy of Sciences at a full General Assembly meeting nominated one of Lysenko’s closest supporters for full membership. Although Tamm among others spoke against the selection, Sakharov’s words were the most blistering. He said that the candidate along with Lysenko was “responsible for the shameful backwardness of Soviet biology and of genetics in particular, for the dissemination of pseudoscientific views, for adventurism, for the degradation of learning, and for the defamation, firing, arrest, even death, of many genuine scientists.” Cries of “Shame,” but also applause greeted these remarks. As he returned to his seat, Lysenko fumed at him, “People like Sakharov should be locked up and put on trial!” [234]. Sakharov’s brief speech, however, had its effect; the assembly overwhelmingly voted against the nomination. The speech received attention in the press, and it apparently upset Khrushchev. Sakharov wrote that the Soviet leader reputedly said, “First Sakharov tried to stop the hydrogen bomb test, and now he’s poking his nose again where it doesn’t belong.” [237] By the end of the year, however, Brezhnev and others had removed Khrushchev from power. Shortly thereafter Lysenko also lost his important positions and influence.

Family Life and Friends during the 1950s and 1960s

In August 1957, the Sakharovs's third and last child, son Dmitri, was born. In December 1961 Andrei's father died, as did his mother in April 1963. In September 1964, Klava became very sick with gastric bleeding and had another bad attack of it the following April. But only in January 1969, two months before her death, did she and Andrei discover that she had stomach cancer. In Andrei's *Memoirs*, written during his second marriage, he sums up his life with Klava. He mentions their two girls and a boy and that "there were happy periods" in their "life that sometimes lasted for years." But he also mentions Klava's "psychological problems" and attributes them partly to her not working outside the home after 1945. He faults himself for not encouraging her to pursue an occupation, as most of his colleagues' wives did. He also blames himself for not creating a better psychological family atmosphere. "Life was somehow empty, and it's particularly sad that our children had too little joy in their lives," he writes, though he and his wife tried to create a happy life for their three children. He admitted that in his relations with Klava and with their children after her death he "tended to avoid confrontations," feeling "unable to cope with them." He then adds some revealing words: "The less I concerned myself with these seemingly insoluble personal matters, the more capable I was of leading an active and productive life outside the home." [58-59] This confession of a man who eventually achieved great distinction but found it harder to be a first-rate husband and father is one to which many professionally successful men can relate—if they are honest with themselves.

Like many such men, the balance between work and family life tilted much more toward the former. Andrei's oldest daughter recalled that in the 1950s he often came home to their Installation cottage—three rooms and a kitchen in half of a two-story house—too tired to pay much attention to family matters. But conscientious as he was, he tried to be a good husband and father. He played chess with Klava, told bedtime stories to the children, hiked, skied, and went on picnics with the family. Klava, however, soon grew tired of life at the Installation. Even though Andrei's prestige gained the family considerable money and privileges, Klava was unhappy with the intrusions that confronted her at the Installation. She found servants and the bodyguards that protected her husband from mid-1954 until late 1957 invasions of privacy, and she and the children started to spend more time in the Moscow apartment the family was allowed to keep after Andrei moved to the Installation. The two KGB bodyguards remained guarding him, and living next door, whether he was at the Installation or at the Moscow apartment. He was supposed to let them know whenever he went out by pressing a buzzer that had been set up so that they could then follow behind to ensure his safety.

Andrei's work at the Installation also kept him from seeing his parents as much as he would have liked, especially after his father started to have heart trouble and was placed in a hospital in late 1961. Andrei continued greatly to admire his father, who had retired. Before his hospitalization, the old man still did physics experiments, wrote about them, and spent hours at his piano, sometimes composing. When weather permitted, he also gardened at his dacha. When Andrei visited him in the hospital, he conveyed his misgivings about Andrei's work on thermonuclear weapons. Although his father returned home for a few days before his death in mid December, Andrei's work prevented him from seeing him one last time. Andrei was, however, able to spend Easter Sunday of 1963 with his mother before she lapsed into unconsciousness the next day and soon died and was buried.

For several years after his mother's death, his work also often kept him apart from Klava, who continued during the children's school year to prefer living with them in the Sakharov's

Moscow apartment. He saw the family only on occasional visits to Moscow and during most summers, which the whole family usually spent at the Installation. Following her first hemorrhaging in 1964, she continued to have health problems, but their source was often misdiagnosed. In October 1968, she and Andrei travelled together to an exclusive government health resort in the southern Russian Caucasus Mineral Waters region—although his early dissident activities (see below) were by now getting him into trouble with the Soviet government, some of the considerable privileges he enjoyed as the “father of the Soviet H-bomb” were still available to him. For a while at the resort, Klava felt better than she had that summer, and she and Andrei enjoyed long walks in the beautiful setting. During their final days there, however, she began to have serious blood circulation problems. It was only a few months later that she was correctly diagnosed in a Kremlin hospital as having inoperable stomach cancer. She spent the last week of her life in the hospital. Desperate to save his wife’s life, Andrei obtained some medicine from a retired doctor who claimed she had discovered a “miraculous anti-cancer vaccine.” [298] Andrei saw to it that Klava was given an injection of it, but she died the next day. In his *Memoirs*, Sakharov says that he was “in a daze” for “months afterwards.” [298]

Recalling the last two decades of his life with Klava, he wrote that they had “rarely socialized or gone anywhere” and that outside of work even his professional contacts were limited. [299] In a society where a great deal of drinking often occurred on social occasions, he almost never drank too much. One U. S. physicist who met him in 1968 thought him “painfully shy.”¹⁸ He was also a bit absent-minded at times. One of his scientific colleagues remembered that in this period, he might appear with an undershirt tucked into his pocket instead of a handkerchief, and one of his biographers wrote that when he worked at the Installation, he might show up to work wearing mismatched shoes. We have already seen that he thought being home-schooled for many years had prevented him from acquiring the social skills that more mixing with other children might have helped develop. M. L. Levin, who some considered close to Sakharov, said they were not close friends and went so far as to say, “It is my impression that in neither his young years nor his middle years did he have any other close friends.” Even in his later years, according to Levin, Andrei had only one genuine close friend, his second wife, Elena Bonner.¹⁹

Yet, despite Levin’s words, there were at least a couple of other people that Sakharov felt close to for many years. His mentor Igor Tamm was one. Another was a fellow scientist at the Installation, Yakov Zeldovich. From this physicist who was seven years older than him, Andrei learned much, and valued his friendship, “regarding it as close and congenial,” and believed that his older friend felt kindly toward him. [132] Zeldovich’s scientific and other interests were many, he discussed topics with intelligence and passion, and Sakharov first saw several underground (*samizdat* or self-published) publications at his place. His passions also carried over into his relations with women, and he had many extra-marital affairs. In his *Memoirs*, the more proper Sakharov said that there were too many such liaisons and that he did not care to hear some of the tales about them that he did. Perhaps partly because of Zeldovich’s Jewish background, he was reluctant at times (especially during Stalin’s final years when anti-Semitism was on the rise) to take political risks like standing up for a politically suspect colleague, but would urge Sakharov or others to do so. By the time Sakharov wrote his *Memoirs*

¹⁸ *Sakharov Remembered*, 75.

¹⁹ *Ibid.*, 69.

and Zeldovich had self-servingly criticized him, Andrei had concluded that he was somewhat of an “operator.” [132]

After Klava’s death, as Andrei became more active in dissident activities, no longer worked at the Installation, and met many of Elena Bonner’s acquaintances (see below), he also mixed with more people outside of work and made new friends. In his *Memoirs*, he mentions numerous people with whom he and Elena had warm relations, although the arrests, sentences, and exile that many of them suffered often prevented the couple from seeing them for long periods. Equally, the memoirs and testimonies of many dissidents and some of Andrei’s fellow scientists indicate the affection they had for Andrei and Elena.

Dissidence and Elena Bonner, 1964-1979

The first few years of Leonid Brezhnev’s Communist Party leadership marked a turning point in Sakharov’s life. After the Limited Test-Ban treaty of 1963 and his anti-Lysenko speech at the Academy of Sciences’ General Assembly meeting in 1964, he became increasingly involved in political issues. His opposition to Lysenko had encouraged other members of the intelligentsia to think of him as a possible ally in the struggle against Stalinism, which some of them feared was reemerging under Brezhnev. The arrest and trial of Andrei Siniavsky and Yuli Daniel in 1965-1966 stoked these fears. Their underground critical and satirical works had been smuggled out of the USSR and published abroad under pseudonyms. Their crime was “anti-Soviet propaganda” and they were sentenced to Soviet labor camps for seven and five years respectively. The trial of these two dissidents marked an early stage of a dissident movement characterized by underground (*samizdat* or self-published) literature, usually circulating in typed or mimeographed copies, and foreign-published forbidden works (*tamizdat*) of Soviet authors. Often *samizdat* works later became *tamizdat* ones.

In early 1966, Sakharov signed a letter, as eventually did two dozen others, which was made known to the foreign press. It asked an upcoming Communist Party Congress not to rehabilitate Stalin. Later in the year, he signed another appeal requesting the Russian republic’s Supreme Soviet to reject a new provision for the criminal code that would make it easier to prosecute dissidents. He followed this up by sending a personal telegram to the chairman of that Supreme Soviet. That same year, he met the historian Roy Medvedev, whose twin brother, the biologist Zhores, he already knew. Roy was then working on a book that would first be published abroad in 1971 in an English translation under the title *Let History Judge: The Origins and Consequences of Stalinism*. It contained much information about the crimes and other activities of Stalin that most Soviet citizens, including Sakharov, had never read, and he loaned Andrei various chapters of this *samizdat* work. The historian also lent him other *samizdat* publications and informed him of other dissident activity. Sakharov stated that they helped him escape from his constricted mental world—he continued reading *samizdat* and *tamizdat* for many years afterward.²⁰ On Constitution Day (December 5) in 1966 he took part in a silent demonstration near the Pushkin Monument in Moscow. A few dozen people were there, but some were KGB agents. All that most of the demonstrators did was remove their hats at 6:00 pm. Sakharov also read aloud the monument’s inscription:

²⁰ His diary entry for May 3, 1978, for example, mentions that he spent several days reading two volumes of such material. Heretofore his diary has not been translated into English, but is available in Russian; see A. Sakharov and E. Bonner, *Dnevnik: roman-dokumen, 3 vols.* (Moscow: Vremia, 2006).

I shall be loved, and the people will long remember
 that my lyre was tuned to goodness,
 that in this cruel age I celebrated freedom
 and asked for mercy for the fallen. [273]²¹

In 1967, Sakharov sent a letter to Brezhnev defending four dissidents who were being put on trial. Soon afterwards he was replaced as a department head at the Installation and his pay was cut. He was still influential enough, however, to reach KGB head Yuri Andropov and Brezhnev by telephone. He phoned Andropov after reading a letter about the dire situation of Yuli Daniel in a forced-labor camp, and he called Brezhnev after becoming involved with a committee concerned about environmental damage occurring at Lake Baikal. Neither call produced positive results. That same year he wrote materials dealing with the future of science and the role of the intelligentsia. In the original or in reworked pages some of this material soon circulated in *samizdat* form.

The following year was a pivotal one for Sakharov, for it marked his emergence as a major voice in the dissident movement. He later summarized his feelings and thinking at the start of that year.

By the beginning of 1968, I felt a growing compulsion to speak out on the fundamental issues of our age. I was influenced by my life experience and a feeling of personal responsibility, reinforced by the part I'd played in the development of the hydrogen bomb, the special knowledge I'd gained about thermonuclear warfare, my bitter struggle to ban nuclear testing and my familiarity with the Soviet system. I hoped that such notions as an open society, convergence of the capitalist and communist systems, and world government might ease the tragic crisis of our age. In 1968 I took my decisive step by publishing *Reflections on Progress, Peaceful Coexistence, and Intellectual Freedom*.

My work on *Reflections* happened to coincide with the Prague Spring. What so many of us in the socialist countries had been dreaming of finally seemed to be coming to pass in [Communist] Czechoslovakia: democracy, including freedom of expression and abolition of censorship; reform of the economic and social systems; curbs on the security forces; and full disclosure of the crimes of the Stalin era (the "Gottwald era" in Czechoslovakia). Even from afar, we were caught up in all the hopes of the catchwords "Prague Spring" and "socialism with a human face."²²

Sakharov finished his *Reflections* that spring and gave Roy Medvedev a copy realizing that it would now circulate in *samizdat* form and perhaps even end up being published abroad. KGB head Andropov soon called in the head of the Installation and ordered him to tell Sakharov he wanted it withdrawn. Not only did Andrei refuse to withdraw it, he also soon sent a version of it to Brezhnev. By the middle of 1968, the manuscript was being translated and published abroad, including by the *New York Times*. In 1968-69, according to Sakharov, more than 18 million copies were sold worldwide.

²¹ The inscription is from Pushkin's 1836 poem "Exegi Monumentum ("Unto myself I reared a monument"); the original Russian version and a slightly different English translation can be found in Alexander Pushkin, *Pushkin: Selected Verse*, ed. and trans. John Fennell (Baltimore: Penguin Books, 1964), 75-76.

²² Andrei Sakharov, "Years in Exile," *Time*, May 21, 1990, <http://www.time.com/time/printout/0,8816,970185,00.html>.

Since we shall examine the main ideas expounded in *Reflections* later, it is enough here to indicate that following the foreign publication of this work, Sakharov never again was allowed to work at the Installation. The following year he was transferred back to FIAN as a senior scientific fellow, but he was never again assigned any real duties. During one last trip to the Installation, in 1969, to clean out his belongings, he decided to donate a large sum of money left in his Installation bank account to several charities.

Soon after Sakharov's book appeared in the West, Soviet troops in August 1968 brought an end to the reform movement in Czechoslovakia. As Sakharov later wrote, "The hopes inspired by the Prague Spring collapsed. And 'real socialism' displayed its true colors, its stagnation, its inability to tolerate pluralistic or democratic tendencies, not just in the Soviet Union but even in neighboring countries. The abolition of censorship and free elections were regarded as too risky and contagious."²³ In Moscow, a small group of dissidents were bold enough to publically protest against the Soviet invasion, and were quickly arrested. Not long after this, Sakharov used the phone of the director of the Atomic Energy Institute to call KGB head Andropov and urge him not to prosecute the protestors. They were tried, however, and suffered fates that were typical of the three main ways the Brezhnev regime began punishing dissenters—sending them to forced labor camps, exiling them (either to remote Soviet regions or abroad), or incarcerating them in psychiatric facilities.

A few days before the phone call, Sakharov had his first meeting with Alexander Solzhenitsyn. Within a few years this writer would win the Nobel Prize for Literature and become, along with Sakharov, one of the USSR's two most significant dissidents. Despite their mutual criticism of the Soviet regime, there were important differences between the two men that emerged already during this first meeting. In the years ahead further differences would become apparent. By the time Solzhenitsyn was finally exiled abroad in 1974, he and Sakharov represented two distinct types of dissidence. Solzhenitsyn's approach was more of a neo-Slavophile one grounded in respect for the pre-Soviet Russian cultural and religious traditions and contempt for the permissive materialism he thought characteristic of the West. Sakharov was more sympathetic to the West and its emphasis on separation of church and state, human rights, legality, and due process of law.

In early 1970 another physicist persuaded Sakharov to co-author a letter to Soviet leaders to convince them that greater democracy and freedom were necessary for faster scientific advancement and economic growth. It stressed that the USSR was way behind the USA in computer technology, which represented a "second industrial revolution." The authors warned that if greater democratization and freedom were not forthcoming the USSR would fall further behind the capitalist powers, see its economy stagnate, and become a "second-rate provincial power."²⁴ The Soviet leadership was unwilling to heed such advice; instead KGB chief Andropov sought higher authority to bug Sakharov's apartment. Brezhnev and other leaders assented. Only a decade and a half later would a new leader, Mikhail Gorbachev, begin pursuing policies more in keeping with the insightful advice of the letter.

In mid 1970 Sakharov joined with Roy Medvedev, who had also signed the letter, in protesting the incarceration of Roy's twin brother, Zhores, in a psychiatric hospital. This time the efforts of Sakharov and others may have helped because a few weeks later Zhores was released—in 1973, however, his citizenship was revoked while he was in England, thus exiling him by preventing his return to the USSR. Roy, however, remained in the Soviet Union and

²³ Ibid.

²⁴ Andrei D. Sakharov, *Sakharov Speaks* (New York: Vintage Books, 1974), 120, 132.

came to typify a third type of dissent—according to Sakharov the divisions between dissidents that later became apparent were much less evident in the early 1970s, when he remembered the dissidents as “young in spirit and pure of heart.” [361]. Less sympathetic with the West than Sakharov, Medvedev’s dissent was that of a reforming Communist who blamed most of his country’s problems on Stalin and his legacy. In addition to the growing differences in the approaches of Sakharov, Solzhenitsyn, and Roy Medvedev, there was still another type of dissidence that centered mainly on the grievances of various non-Russian nationalities, especially the Ukrainians, the Baltic peoples, the Georgians, the Jews, and the Crimean Tatars.

Before 1970 came to an end, Sakharov experienced two other important events: Fellow physicist and dissident Valery Chalidze persuaded him to join with him and another physicist in founding the Human Rights Committee, and at Chalidze’s apartment he met his future second wife, Elena Bonner. Chalidze’s emphasis on human rights was in turn influenced by the ideas of his friend mathematician and logician Alexander Esenin-Volpin, who Sakharov now also got to know better. Esenin-Volpin continually insisted that the government should keep within the bounds of the Soviet Constitution and legality. In conversations and *samizdat* publications, he stressed that no law obliged citizens to believe in communism or cooperate with the KGB. And he worked hard to educate his fellow citizens of their rights under USSR laws and to convince them that they should insist these laws be obeyed by the authorities.

Although we shall later examine more Sakharov’s emphasis on human rights, it is appropriate to mention here that not only was he influenced by Chalidze and Esenin-Volpin on this issue, but also by a broader international stress on such rights and by Elena Bonner. During the 1970s the two of them often attended dissident trials—among hundreds of such trials from 1968 to 1978 there were no acquittals—and took other steps to aid those whom they considered victims of an oppressive state. Her mother was Jewish and both her father (whom she hardly knew) and stepfather were Armenian, the latter an important Soviet member of the Comintern, the international Communist organization directed from Moscow. Like many Comintern members, Elena’s stepfather was purged by Stalin, in 1937, and (as Elena was to learn only many decades later) was executed in 1938. Her mother was also arrested, and sent to a forced-labor camp, leaving the fourteen-year-old Elena and her brother in the care of their grandmother. During World War II Elena’s brother was killed and she worked as a nurse and was injured. Following the war, she went to medical school, married a fellow student, had two children, Tatiana and Alexei, and eventually became a pediatrician. By the time Sakharov met her, she was divorced, had worked in Iraq for about a year, and had also visited other countries such as Lebanon, Egypt, Poland, and France. Compared to the shy Andrei, who had never left the USSR and led somewhat of a sheltered existence, Elena was a more forceful, temperamental personality who had experienced many of the hardships typical of her generation. Once accompanied by Andrei, when a policeman tried to prevent her and others from reaching a door during a political trial, she yelled, “Get out of my way, you fascist!” [359] Andrei described her as “a doer” and explained that she had joined the Communist Party several years before they met because she thought she could best help reform the system that way. [352]

The marriage of Andrei and Elena (or Lusya, as he and her friends called her) occurred in January 1972, but his children were not invited to the ceremony. A KGB report from the previous October indicates why. It said, “Sakharov’s intention to marry Bonner elicited a negative reaction on the part of his daughters, which has caused a tense situation in the family.”²⁵ Sakharov himself later mentioned the “strained relations” that existed between him and his son,

²⁵ *KGB File*, 131.

Dmitri, and also expressed regret at not inviting his children to the wedding and added that “such cowardice only makes life more difficult.” [358-359] A few months after the wedding, Andrei and Elena took a vacation trip to Central Asia and asked Dmitri and Elena’s son, Alexei, to come along, but Dmitri refused.

The efforts of Andrei and Elena in behalf of other dissidents and people simply being denied basic rights were arduous and continuous throughout the 1970s. In 1976, a year after the USSR and other European Soviet Bloc countries agreed to recognize various human rights in the Helsinki Accords, several dissidents including Bonner founded the Moscow Helsinki Watch Group to call attention to human rights violations of the agreements. For many years afterwards, she worked tirelessly as a member, and sometimes acting chair, of the group. Sakharov supported their efforts in various ways.

Often strangers sent letters, sometimes intercepted by the KGB, or just came to see the couple, asking for help emigrating or dealing with job injustices or Soviet bureaucrats. He frequently wrote appeals to government leaders, including Brezhnev; sometimes made phone calls to lesser officials; and often contacted foreign press agencies to highlight human rights problems that Soviet officials ignored or refused to address—he realized that his international prestige might help to apply pressure on a Soviet government mindful of foreign opinion. Writing about 1979 in his *Memoirs*, he wrote that such press agencies “were used to hearing from me at least once a week.” [490] Dissident Natan Sharansky noted some of Sakharov’s efforts. “During my days as an activist I was often asked by Jewish organizations in America, or by my fellow refuseniks in Moscow, if I could get Sakharov to write a letter, sign a statement, or make an appearance on behalf of our movement. Although he was one of the busiest men in Moscow and the whole world was beating down his door, he never once refused us.”²⁶

The activities of Sakharov and Bonner often involved great hardships. To cite just one example, taken from Sakharov’s *Memoirs* and an Andropov KGB report, there was their 1976 trip to visit a fellow dissident and physicist who had been exiled to the Siberian area of Yakutia. The trip was made especially difficult by KGB operatives. Elena suggested it when she saw a photo of the exile and found something disturbing about his expression. On the way to the Moscow airport they suffered whiplash when their taxi was hit by another car. Once in Yakutia, they had to wait overnight, sleeping on terminal benches, in a local airport before they could board a connecting flight to a city within 12 miles of their final destination. Upon this second landing, however, they discovered that the bus ride to take them those final dozen miles had been cancelled and no other transportation was available. So they walked, with Andrei carrying a bag of presents over his shoulder, and arrived in the early morning hours. The KGB reported on their conversations with the exile and that while walking around a lake with him, “Sakharov hurt his leg and returned to Moscow on crutches. His injured leg is now in a plaster cast.”²⁷ At their first return-trip airport, heart pain forced him to lie down for a while on a bench. At the second airport, they could not get a direct flight to Moscow but had to first fly south to Irkutsk. Once there, they may have had a long wait if Elena “had not made a scene” in order to get them on board a flight to Leningrad, where they spent the night before returning to Moscow and an examination of his leg. [454]

In addition to all these type personal efforts, as well as furnishing financial assistance on numerous occasions, Andrei wrote a great deal in behalf of dissident causes. He said that writing did not come easy for him. But in the years 1974-1978, three collections of his writings appeared

²⁶ Natan Sharansky, *Fear No Evil* (New York: Random House, 1988), 333.

²⁷ *KGB File*, 216.

abroad, *Sakharov Speaks, My Country and the World*, and *Alarm and Hope*. Elena often typed, either as Andrei dictated or from his handwritten drafts, and made editorial comments and suggestions. He was more open than most writers to criticism and feedback, but they often differed over her suggestions before he accepted some while rejecting others. In 1975 Elena, who was already abroad for medical treatment, travelled to Oslo to accept the Nobel Peace Prize for her husband—the Soviet government would not let him leave the USSR—and read his acceptance speech. In granting him the award the Noble Committee stated:

Sakharov's fearless personal commitment in upholding the fundamental principles for peace between men is a powerful inspiration for all true work for peace. Uncompromisingly and with unflagging strength Sakharov has fought against the abuse of power and all forms of violation of human dignity, and he has fought no less courageously for the idea of government based on the rule of law.

In a convincing manner Sakharov has emphasised that Man's inviolable rights provide the only safe foundation for genuine and enduring international cooperation.

In this way, in a particularly effective manner, working under difficult conditions, he has enhanced respect for the values that rally all true peacelovers.²⁸

The “difficult conditions” Sakharov had to work under included increasing KGB intimidation against him, Elena, and both of their families. Sakharov later recounted it:

After the massacre of Israeli athletes at the 1972 Munich Olympics, I joined a silent protest in front of the Lebanese embassy in Moscow. Lusia [Elena] was ill, but her son Alexei, her daughter Tanya and Tanya's husband Efrem Yankelevich were with me. We were all carted to a drunk tank by the KGB. A month later, Tanya was expelled from Moscow University. Lusia's children had now become hostages to my public activity. Their access to education and jobs would be restricted or blocked. Threats of arrest, imprisonment, physical violence and even murder became a genuine menace. Eventually [in 1977 and 1978], the children were forced to emigrate.²⁹

In a 1973 interview with a Swedish radio correspondent, he said that he had reason to fear measures directed “against members of my family, members of the family of my wife. That is the most painful thing.”³⁰ Following the airing of the interview in early July, the KGB and Soviet government ratcheted up the pressure on him, orchestrating newspaper articles and letters attacking him and his views. Both he and Elena received official warnings; and Elena, refusing to be intimidated, resigned from the Communist Party. In September Andropov wrote a KGB memo to Party leaders suggesting how they might best deal with the two main dissidents, Solzhenitsyn and Sakharov. For the former, Andropov suggested a trial or arranging his exile abroad; for the latter, depriving him of his positions (“which also means losing the 800 rubles a month that he now receives for doing nothing”) or sending him to a more restricted city, where the foreign press would not have access to him.³¹

²⁸ See http://nobelprize.org/nobel_prizes/peace/laureates/1975/press.html.

²⁹ “Years in Exile,” at <http://www.time.com/time/printout/0,8816,970185,00.html>.

³⁰ *Sakharov Speaks*, 178.

³¹ *KGB File*, 156.

In February 1974 Solzhenitsyn was arrested and expelled from the USSR, but Andropov's suggestions for Sakharov were not followed—yet. In the late 1970s, however, as Sakharov continued giving interviews with Western correspondents and also airing his views in other non-Soviet ways, he became Andropov's "Public Enemy No. 1." By early 1977, 32 measures intended to destabilize and discredit him were underway or planned. Yet, during much of the 1970s the USSR and USA were pursuing a policy of détente and Soviet leaders realized that Sakharov's admirers in the West, including U.S. President Jimmy Carter, necessitated treating Sakharov more cautiously than other dissidents.

By late January 1980, however, the Soviet government finally decided to follow Andropov's earlier suggestions, ones he and the government's leading prosecutor had restated and justified with more details in December 1979. They wrote that, "For more than ten years Academician Sakharov, a convinced adversary of the socialist order, has conducted subversive activities against the Soviet state." They also maintained that between 1972 and 1979, he had visited foreign capitalist "diplomatic offices eighty times."³² In January 1980, Sakharov conducted interviews with foreign journalists and criticized the Soviet invasion of Afghanistan, which had occurred the month before, and added that if Soviet troops were not withdrawn, the Olympic Committee should cancel the upcoming games due to be held in Moscow. Voice of America beamed one of these interviews back into the USSR. On January 22, Sakharov was arrested and informed that he was to be stripped of his awards and sent to the city of Gorky (today once again Nizhny Novgorod), a city on the Volga River that was off limits to foreigners and would thus deprive Sakharov of his contacts with foreign journalists and diplomatic offices. That same day KGB agents escorted him and Elena Bonner to Gorky aboard a special flight.

The Exile Years, 1980-1986

In Gorky the first-floor apartment assigned to them contained four rooms, plus a bathroom and kitchen, but one of the four rooms was assigned to a "landlady" that worked for the KGB until she was let go and the room sealed up. There was also a policeman constantly stationed outside their apartment door and a police observation post in a nearby building. Although the couple possessed a short-wave radio, they could not hear foreign broadcasts in their apartment because of police jamming. Their apartment was also bugged, and they were not permitted a phone. On occasion the police searched their apartment and sometimes confiscated materials. Tired of having their lock broken, after a while the couple just left a key in the door. When they left their apartment and got in the old car they possessed, "KGB tails" followed them. [526] The KGB also oversaw numerous incidents of vandalizing their car. In some of the places they went (and inside their apartment), hidden cameras recorded their movements and, primarily for foreign consumption, the KGB edited and rearranged some of the footage to make their lives seem more pleasant and less draconian than they actually were. By mid 1986, eight KGB-authorized video tapes had been made available to Western media.³³ Bonner thought that the videos, made without their subjects' knowledge and sometimes depicting Sakharov discussing private medical matters with doctors, violated "ethical norms—medical, professional, and human."³⁴

Prior to mid 1984, when she was also sentenced to exile, Bonner estimated that she made well over 100 trips back and forth to Moscow. On some of these roundtrips from Gorky she took

³² Ibid., 243.

³³ Elena Bonner, *Alone Together* (New York: Vintage Books, 1988), 203-15, 281-82.

³⁴ Ibid., 213.

portions of the 900-handwritten-page *Memoirs* her husband had labored over since 1978 to have typed in Moscow. Time and again, however, the KGB stole all or parts of the manuscript, and he had to rewrite its pages. To prevent theft from their apartment, he usually carried a heavy bag of valuable papers, including his *Memoirs* with him, but once while at his Gorky dentist's office, the bag was stolen, and on another occasion his bag was stolen from their car. He was convinced, for good reasons, that the thefts were the work of the KGB.

To the extent possible, Sakharov continued to write articles and appeals to various Soviet leaders and officials, as well as to foreign leaders. Often his appeals were in behalf of various dissidents or other victims of injustice. Bonner often brought some of these writings to Moscow, where she contacted various people including some foreign journalists, and most of his writings eventually reached the Western world.

They both suffered from serious physical problems while in Gorky, including heart attacks and major dental problems. Before eventually having sextuple heart bypass surgery in January 1986 (in the United States), Elena suffered not only from a few heart attacks, but constantly carried nitroglycerine pills with her, sometimes "taking as many as twenty-five pills a day" to prevent another attack.³⁵ Their health, especially his, was further compromised by occasional hunger strikes. Following in the tradition of India's Gandhi and others who had undergone such strikes,³⁶ Sakharov had already engaged in his first such strike (for six days) in 1974 in order "to call attention to the plight of political prisoners." [411] In Gorky the couple's first joint hunger strike began in November 1981. It was one last desperate effort to pressure the Soviet government to allow the emigration of Liza Alexeyeva, by now the wife (by a proxy marriage) of Bonner's son, Alexei, so she could join him in the United States.

After almost two weeks of the strike, KGB agents seized them and took them to separate hospitals. But they still refused to eat or submit to most medical procedures. Medical personnel and the KGB attempted to frighten them into giving up their strike. After a little under one week in the hospital, forced-feeding apparatus appeared in Bonner's room, but she insisted that she would resist with all her might. Shortly thereafter a KGB agent told Sakharov that if he ended his strike their demand for Liza's emigration would be looked upon favorably. Sakharov insisted that no end to the strike could come until he was reunited with his wife. The KGB delivered her to his hospital later that same day. After obtaining further assurances that Liza would be able to emigrate, the couple ended their 17-day hunger strike. Liza emigrated less than two weeks later. Although Bonner was by then out of the hospital, Sakharov remained hospitalized until he suffered a heart spasm several days later. Apparently afraid he might die in the hospital, authorities dismissed him the next day. Three days after that he suffered a heart attack. He later wrote of his health as diagnosed by a team of doctors sent to Gorky in 1983 by the Academy of Sciences: "The head of the team said hospitalization was advisable in my case, as I had received no treatment for a chronic prostate condition since arriving in Gorky, was plagued by angina and borderline hypertension and apparently had suffered several heart attacks —microinfarcts in 1970 and 1975 and three attacks in Gorky—as well as a bout of thrombophlebitis."³⁷

In May 1984, with Konstantin Chernenko having replaced Andropov as the second old, ailing Soviet leader after Brezhnev's death in November 1982, Sakharov began his second Gorky

³⁵ *Ibid.*, 227.

³⁶ For a comparison of Gandhi and Sakharov, see P.N. Lebedev Physics Institute, ed., *Andrei Sakharov: Facets of a Life* (Gif-sur-Yvette, France: Editions Frontières, 1991), 272-81 (hereafter cited as *Andrei Sakharov: Facets*).

³⁷ "Years in Exile," at <http://www.time.com/time/printout/0,8816,970185,00.html>.

hunger strike. This time it was to pressure the Soviet government to allow his wife to go abroad for medical treatment and to see her children, grandchildren, and mother. Just before he began the strike, Elena was arrested at the Gorky airport as she was preparing to fly to Moscow. She was accused of "slandering the Soviet system," and several months later she was convicted and sentenced to five years' exile in Gorky, thus ending her right to make trips to Moscow. Just days after he began his strike, authorities forced him to enter a hospital, and five days after that he was tied to his bed and forced fed. For over two weeks the forced feeding continued, with the method eventually becoming more draconian as food was forced into his mouth, which was then clamped shut.

Meanwhile, his three children had sent Elena a telegram blaming her for his strike and threatening to have her prosecuted if she did not persuade him to end it. The KGB, however, prevented her from visiting him. Finally, increasingly miserable, from the forced feeding and separation, he agreed to end his strike, but was kept in the hospital for another few months. In April 1985, just a month after Mikhail Gorbachev had become the new Soviet leader, Sakharov began his third Gorky hunger strike, once again trying to pressure the government to allow his wife to go abroad for medical treatment. He was taken back to the same hospital, cut off from contact with Elena, and forced fed for about six weeks until he broke it off after writing to Gorbachev and telling him that the strike would be suspended while he gave Gorbachev a chance to indicate that Elena would be granted permission to go abroad. Two weeks later, having returned home but not having heard from Gorbachev, he resumed the strike. And a few days later he was taken back to the same hospital and again forced fed. Again he wrote to Gorbachev, but this time promising to "discontinue" his "public activities apart from exceptional circumstances" if his wife was allowed to go abroad. [600] Having written the letter at the end of July, he spent the entire month of August being forced fed. On the last day of that month, in Washington D. C. before the Soviet Embassy, Elena's son, Alexei, proclaimed that he would also commence a hunger strike. In September the U. S. Congress passed a resolution protesting the treatment of Sakharov and Bonner. Early that month a KGB official visited Sakharov and told him that Gorbachev was seriously considering his request regarding his wife's travel. In October, after she had made certain promises, like agreeing to refrain from holding press conferences abroad, and after Andrei had ended his strike, she received word that she could make her trip abroad. In late November she left Gorky for Moscow and then abroad. Stopping in Italy before coming to the USA, she had a private audience with the Polish-born Pope John Paul II and a meeting with Italian Prime Minister Bettino Craxi. In mid-January 1986 she had her open heart surgery in Boston and then recovered surrounded by her children, grandchildren, and mother. Later she traveled around the USA, and before returning to the USSR in June she also stopped in Western Europe where she met the French President Francois Mitterrand and British Prime Minister Margaret Thatcher.

By the time she was reunited with Sakharov in Gorky in June, much had changed in the USSR. A few months before a major nuclear accident had occurred at the Chernobyl power station in Ukraine, and Gorbachev had begun his reforming *glasnost* and *perestroika* policies, as well as his "new-thinking" foreign policy. He and U. S. President Reagan had also had, in Geneva, the first of their five meetings. *Glasnost* (openness) brought more freedoms and less oppression and censorship. *Perestroika* (restructuring) at first was concerned mainly with bringing about economic changes to make the Soviet economy more efficient, dynamic, and modern, but Gorbachev and other reformers also soon started applying the term more broadly to

other elements of Soviet life.³⁸ While Elena was gone, Sakharov had written another letter to Gorbachev asking him to free all prisoners of conscience, and in late October he sent still another request. In it he stated that he had been sent to Gorky without any trial and he hoped that Gorbachev would end his exile, as well as Elena's. He reiterated his earlier statement that he would "make no more public statements, apart from exceptional cases."³⁹

In the middle of December, electricians finally installed a phone in their apartment. An accompanying KGB agent told them they would get a phone call the next day, and they did. It was from Gorbachev, who told Sakharov that he and Elena could return to Moscow. Sakharov thanked him, but reminded him that all prisoners of conscience should be released. A week later the exiled couple returned to Moscow by train and were welcomed by a large crowd.

Gorbachev and Sakharov's Final Years

Both Sakharov and Bonner "were almost buried under the load of the first few months in Moscow." He "spent time preparing written responses for almost all major interviews. People passed through the house endlessly. Lusia [Elena] cooked for a whole crowd. Long after midnight, it was not uncommon to find her, despite her heart attacks and her bypasses, mopping the landing" while he still worked on a statement.⁴⁰

In 1987, Sakharov attempted to renew his scientific research, sometimes appearing in his old office at the Physics Institute. In May, he met with other physicists including Britain's Stephen Hawking, at an international seminar in Moscow. But the whirlwind changes occurring in Soviet society and political life and a few chairmanships he accepted—one on an Academy of Sciences commission and the other on a committee of the International Foundation for the Survival and Development of Humanity—left him little time for theoretical physics. In addition, a few supplicants would come to their apartment on an average day, asking for help with some problem or other, and he continued sending telegrams, writing letters, making phone calls and doing all else he could to free those still being punished for political offenses. Sometimes he met in Moscow with foreign dignitaries and the foreign press. In February 1987, for example, he sat down with a group organized by the U. S. Council on Foreign Relations that included some former U. S. government officials like Henry Kissinger. The next month he and Elena had lunch at the British Embassy with British Prime Minister Margaret Thatcher. In May, he spoke with French Prime Minister Jacques Chirac, who came to Moscow on a state visit.

Since Sakharov generally supported the reform and foreign policies of Gorbachev, many of which he had proposed long before Gorbachev did, the Gorbachev administration was more favorable to allowing him to speak to foreign visitors and media than previous Soviet administrations had been. But perhaps because Gorbachev was proceeding cautiously and still faced opposition within the Communist Party and government, the Soviet media still provided only limited access to Sakharov's ideas and he was not yet permitted to travel abroad.

His first meeting with Gorbachev occurred in January 1988, when he and other board members of the international foundation he served on met with him. Sakharov thought that he was "intelligent, self-possessed, and quick-witted in discussion," and added that "the policies he was pursuing at the time impressed me as consistently liberal, fostering a gradual growth of democracy by means of fundamental reforms." Although not satisfied with Gorbachev's "half-

³⁸ For treatment of the Gorbachev years in power, see my *HR*, Ch. 19.

³⁹ "Years in Exile," at <http://www.time.com/time/printout/0,8816,970185,00.html>.

⁴⁰ "Years in Exile," at <http://www.time.com/time/printout/0,8816,970185,00.html>.

measures" and "several seemingly retrograde actions," he "attributed these failings mainly to the constraints that inhibit every leader, especially a reformer, and to the rules of the game prevailing in the milieu in which Gorbachev had made his career and in which he was still operating."⁴¹ After this first meeting, there were occasional others, especially after Sakharov was elected to a new Soviet Congress of 2,250 deputies, which met in the spring of 1989.

By then Gorbachev was facing three intertwined crises—nationality tensions, diminished political authority, and serious economic decline—that would only worsen until the USSR collapsed in December 1991 and Gorbachev was left without a country over which to rule. These crises resulted partly from his own failures, but also from the clash of long-standing Soviet patterns with all the hopes, fears, and confusion unleashed by his reforms. Until Sakharov's death in December 1989, he was an active participant in the debate about the future of his country and which policies it should pursue, but we will postpone consideration of his political ideas and activities until we examine them and their wisdom in a later section.

After his many years of exile, he was eager to travel. In the summer of 1987, he, Elena, and her mother (who had returned from the USA to live in Moscow, but died that December) spent a "free and happy" month in the Estonian countryside.⁴² In October, he and Elena attended a disarmament conference in Vilnius. In late April of the following year, they left Moscow to spend three weeks at a Black Sea resort. He recalled them as "marvelous days, free, productive, and happy"—in addition to enjoying "the marvelous view of the sea" and other aspects of resort life, they both worked, he on a physics talk he would soon give and she on a book of childhood memoirs (published in English translation in 1992 as *Mothers and Daughters*).⁴³ While there, he helped out one of their waitresses by sending a telegram to a local official to overcome red tape which was preventing her from getting married. Before returning to Moscow, Sakharov attended a physics conference in Tbilisi. Part of June, he and Elena spent in Leningrad, where he attended a conference and appeared on a popular television program.

In November-December 1988, this time by himself, he finally made his first trip abroad. Besides spending considerable time with Elena's children and grandchildren in the Boston area, he also had various meetings in New York and Washington and met privately with President Reagan, President-Elect Bush, and Secretary of State George Shultz. He also had another meeting with British Prime Minister Thatcher, who was visiting the USA, and a conversation with physicist Edward Teller, who had helped develop U. S. nuclear weapons. On the way back to the USSR, he stopped in Paris, where he met Polish dissident (and future Polish president) Lech Walesa and also Elena, who had flown in from Moscow. Before leaving Paris, he and Elena enjoyed sightseeing and were honored by French President Mitterrand at a reception and state dinner also attended by UN Secretary-General Perez de Cuellar. Upon their return in December, the couple and several others traveled to Baku, Yerevan, and a few other areas in the Caucasus to examine ethnic unrest there (see below under "Human Rights as a Cornerstone").

In February 1989, he and Elena again left the USSR to visit Italy, Canada, and the USA. In Italy, they did some sightseeing and met with Italian political leaders and Pope John Paul II. In Canada, in addition to meeting with political leaders, they both received honorary degrees. In the United States, they spent time with her children and grandchildren, including "five wonderful days with all four grandchildren on Amelia Island" (Florida).⁴⁴

⁴¹ Andrei D. Sakharov, *Moscow and Beyond, 1986 to 1989* (New York: Vintage Books, 1992), 45-46.

⁴² *Ibid.*, 40.

⁴³ *Ibid.*, 52.

⁴⁴ *Ibid.*, 104.

While Elena remained for an additional month with her children and grandchildren in Massachusetts, he returned in mid March to take part in elections for the new Congress of People's Deputies. Soon after she returned, the couple flew to Tbilisi to look into violence that had erupted in April when Soviet forces had broken up a Georgian demonstration. As earlier in Baku and Yerevan, they met with officials and others including victims of the violence.

During the remainder of 1989, he was able to make one long and two brief trips abroad. In May, he and Elena made a quick trip to Italy to attend the annual convention of the Italian Socialist Party and support former Prime Minister Bettino Craxi, who had met Elena earlier in 1985 and spoken in support of her and Sakharov. In September Sakharov received an honorary degree from Claude Bernard University in Lyons, France, where he delivered a lecture on "Science and Freedom" before a joint session of the university and the French Physics Society. His longest trip was another one from June to late August to the United States, via Switzerland and England, where he and Elena visited Prime Minister Thatcher. Sakharov also received honorary degrees in England and told an audience at the Royal Institute for International Affairs that the USSR was threatened with ecological disaster, economic collapse, and a right-wing coup. In both England and the USA, Sakharov expressed concern about imprisoned protestors and members of the democratic movement in China who had been arrested following the Chinese government's crackdown and violent retribution against protestors on Tiananmen Square. At the home of Bonner's daughter in August, he and Elena met with two of the young adherents of the Chinese protest movement and liked them a great deal. Most of the time in the USA, however, was spent with Bonner's children and grandchildren and with finishing their respective memoirs, for him mainly his brief second volume of them covering their post-Gorky years, and for her the youthful remembrances contained in *Mothers and Daughters*.

After returning to the USSR in late August Sakharov, although not a member, attended sessions of the Supreme Soviet, a 542-member legislative body that met between sessions of the larger Congress of People's Deputies. During the Congress's first session in the spring of 1989, he had emerged as the leading voice of the Interregional Group of Deputies that also included Boris Yeltsin. Now at the Supreme Soviet sessions that lasted until the end of November, his group continued to urge Gorbachev to resist reactionary pressures and accelerate the reform process. During November, as Communist governments in Eastern Europe were beginning to collapse and the Berlin Wall came tumbling down, Sakharov also worked on drafting a new constitution for his country. From December 12th to the 14th, he participated in the Second Congress of People's Deputies, encouraging the Interregional Group of Deputies to oppose government actions that were ran counter to the spirit of reform. Following the December 14 session, he returned home, ate dinner, and asked Bonner to wake him after a nap, predicting a big battle the following day. When she went to wake him, he was dead from a heart attack.

Sakharov's Wisdom

Andrei Sakharov displayed many of the characteristics of a wise man, especially in the last several decades of his life. We have already seen many examples of his compassion, courage, perseverance, and self-discipline, all virtues that various wisdom scholars have identified as being helpful in leading a wise life. As one writer (Paul Baltes) has said, "Wisdom involves . . .

an orchestration of knowledge and virtues.” Wisdom involves not just thinking but acting, not just intellect but character.⁴⁵

A scholar who has studied psychoanalyst Erik Erikson’s lifetime of comments about wisdom, notes that despite some changes in his thinking about it, he also held some consistent ideas about wisdom and the qualities possessed by wise adults. They fit Sakharov perfectly.

Wisdom is found in an enduring hope in the species. . . .

. . . Wise adults engage in careful planning. They are temperate and deliberate. . . .

. . . They hold to principles and human values in a material world. They behave authentically, shirking affectations born of pretense or of the defensive need to appear other than genuine, unique persons. They relate well with others and are sensitive to their needs. . . . They treat others as ends, not as the means to some self-centered end.

As a result, such adults tend to become ethical, and sometimes spiritual, leaders. Although they many not choose leadership roles, they are emulated as role models, for their consistently principled, wise behavior shows sound judgment, high ideals, courage, purpose, responsible action, and unswerving convictions that are worth following.⁴⁶

The titles of some of Sakharov’s books reflect his “enduring hope in the species.” His 1968 essay and his 1975 Nobel Lecture both had “progress” in the title, and he continued to speak about his hopes for it thereafter. In his lecture in Lyons, just months before his death, he said, “humankind cannot refuse to move forward, it cannot deny itself progress.”⁴⁷ Hopefulness is one of the characteristics of wisdom, and Erikson stated that maintaining a positive approach to life in the face of death itself was the true test of wisdom.⁴⁸

Yet, Sakharov’s hopes were not naïve ones. The title of one of his collections, *Alarm and Hope*, reflected what he wrote a few years earlier in 1975:

The reality of the contemporary world is complex. . . . It is a fantastic mix of tragedy, irreparable misfortune, apathy, prejudices, and ignorance, plus dynamism, selflessness, hope, and intelligence. The future may be even more tragic. Or it may be more worthy of human beings—better and more intelligent. Or, again, it may not be at all. It depends on all of us—people . . . in every country in the world. It depends on our wisdom, our freedom from illusion and prejudices, our readiness to work, to practice intelligent austerity, and on our kindness and breadth as human beings.⁴⁹

⁴⁵Paul Baltes, “Wisdom as Orchestration of Mind and Virtue,” 2004, http://library.mpib-berlin.mpg.de/ft/pb/PB_Wisdom_2004.pdf. For more of my thinking on wisdom, see <http://www.wisdompage.com/MossPortraitsIntro.pdf>. For more on the qualities of wise people, see Copthorne Macdonald, Ch. 1 of *Toward Wisdom: Finding Our Way to Inner Peace, Love & Happiness* (Bloomington, IN: AuthorHouse, 2001); this chapter is available online at <http://www.wisdompage.com/tw-ch01.html>, and the whole book can be downloaded at <http://www.wisdompage.com/twdown73462.html>. See also his “Playing the Wisdom Game,” <http://www.copmacdonald.com/wisdomgame.html>.

⁴⁶ Carol Hren Hoare, *Erikson on Development in Adulthood* (Oxford: Oxford University Press, 2002), 192, 196.

⁴⁷ “Lecture in Lyons: Science and Freedom,” *Physics Today*, 52 (July 1999), 24.

⁴⁸ For a list of values associated with wisdom, see Copthorne Macdonald’s “Values that Various People Have Associated with Wisdom,” <http://www.wisdompage.com/valueslists.html>; Erik H. Erikson, “Reflections on Dr. Borg’s Life Cycle,” in *Aging, Death, and the Completion of Being*, ed. Stuart F. Spicker et al. (Philadelphia: University of Pennsylvania Press, 1979), 60.

⁴⁹ Andrei Sakharov, *My Country and the World*, (New York: Vintage Books, 1975), 108-09.

In his second book of memoirs, completed shortly before his death, he wrote that “if our view of the world can be called optimism, it is a tragic optimism.”⁵⁰ Another twentieth-century wise man, the French philosopher Gabriel Marcel, who stressed the importance of both hope and wisdom, sounded a similar note when he wrote, “For man today, it seems that wisdom can only be tragic wisdom.”⁵¹

One former Moscow correspondent wrote about Sakharov that he “returned from [Gorky] exile to reveal his wisdom.”⁵² Many of his acquaintances and friends mentioned other virtues connected with wisdom that he possessed such as humility, patience, serenity, and a passion for truth and justice—Marcel once observed that “a wisdom which does not include passion . . . is not worthy of being called wisdom.”⁵³ A Russian philosopher said that Sakharov “has never talked a lot about himself, never tried to hog the stage,” and that he was “serene, sober-minded, benevolent, without any fears, without any hatred.”⁵⁴ An American scientist wrote, “Never had I met anyone so senior who communicated more strongly the aura of a humble searcher for truth, one wanting to learn about the great mysteries—learn from nature, learn from the scientific literature, learn from discussion.”⁵⁵ A Russian scientist observing him in Gorky exile wrote that “his best human qualities were made manifest . . . his genuine lack of superficiality, his joy in the companionship of those close to him, the simplicity of his behavior at home, his hospitality, his ability to listen without interrupting to opinions that contradicted his own, and the absence of any bitterness despite almost unbearable suffering and injustice.”⁵⁶ A Russian dissident commented on his “tranquility and calm” that were severely tested by all the injustices perpetrated on him and others by the Soviet state.⁵⁷ Another dissident stated: “I saw no gap between his inner thoughts and his public statements—no pretense, no show whatsoever. When I called to congratulate him for winning the Nobel Prize, he said, ‘It belongs to all of us.’ Coming from Sakharov it didn’t sound banal, and I knew that he really meant it.”⁵⁸ Concerning his commitment and perseverance, Bonner wrote that his main talent was finishing what he started. She also commented on his willingness to do all sorts of household chores and his respect for people regardless of their rank or status, believing “there are no little people or unimportant lives, there is no insignificant work. . . . He approaches household matters and everyday life with the same simplicity and respect he does people.”⁵⁹ Although he was certainly a serious man, he did possess another characteristic helpful for achieving wisdom—a sense of humor. One of his colleagues, A. S. Askaryan, recalled several instances of it in a brief remembrance entitled “Sad Humor in the Era of ‘Confrontation.’”⁶⁰

⁵⁰ Sakharov, *Moscow and Beyond*, 156.

⁵¹ Gabriel Marcel, *Tragic Wisdom and Beyond; Including, Conversations Between Paul Ricoeur and Gabriel Marcel* (Evanston: Northwestern University Press, 1973), 201. See also Gabriel Marcel, *Homo Viator: Introduction to a Metaphysic of Hope* (New York: Harper, 1962).

⁵² Remnick, 279.

⁵³ Marcel, *Tragic Wisdom*, 198.

⁵⁴ *On Sakharov*, ed. Alexander Babenyshev (New York: Knopf, 1982), 48, 49 (hereafter cited as *On Sakharov*).

⁵⁵ *Sakharov Remembered*, 80.

⁵⁶ *Ibid.*, 19.

⁵⁷ Raisa Orlova, *Memoirs* (New York: Random House, 1983), 359.

⁵⁸ Sharansky, xxi; Baltes’ title “Wisdom as Orchestration of Mind and Virtue,” at http://library.mpib-berlin.mpg.de/ft/pb/PB_Wisdom_2004.pdf, speaks to the necessity for wisdom of the type of congruence between the inner and outer person that Sharansky saw in Sakharov.

⁵⁹ Bonner, 7, 194-95.

⁶⁰ *Sakharov Remembered*, 62-65.

Even the KGB that relentlessly persecuted him privately paid tribute to his character. In a 1971 report to Brezhnev it wrote that he “is described as an honest, compassionate, and conscientious person. He respects intelligent and knowledgeable people; he is principled and courageous in defending his principles. . . . He is interested in biology, literature, and politics.”⁶¹ In Khrushchev’s memoirs written not long before this report, he also had praise for Sakharov despite their differing views on nuclear testing. The former Soviet leader conceded that Sakharov’s opposition to further testing “was obviously guided by moral and humanistic considerations.” He added, “I knew him and was profoundly impressed by him. Everyone was. He was, as they say, a crystal of morality among our scientists. . . . He was devoted to the idea that science should bring peace and prosperity to the world, that it should help preserve and improve the conditions for human life.”⁶² Although Gorbachev’s political thinking owed much more to Sakharov than did Khrushchev’s, Gorbachev’s *Memoirs* are more ambiguous than Khrushchev’s in dealing with Sakharov’s character. But more about that later in this essay.

Wisdom is about integrating into one’s life what one scholar has called “the three great value spheres” of “the Good, the True, and the Beautiful” or those of “morals, science, and art.”⁶³ In Sakharov’s scientific work and in his more general writings, he most clearly comes across as a humble seeker of truth. But goodness and beauty were also important to him. His tribute to his mother-in-law, who died just two years before his own death, reflects what he valued and could also be applied to him. He wrote: “It seems to me Ruth led a happy life. She preserved her integrity throughout, and always found a way to be useful to family, friends, and even strangers. She saw the good in people and the beauty in the world.”⁶⁴ In an interview about a year before his death, he was asked, “What Could Save the World Today?” He began his answer as follows: “On the individual level, I think that what matters here is a certain moral code and the individual qualities and features which are manifested through the action of the people and their active morality.”⁶⁵ An astute observer of the Gorbachev years in power said about Sakharov, “I would not hesitate to call him a saint. He was the dominant moral example of his time and place.”⁶⁶

This does not mean that Sakharov was without fault or always wise, for as Alexander Pope wrote, “To err is human.” In his two books of memoirs (*Memoirs* and *Moscow and Beyond, 1986 to 1989*) Sakharov admits many mistakes that he made. In his *Memoirs*, he wrote “Looking back on my life, I see not only actions which are a source of pride, but others which were false, cowardly, shameful, foolish, ill-advised.”[15] Yet the very act of reflecting on his past in his two autobiographical books, which he did a great deal of in his final years, contributed to his growing wisdom. Erikson and others have maintained that reviewing one’s life is important for achieving greater wisdom.⁶⁷ And Sakharov certainly faced death without giving way to despair, a final important challenge that Erikson listed along the path to a greater wisdom. Especially in Gorky exile, Sakharov demonstrated that he considered certain principles more important than his own

⁶¹ *KGB File*, 115. This report can also be found in a slightly different form at http://www.yale.edu/annals/sakharov/sakharov_english_txt/e023.txt.

⁶² Nikita S. Khrushchev, *Khrushchev Remembers: The Last Testament* (New York: Bantam Books, 1976), 75.

⁶³ Copthorne Macdonald, “The Integral Vision: A Brief Introduction”, <http://www.wisdompage.com/integralintro.html>.

⁶⁴ Sakharov, *Moscow and Beyond*, 34-35.

⁶⁵ Jonathan Eisen, ed. *The Glasnost Reader* (New York: New American Library, 1990), 330.

⁶⁶ Remnick, 165.

⁶⁷ Erik H. Erikson, “Reflections on Dr. Borg’s Life Cycle,” in *Aging, Death, and the Completion of Being*, 60; see also Linda M. Woolfe, “Life Review” at <http://www.webster.edu/~woolfm/lifereview.html>.

life and that he was willing to face death with courage. Between hunger strikes in the fall of 1984, he told Bonner that he wished to “learn how to die with dignity.”⁶⁸

He also acted wisely in helping others and in working to improve human conditions, both in his own country and in the world generally. These efforts were in behalf of some of the most important causes of the late twentieth century: avoiding nuclear war, insuring human rights, and lessening ethnic conflicts and environmental damage. His herculean work in behalf of these causes led to much suffering imposed upon him by the Soviet government, but also gave his life an integrity and meaning that contributed to his own happiness.

One area where Sakharov himself suggests he was not so wise was in dealing with his own children, the offspring of his first marriage, who still felt estranged from him after his return from exile. Shortly before his death, in the penultimate paragraph of his second book of memoirs, he wrote: “A few words about my own family, children, and grandchildren. There is much I have failed to do, sometimes because of my natural disposition to procrastinate, sometimes because of sheer physical impossibility, sometimes because of the resistance of my daughters and son which I could not overcome. But I have never stopped thinking about this.”⁶⁹ Although he did not offer it as an excuse, his role as a father was also made more difficult first by his scientific work at the Installation and later by his political activities in behalf of human rights. As another twentieth-century activist for such rights, Nelson Mandela, discovered, such activism often interferes with family obligations.⁷⁰ Two other areas where his wisdom might be questioned are in regard to all his work on thermonuclear weapons and in taking sufficient care of his own health. As we shall see, however, his weapons’ work is a complex issue, and his own health was simply not as important to him as the larger causes in which he believed.

Although Sakharov’s wisdom, especially in the socio-political sphere, is most evident in his final twenty-one years, dating from the appearance in 1968 of his *Reflections on Progress, Peaceful Coexistence, and Intellectual Freedom*, the basis of it owes much to his earlier formative years.

Sakharov’s Path to Wisdom

One wisdom scholar has written that “Wisdom is . . . the application of successful intelligence and creativity as mediated by values toward the achievement of a common good . . . [It] is not just about maximizing one’s own or someone else’s self-interest, but about balancing various self-interests (intrapersonal) with the interests of others (interpersonal) and of other aspects of the context in which one lives (extrapersonal), such as one’s city or country or environment or even God.”⁷¹ Implied in this definition is the necessity of making good judgments in various aspects of one’s life, personal, social, and political, which is perhaps the essence of wisdom. But as the above definition indicates one’s context also matters. This means that although there are certain permanent values that are needed to achieve wisdom, how best to become wise also varies depending on time and place.⁷²

⁶⁸ Bonner, 177.

⁶⁹ Sakharov, *Moscow and Beyond*, 160.

⁷⁰ *Long Walk to Freedom: The Autobiography of Nelson Mandela*, (Boston: Little, Brown, 1994), 543.

⁷¹ Robert J. Sternberg, *Wisdom, Intelligence, and Creativity Synthesized* (Cambridge University Press, 2003), 152.

⁷² For a list of “wisdom values,” see Macdonald’s values list at <http://www.wisdompage.com/valueslists.html>.

Achieving wisdom in the USSR during the Cold War presented its own set of unique problems.⁷³ It meant making good judgments about how best to work toward “the common good” in a society ruled by a government that allowed individuals much less freedom than in democratic countries to explore or contribute to that good. It also necessitated good decisions about how best to balance one’s time in the face of that challenge. It meant overcoming propaganda and state ideological controls in order to discover truth, for a wise person is a truth seeker. It also required great courage because seeking truth in such a society and attempting to further the common good involved dangerous risks that could bring about severe punishments. And balancing one’s personal interests with those of others took on different dimensions in a society where signing a petition might mean the loss of one’s job or permission to travel abroad.

Most of Sakharov’s adult years were lived during the Cold-War era, and that time also presented its own challenges for living wisely, none perhaps more important than helping to prevent a nuclear war. For four decades no other task loomed more significant for anyone in the world seeking the common good. Whether all of Sakharov’s efforts regarding nuclear weapons, including his work on the Soviet H-bomb, contributed to this goal can be questioned (see below, “Social and Political Views”), but if one test of wisdom is how seriously one concerns oneself with the common good then there can be little doubt that at least by 1975 Sakharov displayed that concern to such an extent that in that year the Nobel Committee awarding him the Peace Prize declared, “Sakharov’s fearless personal commitment in upholding the fundamental principles for peace between men is a powerful inspiration for all true work for peace.”⁷⁴

Although living where and when he did produced significant obstacles for Sakharov in his path to greater wisdom, other circumstances facilitated this development. The three most important were being raised in a family that manifested the best qualities of the pre-Soviet intelligentsia, his scientific work and contacts, and his relationship to Elena Bonner.

The Role of the Humanities

Sakharov’s family possessed a strong sense of morality that kept alive the best traditions of Russia’s pre-Soviet intelligentsia. He later stated how fortunate he was to have had been brought up in such an environment. His early upbringing and appreciation for and education in both the humanities and sciences helped foster his wise behavior. When being interviewed by Igor Tamm for admission into his graduate program in physics, Tamm apparently told him, that he had “a sort of humanistic mind.”⁷⁵ Andrei’s grandfather Ivan, although not a priest himself, came from several generations of Orthodox priests (unlike Catholic priests, they were allowed to marry). Besides his legal and political activities, he edited a book of essays entitled *Against the Death Penalty*, which greatly impressed Andrei when he read it as a young boy. Ivan’s widow, Maria, had a great influence on Andrei, she often watched the children, and he remembered her room fondly. It contained an icon with a constantly-burning devotional candle before it, pictures of Venice and Rome, Raphael’s *Madonna*, and a statue of Russia’s great writer Leo Tolstoy (1828-1910). Her room reflected her personality: she was both religious and cultured and with her husband and children often had travelled to Western Europe before WWI. She frequently read to

⁷³ For a somewhat different set of challenges in a different culture, see the section “Achieving Wisdom and Balance in an Age of Consumer Culture and Mass Media,” in my “The Wisdom of Carl and Paula Sandburg,” at <http://www.wisdompage.com/SandburgEssay.pdf>.

⁷⁴ See http://nobelprize.org/nobel_prizes/peace/laureates/1975/press.html.

⁷⁵ Quoted in *KGB File*, 7 n.

her grandchildren. Andrei heard from her *Uncle Tom's Cabin* and some of Charles Dickens's writings, as well as the Bible and Russian favorites like the works of Pushkin. When she was nearing fifty, she taught herself English and cherished English novels.

Before entering adolescence, Andrei had read some of the world's great and/or popular authors—not only Tolstoy and “virtually everything by Pushkin and Gogol,” but also (mainly in translation) Shakespeare, Dickens, Swift (*Gulliver's Travels*) Hugo, Dumas (*The Three Musketeers*), Goethe, Hans Christian Andersen, Mark Twain, Jack London, and science fiction pioneers Jules Verne and H. G. Wells. Some of Pushkin's poetry he had memorized. Even several of the games he played had literary sources, in that they were based on adventurous literary characters from the works of Pushkin, Gogol, or the American James Fenimore Cooper, whose *Last of the Mohicans* furnished characters for the game “Indians.”

The example of Andrei's father, Dmitri, was especially important in ingraining the best virtues of the intelligentsia in him. He was not only a physicist but, in his son's eyes, a wise and cultured man who also loved music and poetry. Among the older Russian intelligentsia the “two-cultures” divide that C. P. Snow later lamented between scientific culture and literary/humanistic culture was not so wide. One of Sakharov's biographers observed that “though the intelligentsia could be divided into scientific and humanistic, any engineer was expected to (and could) quote the lines of poetry that were for him both beauty and words to live by.”⁷⁶

With his family, Dmitri was in Western Europe on the eve of WWI, before returning to Russia and serving briefly as a medic during the war. He played the piano well and loved the music of Bach, Mozart, Beethoven, Chopin, Grieg, and Schumann, as well as some of the Russian composers like Rimsky-Korsakov and Scriabin. He also loved the poetry of his contemporary Alexander Blok and composed music for at least one of his poems. During the Russian Civil War, part of which he spent near the Black Sea, he earned money playing the piano to accompany silent films. In his *Memoirs* Andrei's great admiration for his father is clearly evident. He describes him as gentle, compassionate, principled, and wise, and says he was loved by many. “He possessed a humane worldly wisdom, which enabled him to enjoy life to the full.” His favorite proverb was:

"To live a life is not to cross a field." Those words implied a great deal: an understanding that the real world is not a simple place, a sense of life's tragedy and beauty, and forgiveness for those who stumble. Father had another favorite saying which expressed his understanding of harmony and wisdom: "A sense of moderation is the greatest gift of the gods." [15]

Andrei believed that his dad applied this principle to all aspects of his life—personal relations, art, music, science, teaching, and politics—“he would say that what the Bolsheviks [Russian communists] lacked most of all was balance, by his lights a stern judgment.” Although many people later commented on Andrei's serenity, he found it difficult to always emulate his father's moderation. He later stated that “there was a ferment inside me, an inner conflict, and moderation was something I could achieve only with great effort.” [15] The fact that he often did seem balanced and moderate to others, was an indication of his self-discipline and ability to harness his passions to serve just causes and not just run amok.

Perhaps partly because his mother had Greeks and Tatars among her ancestors and was a devout Russian Orthodox believer, Andrei was more tolerant than many Soviet Russians of

⁷⁶ Lourie, 28.

ethnic and national minorities and religious believers. In his *Memoirs*, he wrote that his parents loved Russian literature and Russian and Ukrainian songs, but that they also appreciated the contributions of other cultures. He never recalled his parents saying anything derogatory about non-Russians.

His mother's sister married Alexander B. Goldenveizer (1875-1961), who became Andrei's godfather. As a youngster, Andrei sometimes visited him. He was a noted pianist and composer, friend of the more famous composers Sergei Rachmaninov and Alexander Scriabin, and for almost fifteen years had been a young friend of the great Leo Tolstoy before his death in 1910. About the time Andrei was born, this uncle had published a two-volume reminiscence of Tolstoy entitled *Near Tolstoy*.⁷⁷ In his *Memoirs*, Sakharov tells us little about what was discussed during his visits to his uncle and we are only left to wonder about what might have been said about Tolstoy, who many considered one of the wisest men of his time.⁷⁸

Andrei's relationship with his Jewish childhood friend Oleg also strengthened his love for the humanities. Oleg knew at an early age that he wished to be a historian and later earned a history degree, specializing in ancient history, but he was also interested in mythology, culture, and poetry. He could recite from memory many lines from *The Iliad*, *The Odyssey*, Goethe's *Faust*, and some of Pushkin's poetry. His father taught mathematics at Moscow University, and Andrei loved to examine some of the books in his study, especially the many-volumes of a pre-WWI encyclopedia. Andrei wrote that he owed Oleg a great deal for opening up "whole new vistas of knowledge and art, the entire field of the 'humanities.'" [29]

This appreciation for the humanities encouraged by his parents, relatives, and Oleg remained with Sakharov his whole life and was later strengthened by Elena Bonner's love of literature and acquaintance with many literary figures. In his *Memoirs* he mentions, for example, that the writer Vladimir Korolenko (who wrote such humanistic prose works as *The Blind Musician*) was a friend of his grandfather Ivan and his family, that all Andrei's relatives thought highly of Korolenko, and that he (Andrei) still shared that feeling. Sakharov's strongest literary love throughout his life was for Pushkin's poetry.⁷⁹ A few friends that he met in 1971 recalled that he often recited Pushkin from memory. While in Gorky, he worked on two essays on Pushkin poems, but they were stolen by the KGB along with some other of his writings including an essay on Chingiz Aitmatov's novel *The Day Lasts More than a Hundred Years* and another on William Faulkner's novel *Absalom, Absalom!* Later, while he was hospitalized and being forced to overcome his hunger strike of 1984, Bonner attempted to send to him the books she thought would give him the most solace—their three-volume Pushkin set. When an official asked her why he needed Pushkin, she found it difficult to "explain that you might need Pushkin at any time, in any of life's circumstances."⁸⁰

Besides Pushkin, Sakharov sometimes quoted other writers and leaves us with the impression that these quotes came naturally to him and that he found them inspiring. From

⁷⁷ A portion of this work is available in English translation. See A. B. Goldenveizer, *Talks with Tolstoy* (New York: Horizon Press, 1969). On his many musical accomplishments, see "Goldenweizer, Alexander," <http://www.toccataclassics.com/artistdetail.php?ID=25>.

⁷⁸ In the early twentieth century, Tolstoy was one of the world's most famous men, and the world press often referred to him as the "sage of Yasnaya Polyana" (his estate south of Moscow).

⁷⁹ For more on Sakharov's love of Pushkin, see Gorelik, 54-58, 68-70, and other references on Pushkin in Gorelik's index. For those who read Russian, Sakharov's childhood friend M. L. Levin, who visited him in Gorky, has written an essay on Sakharov and Pushkin that is entitled "Progulki s Pushkinym" ("Walks with Pushkin"). It appears in B. L. Altshuler, et al., eds., *On mezhdu nami zhil: Vospominaniia o Sakharove* (Moscow: Praktika, 1996), 337-75.

⁸⁰ Bonner, 77.

Faust, he quoted Goethe: “He alone is worthy of life and freedom / Who each day does battle for them anew!” Bonner’s preparations to leave Gorky to go abroad for heart surgery reminded him of lines from the poet Osip Mandelstam, “Who can tell from the sound of the word ‘parting’ what kind of bereavements await us.” [603] To illustrate how people were often looking for flaws in public personalities he quoted Boris Pasternak’s poem “Hamlet” in *Doctor Zhivago*. In writing of the impact of modern technology, he cited the nineteenth-century poet Nekrasov’s lines about railroads being built on Russian bones. When recalling his visit to the Roman Coliseum, he mentioned Lermontov’s 1836 poem, “The Dying Gladiator.” On seeing Notre Dame in Paris, he wrote that his impressions merged with those still in his mind from reading as a child Victor Hugo’s *The Hunchback of Notre Dame*. He liked Chekhov’s expression, “We are squeezing the slave out of ourselves drop by drop.”

Thanks to Bonner, he got to know the poets David Samoilov, Bulat Okudzhava, and Alexander Galich, the last two “guitar poets” who put their poems to music. In his *Memoirs*, Sakharov tells us how much he enjoyed the works of all three men.⁸¹ Despite the fact that all three sometimes had their poetry published, at other times they were denied that right and some of their poems or songs circulated underground. In his memoirs, the dissident Vladimir Bukovsky recalled “the idiotic and spiteful persecution” of Okudzhava in the late 1950s and (perhaps with a bit of exaggeration) that the first question asked to a new arrival in the labor camps was, “What new Galich songs have you got?”⁸² A few friends from the 1970s later wrote that they often read or listened to these three poets, as well as others like Pushkin, together with Sakharov and Bonner. When the couple traveled together by plane or car, they sometimes read or recited poems to each other.

The poet Robert Frost once wrote that a poem “begins in delight and ends in wisdom.”⁸³ And there is no doubt that reading good poetry can help make us wiser people, for it encourages reflection and seeing life more holistically than we might otherwise. Sakharov’s love of nature seems to combine the sensibilities of the scientist with those of a lover of poetry. His comment in his *Memoirs* about the countryside around Moscow—“I’ve always loved the serene, lyrical countryside around Moscow; even now, I can think of no greater pleasure than lying on my back by the edge of the woods and looking up at the sky and trees”[16]—reminds us of some of Wordsworth’s nature poetry or some lines from Pushkin such as in his youthful poem “In the Country.”

Sakharov also enjoyed other types of literature, as well as music, the theater, films, art, and history. In his *Memoirs* he recalls as one of the happiest moments of his life listening with Elena in 1971 to a record of a concerto of the Italian baroque composer Albinoni. But his work as a scientist, human rights advocate, writer, and (thanks to the KGB) rewriter of some works that were confiscated, often left him little time to enjoy such humanistic pursuits. As indicated above, wisdom involves balancing various aspects of one’s life, but it is often difficult to know exactly how best to do this. Sakharov undoubtedly believed he was acting wisely in devoting so much of his time in behalf of human rights and justice, both as a cause and for many individuals. In a 1977 interview, he mentioned that he had not been to the theater in two years or to see a film in a long time, but that he had recently been to two concerts where he heard pianist Sviatoslav

⁸¹ Sakharov, *Memoirs*, 354-56. Zubok mentions these three poets and their effect on dissidents and other members of the intelligentsia on numerous pages in his book mentioned above in fn. 11.

⁸² Vladimir Bukovsky, *To Build a Castle: My Life as a Dissenter* (New York: Viking Press, 1979), 142.

⁸³ Robert Frost, “The Figure a Poem Makes,” available at <http://www.mrbauld.com/frostfig.html>.

Richter play Bach. The concerts, he said, “made an unforgettable impression” and “seemed like a voyage into another world.”⁸⁴

In Gorky he and Elena had more time for reading and going to films and concerts, and they did hear a Richter concert and some others when they came there, but in general cultural performances were much less available than in Moscow. Soviet radio and television still, however, provided many concerts and cultural programs. Sakharov recalled that he and Elena watched programs like an airing of Beethoven’s Fifth Symphony, and in his diary he mentions interesting broadcasts that he heard and watched about poets. In February 1984, he especially enjoyed one broadcast in which poets read some of their favorite poems from other poets, for example Bella Akhmadulina reading Marina Tsvetaeva, Anna Akhmatova, and Pasternak. In March 1986, a program was aired on the poetry and theater of the period 1955-60, which dealt not only with older poets such as Akhmatova, Pasternak and Alexander Tvardovsky but also younger ones like Akhmadulina, Evgeni Evtushenko, and Andrei Voznesensky, the three of whom had once recited their poems in front of 14,000 people in Moscow’s largest sports arena. While hospitalized on one of his hunger strikes, he sent to Elena novelist Vladimir Nabokov’s autobiographical *Speak Memory*, which he had been reading. Elena remembered reading many English and American detective stories in Gorky and that Andrei sometimes also read English mysteries. They also spent much time discussing what they read, for example a book on the seventeenth-century French physicist, mathematician, and religious philosopher Blaise Pascal.

Once he returned to Moscow in 1986, amidst the ferment of *glasnost*, all sorts of new books, films, television programming, and theater presentations were available, but his human rights and other political activities keep him busier than ever. He did, however, take time to write of his impressions of a stage adaption of Mikhail Bulgakov’s satiric novella *Heart of a Dog* (written in 1925).

On his foreign trips in the last few years of his life he did find some time to enjoy art and architecture and to reflect on history. In the USA he took delight in a “marvelous Degas exhibition” at New York’s Metropolitan Museum of Art. After seeing Notre Dame Cathedral in Paris he imagined how medieval Parisians felt when they saw it. Traveling in Rome, Florence, and other Italian cities in early 1989 prompted the reflection that “at every step in Italy you come into contact with history, with the sources of our civilization—Russians are, after all is said and done, Europeans.”⁸⁵

According to Sakharov the highlight of this trip to Rome was meeting Pope John Paul II, for whom the non-believing Sakharov had great respect. Although some Christians might maintain that non-Christians cannot be truly wise, this essay obviously take a different position and opines that Christians, other believers, and non-believers can all be wise or unwise.

Regardless, however, people’s fundamental values and beliefs are significant in assessing their wisdom. Toward the end of his life, Sakharov wrote:

Today, deep in my heart, I do not know where I stand on religion. I don’t believe in any dogma and I dislike official churches, especially those closely tied to the state, those of a predominantly ceremonial character, or those tainted by fanaticism and intolerance. And yet I am unable to imagine the universe and human life without some guiding principle, without a source of spiritual “warmth” that is nonmaterial and not bound by physical laws. Probably this sense of things could be called “religious.” [4]

⁸⁴ Andrei D. Sakharov, *Alarm and Hope* (New York: Vintage Books, 1978), 94.

⁸⁵ Sakharov, *Moscow and Beyond*, 68, 73, 101.

He also thought that “religious liberty is part of the general issue of freedom of opinion,” and spoke out in behalf of persecuted believers of various faiths. [337] He and Bonner did possess a Bible, which they knew well, and according to a scientific colleague, Sakharov maintained in the early 1970s that religion was “the main source of people’s morals.” This same colleague, commenting on Sakharov’s forgiveness of others, wrote that he “may be the only true Christian I have ever met.”⁸⁶

Sakharov’s worldview bears some resemblance to that of another prominent spokesman for freedom in the twentieth century, the French novelist Albert Camus (1913-1960). In 1948 he said to Catholic Dominican Monks, “Perhaps we cannot prevent this world from being a world in which children are tortured. But we can reduce the number of tortured children. . . . And what I know—which sometimes creates a deep longing in me—is that if Christians made up their minds to it, millions of voices—millions, I say—throughout the world would be added to the appeal of a handful of isolated individuals who, without any sort of affiliation, today intercede almost everywhere and ceaselessly for children and for men.”⁸⁷ Camus won the Nobel Prize for Literature in 1957, and in discussing his acceptance speech Sakharov later praised it by stating that it reminded him of “Pushkin’s Code of Honor.”⁸⁸ Both Camus and Sakharov were “non-believers,” but, in the best and deepest sense of the word, humanists. In 1973, Sakharov added his name to Humanist Manifesto II. Its last paragraph stated: “We, the undersigned, while not necessarily endorsing every detail of the above, pledge our general support to Humanist Manifesto II for the future of humankind. These affirmations are not a final credo or dogma but an expression of a living and growing faith.”⁸⁹ Reading it provides perhaps as good an overview as one can get, at least as of 1973, of Sakharov’s general philosophy of life.

The Role of Science

As much as he enjoyed and benefitted from the humanities and respected truly religious people, Sakharov’s great love was science. Bonner tells us that he spent more time in Gorky reading scientific materials than literature. And he once said to her, “Do you know what I love most of all in life?” She thought he might say a poem, sonata, or even her. Instead, he said, “The thing I love the most is radio background emanation,” which he explained “was the barely discernible reflection of unknown cosmic processes that had ended billions of years ago.”⁹⁰ He may have been only half serious, for he loved her deeply, but he also loved the awesomeness and mysteries of the Cosmos, of what believers call Creation.

In a preface to a book about Sakharov published by the American Institute of Physics, two distinguished physicists write of his “important scientific contributions to some of the most fundamental problems of theoretical physics and his inventive ingenuity in applied science.”⁹¹ As important as these contributions were, however, here we are only interested in how his

⁸⁶ *Andrei Sakharov: Facets*, 530.

⁸⁷ *Resistance, Rebellion, and Death* ((New York: Vintage Books, 1974), 73-74.

⁸⁸ The speech is available at http://nobelprize.org/nobel_prizes/literature/laureates/1957/camus-speech-e.html.

⁸⁹ See http://www.americanhumanist.org/Who_We_Are/About_Humanism/Humanist_Manifesto_II . In my *Age of Progress?*, 137, 139-40, 218-19, I write more of the views of Camus and Sakharov, especially regarding freedom and human rights.

⁹⁰ Quoted in Orlova, 359.

⁹¹ *Sakharov Remembered*, viii; see also pp. 85-86 for a U. S. physicist’s summation of some of Sakharov’s most important scientific work.

scientific pursuits were related to his wisdom. Before he emerged as a leading dissident voice in the late 1960s, his scientific work and contacts both helped to isolate him and broaden his vision. By spending so much time at the top-secret Installation, he was more isolated than most of his fellow citizens from the world around him. Conversely, however, his closeness to his mentor Igor Tamm, especially in the late 1940s and early 1950s, helped broaden his outlook on life and society and facilitate the broadening of horizons that is necessary for greater wisdom. Sakharov believed that Tamm emerged out of the pre-1917 milieu of “professional intelligentsia which possessed firm principles based on spiritual [though often not formal religious] values.”

Surprisingly enough at the top-secret Installation, Tamm often listened to BBC radio programs, in Russian and English, “which very few people did at the time.” He passed on to Sakharov important news items in an “intelligent, passionate, and open-minded” manner. He also discussed with Sakharov all sorts of topics including “the repressions, the [forced-labor] camps, anti-Semitism, collectivization [of agriculture, and] the ideal and real face of communism.” According to Sakharov, Tamm thought that anti-Semitism was despicable; and he also maintained that there was no Soviet science, or French or American science, but that science was universal and offered humanity a path to an improved future. [122-128] In the postwar Stalin years, few other Soviet citizens were exposed to such cosmopolitan thinking. Under Khrushchev and Brezhnev leading scientists like Sakharov were allowed greater access to international scientific materials and even some non-scientific Western periodicals, further broadening his mind. When he became interested in the problems of radioactive contamination in the 1950s, he acknowledged his debt to Western thinkers like Albert Schweitzer and Linus Pauling.

In speaking of the Soviet dissidents that emerged in the 1960s, Elena Bonner later recalled that they consisted of “just a few hundred people,” but that “among them were disproportionately large numbers of physicists, mathematicians, engineers and biologists, and almost no historians or philosophers.”⁹² What was it about the background of scientists that explains why a greater percentage of radicals came from their ranks than was true in the West?

In an age of missile launches and cosmonauts Soviet scientists, especially physicists, had great prestige. Amidst a public “physics-versus-lyrics” debate in late 1959, one poet even bemoaned, “Looks like physics is in honor, / Looks like poetry is not.”⁹³ Many Soviet scientists and other intellectuals believed that science would help lead the way to greater economic, social, and political progress. One astute observer of the period has noted that “scientists had knowledge, resources, and powerful connections that writers and others in the liberal arts lacked. And scientists seemed to combine a sense of intellectual freedom with a sense of civic duty, of moral responsibility for the fate of world civilization.”⁹⁴ The prestige of scientists contributed to their sense of self-worth; and the traditions of the intelligentsia, which many scientists thought themselves a part of, reinforced the feeling of a small number of scientists they had special responsibilities for the common good.

Perhaps in part because of high status and the regard in which they were held, they especially resented government and bureaucratic limitations on their work. Despite Khrushchev’s de-Stalinization policies, many members of the intelligentsia regarded him as “embarrassing.” Even Sakharov, whose views of the Soviet leader were more positive than most,

⁹² From a speech accepting the 2000 Hannah Arendt Award that can be found at <http://www.cdi.org/russia/johnson/5102.html>.

⁹³ The poem, “Physicists and Lyricists,” by Boris Slutsky, can be found in *Modern Russian Poetry: An Anthology*, ed. Vladimir Markov and Merrill Sparks (Indianapolis, Bobbs-Merrill, 1966), 770-771.

⁹⁴ Zubok, 136.

wrote that his “later years in office were marred by blunders and reckless adventures” and that he lacked “wise and well-intentioned advisers.” [211] In general, as respect for Soviet scientists increased, that for political leaders declined. Government interference in such areas as genetics and international scientific cooperation were especially galling to scientists like Zhores Medvedev, who wrote works published in the West critical of such interference. Sakharov expressed his own frustrations on a number of occasions. He recalled one such instance when in 1962 he acted to prevent a ministry, “acting basically from bureaucratic interests,” from going ahead with an H-bomb test that he thought was “useless,” but would have many radiation fallout victims. A decade later he wrote that “the feeling of impotence and fright that seized me on that day has remained in my memory ever since, and it has worked much change in me as I moved toward my present attitude.”⁹⁵

In his last major speech about science before his death, Sakharov said that “during the Renaissance and the 18th and 19th centuries, religious and scientific thought were seen as contrary to each other, as if they were mutually exclusive,” but he noted that “in Einstein's talks, in his letters, one can find the following parallel very often: God and nature.” Sakharov then went on to say that “my feeling is that, in the next stage in the development of human consciousness, there will be some deep, versatile resolution of the perceived discord between religion and science. My deep sense . . . is that some kind of inner meaning exists in nature, in nature as a whole. . . . We now understand that the world is more immense than we could have ever thought before, and much more diverse. And the world is not static. It changes and develops with time.” As much as he was impressed by the advances of science in the twentieth century, he still felt humbled by its mysteries. He said that “we have come to realize that what we don't know exceeds what we do know” and spoke of “our individual fates, which are such small points in time and space.”⁹⁶ His mention of Einstein commenting on religion and nature, as well as the his remarks about religion quoted above from his *Memoirs*, call to mind Einstein's comment that

the most beautiful and deepest experience a man can have is the sense of the mysterious. It is the underlying principle of religion as well as all serious endeavour in art and science. He who never had this experience seems to me, if not dead, then at least blind. To sense that behind anything that can be experienced there is a something that our mind cannot grasp and whose beauty and sublimity reaches us only indirectly and as a feeble reflection, this is religiousness.

In this sense I am religious. To me it suffices to wonder at these secrets and to attempt humbly to grasp with my mind a mere image of the lofty structure of all that there is.⁹⁷

One thinker (Macdonald) who has written much about wisdom has suggested that wise people see the “world around them with a sense of awe and wonder,” and both Sakharov and Einstein did so. Their scientific training and approach to science contributed to this feeling of awe and other wisdom attributes. Among the wisdom qualities that science strengthened in

⁹⁵ Sakharov Speaks, 33-34. Marshall Shatz, in *Soviet Dissent in Historical Perspective* (Cambridge: Cambridge University Press, 1980), 140, 144-48, provides a good summation for why scientists played an important role among dissenters.

⁹⁶ Sakharov, “Lecture in Lyons,” 22-24.

⁹⁷ Albert Einstein, “My Credo,” at <http://www.einsteinandreligion.com/credo.html>; for an interesting book dealing with the awe and hopes that science once engendered in poets, among others, see Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science* (New York: Pantheon, 2009).

Sakharov were the following: “a reality-seeking, truth-seeking orientation,” which implies being open to truth in an objective fashion; a realization of the oneness of the universe; being self-critical and willing to admit error; perseverance; self-discipline; a positive attitude toward problem solving; the ability to “to deal with situations appropriately, using a large repertoire of approaches and techniques”; “choosing the approach that best fits each situation”; and holistic thinking that combined reason and intuition and was strengthened by his appreciation for cosmology and evolution. As Macdonald observes: “Without a grasp of evolutionary processes we have little sense of our deep kinship with the universe. In addition, we fail to sense the role that we humans are now playing as active agents of evolution.”⁹⁸

Sakharov also believed that scientists had a special reasonability to improve the lives of others, such a desire being still another attribute of wise people. In his article “The Social Responsibility of Scientists,” which appeared in the journal *Physics Today* (June 1981), he wrote:

We all share the responsibility to work for the full realization of the results of scientific research in a world where most people’s lives have become more difficult, where so many are threatened by hunger, premature illness, and untimely death.

But scientists and scholars cannot fail to think about the dangers stemming from uncontrolled progress, from unregulated industrial development, and especially from military applications of scientific achievements.”⁹⁹

In some words at the French Embassy in Moscow, where he was honored by the French Academy of Sciences in June 1987, he mentioned several responsibilities of the scientist: “helping to preserve the peace; assuring essential human progress while making certain that scientific advances are applied in a safe manner; furthering trust and openness in society; and defending victims of injustice.”¹⁰⁰ In his last major pronouncement to scientists in Lyons, France, he once again spoke of the obligations of scientists. He talked about the contributions twentieth-century science had made to progress—increasing food production, improving health, and developing new energy resources—but he also spoke of scientists’ contemporary responsibilities for the “negative aspects of progress.” By that term he meant the advances in weaponry that threatened humankind and the scientific and technological developments that contributed to “enormous ecological and environmental dangers.” In his 1987 review of the play “Heart of a Dog,” he mentioned the theory that “scientific and technological progress is occurring faster than anything related to man’s inner development” and how “it would be terrible if the people sent up in the spaceships of the future were competent from a technical standpoint but had black hearts.” He added, “Why, they’d pollute the whole universe!” In general, however, he remained optimistic about science’s role. He believed it was a unifying force in the world. Toward the end of his Lyons’s speech he said: “Finding yourself surrounded by an audience of scientists, you experience a feeling of optimism. You feel that you are among friends who are not apathetic

⁹⁸ The quoted material and the wisdom qualities I mention are spelled out or suggested in Macdonald, Ch. 1 of *Toward Wisdom*, available online at <http://www.wisdompage.com/tw-ch01.html> and in the same author’s <http://www.wisdompage.com/valueslists.html> .

⁹⁹ *On Sakharov*, 206.

¹⁰⁰ Sakharov, *Moscow and Beyond*, 31.

about what goes on beyond the boundaries of their field, nor about what they can do for the common good with the help of their profession.”¹⁰¹

In a sweeping account of twentieth century intellectual history, Peter Watson views science in a similar manner. He contends that science was superseding other forces as the “engine of social development” and that it was open, tolerant, and objective, possessing “no real agenda.”¹⁰² Although Sakharov did not directly address the relation of science to wisdom, his thinking on science and his emphasis on scientists’ social responsibility bears some resemblance to the ideas of those who have written on the subject like Nicholas Maxwell.¹⁰³ A final point to be made about the effect of Sakharov’s scientific training and efforts is the effect they had on his approach to social and political problems, a subject to which we will turn after briefly examining Elena’s Bonner’s contributions to his growing wisdom.

The Influence of Elena Bonner

Bonner’s first love, who died during World War II, was a young poet, and she later edited a book about him. According to a 2008 article about her in the *Boston Globe*, during the war she memorized Pushkin’s *Eugene Onegin*, a novel in verse of about 200 pages.¹⁰⁴ In deciding to link his life with hers after the death of his first wife, Sakharov made one of his most important and wisest decisions. In late 1984, notwithstanding the great hardships they had recently suffered including two of his hunger strikes, a visiting physicist to their Gorky residence observed that “an air of obvious happiness reigned in their apartment, of calm and quiet happiness.”¹⁰⁵ He often followed her suggestions in reading literature and credited her with reinforcing the humanistic direction of their life together. In both of his books of memoirs, especially in the final lines of each, he expressed his gratitude toward her and stressed the importance of their being together. He wrote: “Truly she is the only person who shares my thoughts and feelings. Lusia prompts me to much that I would otherwise miss because of my restrained personality, and to act accordingly. She is a great organizer, and acts as my brain center. We are together. This gives life meaning.”¹⁰⁶ About her, he also wrote that she taught him “to pay more attention to individual victims of injustice, and a further step followed: recognition that human rights and an open society are fundamental to international confidence, security and progress.”¹⁰⁷

The KGB and Soviet press depicted her as a fanatical and evil influence on Sakharov, but he rejected such smears. It was true, as she herself admitted, that she sometimes lost her temper. His temperament was more conducive to making the cool, objective, rational judgments we associate with wisdom. But passion and compassion are also necessary for the highest wisdom, and she had those aplenty. Moreover, he was correct in thinking that she strengthened the

¹⁰¹ Sakharov, “Lecture in Lyons,” 24; and his review, Andrei Sakharov, “I Believe in Reason,” *Culture and Perestroika* (Moscow: Progress Publishers, 1988), 230. For some reflections on science, technology, and progress, see my *Age of Progress?*, Chs. 2 and 9.

¹⁰² Peter Watson, *The Modern Mind: An Intellectual History of the 20th Century* (New York: HarperCollins, 2001), 4-5.

¹⁰³ For an overview of Maxwell’s ideas, see <http://www.nick-maxwell.demon.co.uk/FAQs.htm>.

¹⁰⁴ The *Boston Globe* article can be found at

http://www.boston.com/ae/books/articles/2008/02/16/i_do_not_feel_this_is_home?mode=PF; both my Russian and English language editions of *Eugene Onegin* are slightly over 200 pages.

¹⁰⁵ *Andrei Sakharov: Facets*, 142.

¹⁰⁶ Sakharov, *Moscow and Beyond*, 160.

¹⁰⁷ “Years in Exile,” at <http://www.time.com/time/printout/0,8816,970185,00.html>.

humanistic direction of their life together. Her more outgoing temperament and wide circle of friends, including many writers, brought more balance into his life and helped him acquire the broader perspective helpful in heightening wisdom. *Kompany*—“circles of friends, informal groups consisting mostly of educated people,” often from different professions—were important to the development and broadening of Soviet dissent.¹⁰⁸ Elena helped bring Andrei to the center of this world in the 1970s. Physicist and later dissident Yuri Orlov recalled that they “always kept their door open for like-minded people. Their home was an oasis of free thought and perpetual readiness to help people.”¹⁰⁹ Various dissident writers like the novelist Vladimir Voinovich and poet Vladimir Kornilov came to see them in their Moscow apartment. Voinovich recalled bringing his latest works published in the West, and Kornilov even wrote a poem for Sakharov entitled “Evenings in the Kitchen,” which included the lines:

I was happy. I watched with eyes
Full of rapture and love
As our host kept quiet and listened to us,
Not imposing his own views.¹¹⁰

Journalist David Remnick, who visited Sakharov in his Moscow apartment after his return from Gorky, later wrote that in the 1970s “Sakharov’s kitchen table was the crossroads of the human rights movement,” and *New York Times* correspondent Hedrick Smith described the warmth and simplicity he experienced sitting at the same table in the seventies.¹¹¹

Contacts with such foreign journalists broadened Sakharov’s knowledge of the world, but so too did Bonner’s more extensive foreign travels that occurred before he was ever allowed to go abroad in late 1988. We have already seen that before she met him she had worked in Iraq for about a year, and also visited Lebanon, Egypt, Poland, and France and that after she met him she spent considerable time, primarily for medical care, in Western Europe and the United States. When she returned from abroad in the 1970s and 1980s, he eagerly listened to her accounts. He had earlier bought a short-wave receiver in 1967 and sometimes tuned in to the BBC and Voice of America. After meeting Bonner, they both frequently listened to foreign broadcasts, although in Gorky they often had to drive to a racetrack or cemetery on the outskirts of town to get clear reception. On her trips to Moscow from Gorky she also picked up foreign news, although the police now prevented foreigners from visiting her at their Moscow apartment.

Social and Political Views

In his final two decades, starting from the appearance of his *Reflections on Progress . . .* in 1968, Sakharov displayed political wisdom in three ways: in his selection of issues to deal with, in his method of dealing with them, and in the accuracy of his judgments about most of these issues. He spoke and wrote about the most important problems of his day such as the threat of nuclear weapons, environmental damages, globalization, Cold-War rivalries, human rights, and world hunger. In dealing with them he relied on rational analysis, compassion, tolerance, and humility,

¹⁰⁸ Zubok, 47.

¹⁰⁹ Yuri Orlov, *Dangerous Thoughts: Memoirs of a Russian Life*, (New York: W. Morrow and Company, 1991), 161.

¹¹⁰ The poem is on pp. 5-6 and Voinovich’s remembrances on pp. 38-42 of *On Sakharov*.

¹¹¹ Remnick, 279-80; Hedrick Smith, *The Russians* (New York: Ballantine Books, 1977), 590-91.

all virtues helpful in acting wisely and in making good political judgments, which is the essence of political wisdom. What these specific judgments were we shall soon examine.

Political wisdom comes in different forms. Robert Sternberg, whose definition of wisdom was quoted above, observed that “Winston Churchill, Mahatma Gandhi, Kofi Annan, Nelson Mandela, and Martin Luther King, Jr. are all people who have been known especially for their wisdom.”¹¹² Isaiah Berlin, who met Sakharov in Washington in 1988, wrote about political wisdom in several often-quoted essays such as “Political Judgment,” which he first presented as a BBC talk in 1957. He dealt mainly with the type of wisdom practiced and needed by politicians and statespeople. Another author who is often quoted regarding wisdom in general is Erik Erikson, whose ideas on wisdom were referred to above. Although he did not deal specifically with political wisdom, he did think that Gandhi, Thomas Jefferson, and Abraham Lincoln displayed a wisdom developed from insight and ethical views and characterized by “sustained reflection, sensitivity to the needs of others, sound judgment, prudence, and responsible action.”¹¹³ He also wrote a book on Gandhi. But between the type of political people Berlin was most concerned with— political leaders like Churchill and Franklin Roosevelt—and more dissident people who challenge socio-political structures like Gandhi and King, we sense a significant difference. Andrei Sakharov, like Nelson Mandela, was a dissident before later assuming a government position. But while Mandela eventually became president of his country, Sakharov merely served, briefly before his death, in a new Soviet legislative body.

As we examine Sakharov’s political thinking, we shall look how it developed during three phases: in his pre-dissident days up until the late 1960s, as a dissident, and in his final years after his return from Gorky when Gorbachev permitted him to become part of the sanctioned political process introduced by *glasnost*. We shall also look at his developing political wisdom in the light of what thinkers like Sternberg, Erikson, Berlin have had to say about wisdom.

Erikson recalled that in 1962—the year of the Cuban Missile Crisis—the buildup of nuclear arsenals “capable of global destruction” was going forward, as was the thinking that countering your enemy’s nuclear weapons by building up your own was the best path to peace. He believed that countries could no longer afford to look upon rivals as they had been doing and that Gandhi, who was assassinated in 1948, seemed to him “the only man who had visualized *and* demonstrated an over-all alternative” to the conventional political thinking.¹¹⁴ But before the late 1960s, while displaying some characteristics of wisdom, Sakharov was still closer to conventional ideas about the need for nuclear weapons to counter-balance one’s Cold-War opponent’s supply.

To better understand Sakharov’s decision to obey a government order to begin H-bomb research and continue in such work for two decades, a little background is necessary. When he began his work in 1948, the USA had 56 atomic weapons, the USSR none.¹¹⁵ And, of course, the United States had displayed its willingness to use such weapons in war by bombing Hiroshima and Nagasaki. The same month that he was told of his assignment, the Cold War’s most visible manifestation up until then began—the Berlin Blockade. By then the USSR and its Western WWII allies had become increasingly estranged from each other, both sides seeing the other as a major threat to its global interests and perhaps even its independent political existence. The

¹¹² “Rediscovering Wisdom,” http://www.apa.org/ed/pcue/ptn_winter03.pdf.

¹¹³ Hoare, 194-95; Macdonald, Ch. 1 of *Toward Wisdom*, available online at <http://www.wisdompage.com/tw-ch01.html>, also names these three men as examples of the “the wisest of the world’s leaders.”

¹¹⁴ Erik H Erikson, *Life History and the Historical Moment* (New York: Norton, 1975), 148.

¹¹⁵ Lourie, 96.

Soviet occupation of Eastern Europe, the Truman Doctrine, and the Marshall Plan had all already occurred, and the Berlin Airlift to counter the Berlin Blockade started almost immediately after the blockade began. After many decades of research, historians still differ on the share of blame that should be allocated for the developing Cold War during Stalin's final years (1945-1953), and I side with those who would place most of the blame on the Soviet leader. Nevertheless, it is important to understand the fears of many Soviet citizens at a time when the USA possessed many atomic weapons and the USSR none. Such understanding helps explain why Sakharov thought that his "work was of vital significance for the balance of power in the world."¹¹⁶

His support of Stalin's goal of developing nuclear (either atomic or thermonuclear) weapons did not mean that he supported all of Stalin's policies. Far from it. On one occasion he and Tamm privately agreed that if Leon Trotsky had come to power instead of Stalin, there would have been far fewer victims of state terror. In late 1948 a state-security general invited Sakharov to join the Communist Party and indicated it was a "great responsibility before the people" [104] (less than 5 percent of the total Soviet population then belonged to the Party). But Sakharov said no, stating that he thought some of the Party's past actions, like arresting innocent people and other excesses, were wrong, and that he feared he might be critical of some of its future actions.

In his *Memoirs* Sakharov spells out how he thought about his work and politics in the years 1948 to 1955. Like his mentor Tamm, he then believed that the Soviet system of socialism was superior to Western capitalism. And like many in the USA at the time, Sakharov thought that his country had to develop nuclear weapons to help prevent its Cold War enemy from attacking or dominating it. He admits that his response was more emotional than intellectual, but that "what was primary to me was my feeling of commitment to the same goal I assumed was Stalin's – building up the nation's strength to ensure peace after a devastating war." State control of the media, massive Soviet propaganda, and the natural tendency to regard one's own work as significant also influenced Sakharov, as did his belief that it was a "genuine theoretician's paradise." [96] He realized that Stalin and the leadership had made mistakes, but propaganda had helped convince him that "when you cut wood, chips fly."¹¹⁷ Or as was sometimes said, "You can't make an omelet without breaking eggs." Yet even many years later, by which time he had become a severe critic of Stalin and Stalinism, he still posed the question: "Have Soviet and American atomic scientists helped to keep the peace? After more than forty years, we have had no third world war, and the balance of nuclear terror—the threat of MADD (mutual assured destruction)—may have helped to prevent one." [97-98]

Sakharov's Two Pillars

In his Lyons address in 1989, Sakharov said that the philosopher "Immanuel Kant once said that there are two miracles in the world: the starry sky above us and the instinct of the moral imperative within us." These two "miracles" suggest the two pillars of Sakharov's political philosophy—science and morality—as it emerged in the late 1960s and 1970s. Even before then, however, these two pillars affected his political thinking. Following in the tradition of physicists

¹¹⁶ Autobiography, at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-autobio.

¹¹⁷ "Sakharov on His Intellectual Evolution," at <http://www.aip.org/history/sakharov/intlevol.htm>; see my HR, 257-61, for more on the Stalin cult and how he was able to influence public opinion.

like Mandelshtam and Tamm, neither of whom ignored moral questions about the value of their scientific work, he did not share the view described (but criticized) by one scientist as follows:

"Scientific morality" is widely regarded as an oxymoron, since it is commonly believed that science is "value neutral". . . . The logic of science stipulates that the data, laws, hypotheses and theories of science exclude evaluative terms and concepts, and that the vocabulary of science be exclusively empirical and formal. There are no "oughts," no "goods and bads," no "rights and wrongs."¹¹⁸

After Stalin's death in 1953, Soviet leader Khrushchev seems to have shared Sakharov's view that working on the development of a Soviet H-bomb was moral because it helped to ensure peace by reducing the USSR's nuclear gap with the USA. Khrushchev "certainly did not want a nuclear war, but believed that the best way to prevent one was to accumulate—or at least to appear to accumulate—the means of fighting one."¹¹⁹ Although many people cannot conceive how working on nuclear weapons could ever be wise, the issue is not so simple, as the controversy surrounding Robert Oppenheimer's changing beliefs on the matter testify.

In the autobiographical sketch he provided for the Nobel Prize Foundation in 1975, Sakharov noted that during the Khrushchev era (1953-1964) he "was becoming ever more conscious of the moral problems inherent" in his weapons research.¹²⁰ Observing his first H-bomb test in 1953 especially helped to heighten his moral consciousness. As we have seen, in 1955 and again in 1961, he was publically rebuked for expressing moral concerns about the possible use and continued testing of nuclear weapons.

Besides his concern with nuclear weapons, Sakharov did not publically express many other political opinions during the Khrushchev era. After the press in 1954 attacked a new play critical of Communist Party bureaucrats he did, however, write a letter to Khrushchev defending the play. And throughout the Khrushchev years he expressed his dismay at the destructive genetic ideas of Lysenko. But until he spoke out forcefully and publically in June 1964 about these ideas before a General Assembly meeting of the Academy of Sciences, his criticism was aired before only a small number of people.

Privately, Sakharov thought that Khrushchev was innately intelligent—he was, but not very cultured—and admired him for criticizing Stalin in his secret speech of 1956 and beyond. In Sakharov's *Memoirs*, he states that he believes Khrushchev's accomplishments outweighed his mistakes. Nevertheless, like many other later dissidents, he acknowledged the Soviet leader's faults, especially those displayed in the early 1960s—being erratic and brash, uncultivated, sometimes dogmatic and reckless, failing to surround himself with wise advisers, and being too influenced by flattery.

After Brezhnev came to power in late 1964, Sakharov gradually began to take more public stands. He considered the years 1965-1967 a "turning point" in his relations with the Soviet establishment. We have seen how in this period he signed various appeals and communicated with top leaders to try to prevent a resurgence of Stalinism, unfair treatment of dissidents, and further ecological damage to Lake Baikal; met with dissident Roy Medvedev; increasingly read *samizdat* works; and took part in a silent demonstration near the Pushkin Monument. In 1967, he also tried to persuade Soviet leaders not to go ahead with the

¹¹⁸ Ernest Partridge, "On 'Scientific Morality,'" <http://gadfly.igc.org/pomo/scimoral.htm>.

¹¹⁹ John Lewis Gaddis, *We Now Know: Rethinking Cold War History* (Oxford: Clarendon Press, 1998), 234-35.

¹²⁰ Autobiography, at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-autobio.

development of antiballistic missiles (ABMs). Although his efforts did not seem to have any immediate effects, an ABM Treaty in 1972 reflected some of Sakharov's earlier thinking.

The appearance of his *Reflections on Progress, Peaceful Coexistence, and Intellectual Freedom* in 1968, the same year as his hopes for the "Prague Spring" were deflated by Soviet tanks, marked Sakharov's emergence as a leading dissident. Many of the ideas he expressed in it were ones he would continue to uphold for the rest of his life. He started out saying the following:

The views of the author were formed in the milieu of the scientific and scientific-technical intelligentsia, which manifests much anxiety over the principles and specific aspects of foreign and domestic policy and over the future of mankind. This anxiety is nourished, in particular, by a realization that the scientific method of directing policy, the economy, arts, education, and military affairs still has not become a reality.

We regard as "scientific" a method based on deep analysis of facts, theories, and views, presupposing unprejudiced, unfeared open discussion and conclusions. The complexity and diversity of all the phenomena of modern life, the great possibilities and dangers linked with the scientific-technical revolution and with a number of social tendencies demand precisely such an approach, as has been acknowledged in a number of official statements.

In this essay, advanced for discussion, the author has set himself the goal to present, with the greatest conviction and frankness, two theses that are supported by many people in the world. The theses relate to the destruction threatened by the division of mankind and the need for intellectual freedom.¹²¹

The scientific approach to political judgments that Sakharov indicates here is very important to any discussion of political wisdom. In Berlin's essay on "Political Judgment," first presented before any of Sakharov's writings had appeared, he had some interesting comments to make about science and scientists. He thought that political wisdom was "a gift akin to that of some novelists, that which makes such writers as, for example, Tolstoy or Proust convey a sense of direct acquaintance with the texture of life; not just the sense of a chaotic flow of experience, but a highly developed discrimination of what matters from the rest, whether from the point of view of the writer or that of the characters he describes."

Above all this is an acute sense of what fits with what, what springs from what, what leads to what; how things seem to vary to different observers, what the effect of such experience upon them may be; what the result is likely to be in a concrete situation of the interplay of human beings and impersonal forces. . . . It is what is variously called natural wisdom, imaginative understanding, insight, perceptiveness, and, more misleadingly, intuition (which dangerously suggests some almost magical faculty), as opposed to the markedly different virtues—very great as these are—of theoretical knowledge or learning, erudition, powers of reasoning and generalisation, intellectual genius.

The quality I am attempting to describe is that special understanding of public life (or for that matter private life) which successful statesmen have, whether they are wicked or virtuous—that which Bismarck had . . . or Talleyrand or Franklin Roosevelt, or, for

¹²¹ Andrei Sakharov, *Progress, Coexistence and Intellectual Freedom* (New York: Norton, 1968), 25; also available online at http://www.sakharov-archive.ru/English/Raz_Engl_1.htm.

that matter, men such as Cavour or Disraeli, Gladstone or Ataturk, in common with the great psychological novelists, something which is conspicuously lacking in men of more purely theoretical genius such as Newton or Einstein or Russell, or even Freud. . . .

Scientists, at least *qua* scientists, do not need this talent. Indeed their training often makes them peculiarly unfit in this respect. Those who are scientifically trained often seem to hold Utopian political views precisely because of a belief that methods or models which work well in their particular fields will apply to the entire sphere of human action, or if not this particular method or this particular model, then some other method, some other model of a more or less similar kind. If natural scientists are at times naive in politics, this may be due to the influence of an insensibly made, but nevertheless misleading, identification of what works in the formal and deductive disciplines, or in laboratories, with what works in the organisation of human life.

Berlin did not deny that science could aid political judgment,

but to maintain that they have more to teach us than any other form of experience is an equally blind form of doctrinaire fanaticism which has sometimes led to the torture of innocent men by pseudoscientific monomaniacs in pursuit of the millennium.” . . .

. . . Sciences, theories no doubt do sometimes help, but they cannot be even a partial substitute for a perceptual gift, for a capacity for taking in the total pattern of a human situation, of the way in which things hang together—a talent to which, the finer, the more uncannily acute it is, the power of abstraction and analysis seems alien, if not positively hostile.

. . . The arts of life—not least of politics—as well as some among the humane studies turn out to possess their own special methods and techniques, their own criteria of success and failure. Utopianism, lack of realism, bad judgment here consist not in failing to apply the methods of natural science, but, on the contrary, in over-applying them.¹²²

Although there are elements of Utopianism in Sakharov’s essay, as he later confessed, what is missing in Berlin’s earlier piece is any serious appreciation of the positive aspects that a scientific approach to making political judgments might entail—“deep analysis of facts, theories, and views, presupposing unprejudiced, unfeared open discussion and conclusions,” as Sakharov wrote. Especially important was his willingness to admit past mistakes and change his views in the light of new evidence. In his memoirs and other writings one frequently comes across such statements as this: “If my analysis and opinions are mistaken, I hope my friends in the West will forgive my lack of information.”¹²³ One of his chief biographers writes that he was fond of the words of a Polish philosopher who wrote that “inconsistency is simply a secret awareness of the contradictions of this world. . . a permanent feeling of possible personal error, or if not that, then of the possibility that one’s antagonist is right.”¹²⁴ In a closed society like the USSR, Sakharov realized that he might be missing some of the information needed to make wise

¹²² Isaiah Berlin, "Political Judgment," in *The Sense of Reality: Studies in Ideas and Their History* (London: Chatto & Windus, 1996), 46-52. See also his essay "The Sense of Reality" in the same book, 32-33, where he refers to good political judgment as "wisdom."

¹²³ Sakharov, *My Country*, 86.

¹²⁴ Quoted in Gorelik, 358.

political judgments, but that it was important for him to contribute to political discussions about which he had considerable knowledge such as nuclear weapons and human rights. He was politically wise not only because history has confirmed the correctness of many of his judgments, but also because he addressed the most important problems of his day with such a humble, non-dogmatic approach, one conducive to the *growth* of wisdom.

Berlin's essay also lacks the type of moral fervor that Sakharov displayed in writing of the need for intellectual freedom and to overcome "the division of mankind" that could bring about global destruction. Berlin's several mentions of Bismarck as an example of a wise statesman, and his suggestion that political wisdom could be exercised by politicians "whether they are wicked or virtuous" indicates that he thought such wisdom necessitated neither arriving at political decisions by the type of "open discussion" Sakharov mentioned nor any deep moral concerns.¹²⁵ Berlin also placed less emphasis on universal human rights and reason than did Sakharov, and instead stressed ethical pluralism and the limitations of reason. One of Berlin's chief interpreters thought that his chief idea was "that there can be no universal right set of principles by which we should live, and that all attempts to discover a unique solution to the moral questions that face mankind are based on a profound mistake about the nature of human values."¹²⁶

Despite these differences, the two men shared many similar political goals. They both emphasized freedom, tolerance, and a non-dogmatic approach to politics and believed that humans were free to determine their own futures, not shackled by any type of historical determinism. Berlin's favorite nineteenth-century Russian political thinker was Alexander Herzen, and Sakharov also admired him, once referring to the "best Russian humanitarian tradition from Herzen to Korolenko."¹²⁷ Berlin liked that the mature Herzen emphasized freedom, distrusted utopianism or deterministic philosophies, and took a more pragmatic approach to politics than most of his Russian contemporaries.

More than Berlin was willing to admit, a "scientific" political approach like that suggested by Sakharov could lead to political wisdom because it was humble, empirical, open-minded, and non-dogmatic. And if Berlin is correct that the "powers of reasoning" are limited when it comes to making good political judgments, Sakharov was also correct in insisting on the importance of reason in arriving at them, as he suggested when he stated that "progress is possible and innocuous only when it is subject to the control of reason" and "we must make good the demands of reason and create a life worthy of ourselves and of the goals we only dimly perceive."¹²⁸

Looking beyond Sakharov's scientific method of approach to politics to his specific political concerns expressed in *Reflections on Progress . . .*, we see several items highlighted besides his two main points that "the division of mankind threatens it with destruction" and that "intellectual freedom is essential." To overcome the Cold War antagonisms and lessen the

¹²⁵ This is not to suggest that Berlin was against "open discussion" or any consideration of morality in politics. For a convenient and nuanced view of his overall philosophy and political ideas, see <http://plato.stanford.edu/entries/berlin/>.

¹²⁶ Henry Hardy, "Isaiah Berlin's Key Idea," http://berlin.wolf.ox.ac.uk/writings_on_ib/hhonib/isaiah_berlin%27s_key_idea.html.

¹²⁷ Quoted in Gorelik, 339.

¹²⁸ From his 1975 Nobel-Prize lecture at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

chances of nuclear war, he suggested (as he later summarized it) “a rapprochement of the socialist and capitalist systems that could eliminate or substantially reduce these dangers.”¹²⁹ Several other concerns he dealt with in his essay were conflicts such as those that had occurred or were occurring in Vietnam and the Middle East; world hunger, overpopulation, and racism; pollution; “police dictatorships” like those of Hitler, Stalin, and Mao Zedong; and various threats to intellectual freedom. Among the latter he listed censorship and the persecution of dissidents and nationalities like the Crimean Tatars and Jews.

He also listed, however, more subtle threats to freedom. While stressing the positive aspects of scientific and technological advances and believing that more were necessary for further progress, he acknowledged some of the threats to freedom brought about by such developments. He wrote that “modern technology and mass psychology constantly suggest new possibilities of managing the norms of behavior. . . . but we must be clearly aware of the awesome danger to basic human values and to the meaning of life that may be concealed in the misuse of technical and biochemical methods and the methods of mass psychology.” He also stated that, “We also must not forget the very real danger mentioned by Norbert Wiener in his book *Cybernetics* [1948], namely the absence in cybernetic machines of stable human norms of behavior.” Although writing in the early days of computers, especially in the USSR, Sakharov already was mindful about some of the threats to human freedom posed by information technology. He was also concerned with the effects of increased bureaucratization and mass media, and mentioned “the stupefaction of man . . . by mass culture.” He criticized another threat—one especially prevalent in communist societies— “excessive standardization, extending to the teaching process itself, to the curriculum, especially in literature, history, civics, geography, and to the system of examinations.”¹³⁰

A term that would eventually be the keystone of his political philosophy, human rights, was only briefly mentioned or alluded to:

All peoples have the right to decide their own fate with a free expression of will. This right is guaranteed by international control over observance by all governments of the "Declaration of the Rights of Man" [more formally the UN's "Universal Declaration of Human Rights"]. International control presupposes the use of economic sanctions as well as the use of military forces of the United Nations in defense of "the rights of man". . . .

. . . The goal of international policy is to insure universal fulfillment of the "Declaration of the Rights of Man" and to prevent a sharpening of international tensions and a strengthening of militarist and nationalist tendencies. . . .

All anti-constitutional laws and decrees violating human rights must be abrogated.¹³¹

Human Rights as a Cornerstone

Following the UN approval in 1948 of its Human Rights declaration, with the USSR abstaining, it gradually was accepted, at least in theory, by a majority of the world's countries. Sakharov

¹²⁹ “Years in Exile,” at <http://www.time.com/time/printout/0.8816.970185.00.html>.

¹³⁰ Quoted material is from Sakharov, *Progress*, 59-61.

¹³¹ *Ibid.*, 41-42, 87; for more on twentieth-century threats to freedom and on human rights, see my *Age of Progress?*, Ch. 5.

later referred to it as “one of the most important documents of our time.”¹³² By the time his 1968 essay was published in the West, the USSR had signed the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights, both of which further developed rights stated in the 1948 document. The two covenants, however, still had to be ratified by many countries before they went into effect, and in the USSR the human rights continued to be violated even afterwards and after agreeing to abide by rights indicated in the 1975 Helsinki Accords. During the 1970s and 1980s, Sakharov would frequently mention the Soviet failure to live up to these obligations.

By this time the defense of human rights had become the core idea of Sakharov’s political philosophy. Already in 1971 he declared that “the basic aim of the state is the protection and safeguarding of the basic rights of its citizens. The defense of human rights is the loftiest of all aims.”¹³³ In his 1975 Nobel Prize lecture, he said:

Peace, progress, human rights—these three goals are insolubly linked to one another: it is impossible to achieve one of these goals if the other two are ignored. This is the dominant idea that provides the main theme of my lecture. . . . It was particularly gratifying for me to note the Committee's citation, which emphasizes the defense of human rights as the only sure basis for genuine and lasting international cooperation. . . . I am likewise convinced that freedom of conscience, together with the other civic rights provides the basis for scientific progress and constitutes a guarantee that scientific advances will not be used to despoil mankind, providing the basis for economic and social progress, which in turn is a political guarantee for the possibility of an effective defense of social rights.¹³⁴

In a 1978 essay written for the international Trilateral Commission, he wrote that “the sociopolitical ideology which gives first priority to human rights is, in my opinion, the most reasonable in many respects.” He believed that other political ideologies were either too dogmatic or had been proved ineffective or no longer relevant. Two important advantages he perceived for a human rights ideology was that it was pluralistic and appropriate for an increasingly globalized world.

The ideology of human rights is probably the only one which can be combined with such diverse ideologies as communism, social democracy, religion, technocracy and those ideologies which may be described as national and indigenous. It can also serve as a foothold for those . . . who have tired of the abundance of ideologies, none of which have brought . . . simple human happiness. The defense of human rights is a clear path toward the unification of people in our turbulent world, and a path toward the relief of suffering.¹³⁵

¹³² “The Inevitability of Perestroika,”

http://www.physics.harvard.edu/~wilson/sakharovconference/Suggested_Reading/The_Inevitability_of_Perestroika.pdf.

¹³³ *Sakharov Speaks*, 142.

¹³⁴ Nobel lecture at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

¹³⁵ *On Sakharov*, 244, 259, also at

http://www.trilateral.org/AnnMtgs/Trialog/library_annmtgs/stacks_annmtgs/Politics_Human_Rights.pdf. Burns H. Weston, “Human Rights,” in *Human Rights in the World Community: Issues and Action*, ed. Richard Pierre Claude and Burns H. Weston, 2d ed. (Philadelphia: University of Pennsylvania Press, 1992), 30, ends his overview of human rights developments from a historic viewpoint by quoting these words of Sakharov.

When he wrote that it was compatible with various ideologies such as communism, he apparently meant that human rights could be reconciled with these ideologies if interpreted in their best sense, as he had hoped communism was going to be during the Prague Spring of 1968 or as he later hoped it would be under Gorbachev's *glasnost* and *perestroika* policies.

In the early 1980s, from his Gorky exile, he wrote:

The most important conditions for international trust and security are the openness of society, the observation of the civil and political rights of man—freedom of information, freedom of religion, freedom to choose one's country of residence (that is, to emigrate and return freely), freedom to travel abroad, and freedom to choose one's residence within a country.

The human rights proclaimed by the Universal Declaration in 1948, and again confirmed by the Helsinki Accord in 1975 as being part and parcel of international security, are rights which continue to be flagrantly violated in the USSR and in other countries, particularly those of Eastern Europe.¹³⁶

I During his first meeting with Gorbachev in January 1988, Sakharov stated that he was going to pick up where he had left off the last time they had spoken—when Gorbachev telephoned him in Gorky—and presented the Soviet leader with a list of political prisoners still being held. Sakharov later thought that the list given to Gorbachev might have hastened the release of some of these prisoners.

In 1989, before his death in December, he worked hard within the new Soviet legislature, to repeal Article 6 of the old Soviet Constitution that recognized the Communist Party as “the leading and guiding force of Soviet society and the nucleus of its political system.” Although willing to allow for much more political participation than his Communist predecessors had done, Gorbachev was not yet willing to allow a multiparty system and along with a majority of the legislators opposed Sakharov's effort. Only after Sakharov's death did Gorbachev come to accept a transition to multiparty participation.

In the final months of Sakharov's life, as he worked on a new constitution, guaranteeing human rights remained central to his political thinking. Article 5 of his draft read as follows:

All people have the right to life, liberty, and happiness. It shall be the aim and duty of citizens and the state to uphold the social, economic, and civil rights of the individual. In exercising their rights, citizens must not infringe upon the rights of others, or the interests of society as a whole. Citizens and organizations must act in accordance with the Constitution and laws of the Union and republics and the principles of the Universal Declaration of Human Rights of the United Nations. International laws and treaties adopted by the USSR and the Union, including the Covenants on Human Rights of the United Nations and the Constitution of the Union, shall be directly enforceable on the territory of the Union and shall prevail over the laws of the Union and the republics.¹³⁷

Other articles spelled out more specifically some of the rights he indicated in Article 5.

¹³⁶ *Andrei Sakharov from Exile* (New York: International League for Human Rights, 1983), at <http://www.aip.org/history/sakharov/essay2.htm>.

¹³⁷ <http://www.sakharov-archive.ru/English/Constitution.htm>.

Already in 1968, after referring to the unjust treatment of the Crimean Tatars, Sakharov warned that Soviet nationality policy problems would continue to cause nationality “unrest and dissatisfaction” unless major changes were made.¹³⁸ For the rest of his life, he considered ethnic and national rights an important part of human rights, and devoted considerable time to them.

Twenty years after mentioning the injustices done to the Crimean Tatars in his most famous essay, Sakharov and Bonner met with their leader and took notes on the grievances he listed. Soon after this meeting, in March 1988, Sakharov sent a letter to Gorbachev indicating that the skillful handling of the Tatar grievances, plus those of Armenians in Nagorno-Karabakh, could set a precedent for dealing with other nationality problems—Nagorno-Karabakh was an area in the Azerbaijan republic but peopled primarily by Armenians. In February, unrest in the area and among Armenians and Azerbaijanis in the two Caucasian republics had occurred.¹³⁹

Soon after returning home from his first trip abroad in late 1988, Sakharov met with one of Gorbachev’s leading advisers, Alexander Yakovlev, who suggested that he visit the Caucasus for a first-hand look at the problem, which had gotten worse as massive demonstrations, strikes, and casualties in the two Caucasian republics had occurred and hundreds of thousands of refugees had fled their homes. A devastating earthquake that struck Armenia in December 1988 worsened Armenian conditions even more. In December Andrei, Elena, and several others traveled to Baku and Yerevan. They met with numerous officials and groups, including refugees, but discovered little willingness among Armenians and Azerbaijanis to compromise. Returning to Moscow, Sakharov briefed Yakovlev on their trip and told Prime Minister Nikolai Ryzhkov that he and Elena would be willing to return to Armenia and help organize relief there, but his offer was not taken up, nor was the advice he and Elena gave about how to deal with Nagorno-Karabakh.

Sakharov’s final thinking about Soviet nationality problems was contained in his draft constitution. Article 15 stated that “a basic and supreme right of each nation and republic shall be the right to self-determination.” Article 25 proclaimed that “the original constituent parts of the Union of Soviet Republics of Europe and Asia shall be the union and autonomous republics, the national autonomous regions, and the national districts of the former Union of Soviet Socialist Republics. The national-constitutional process shall begin with a declaration of the independence of all the national-territorial structural parts of the USSR that make up the sovereign republics (states). On the basis of a referendum, some of these parts may join one another.” Thus, all of these national units of the USSR (more than 50), regardless of size, could enter the new Union of Soviet Republics of Europe and Asia as republics with the same rights. Article 17 stated that “a republic shall have the right to secede from the Union.” Article 26 affirmed that “the borders between republics shall remain fixed for the first ten years following the Founding Congress. Later, any alteration of borders between republics, the amalgamation of republics, and the division of republics into smaller units shall be effected in accordance with the will of the population of these republics and the principle of self-determination of nations, in the course of peaceful negotiations with the participation of the Central Government.”¹⁴⁰

Gorbachev later criticized Sakharov for taking the principle of self-determination too far and believed that if it had been carried to the extent Sakharov wished it could have led to new

¹³⁸ Sakharov, *Progress*, 66.

¹³⁹ Sakharov sums up his advice to Gorbachev on the Crimean Tatars and Nagorno-Karabakh in “The Inevitability of Perestroika,” http://www.physics.harvard.edu/~wilson/sakharovconference/Suggested_Reading/The_Inevitability_of_Perestroika.pdf.

¹⁴⁰ <http://www.sakharov-archive.ru/English/Constitution.htm>.

“partitionings, conflicts, and wars.”¹⁴¹ U. S. Ambassador Jack Matlock also thought that Sakharov’s suggestion regarding Nagorno-Karabakh—that the will of the majority there, the Armenians, be granted—would have been unwise. He agreed with Gorbachev that Sakharov wished to carry a principle too far and that doing so would have just lead to more bloodshed. On the other hand, he did fault Gorbachev for “bias against the Armenians” and for his “failure to do *anything* effective” about Nagorno-Karabakh.¹⁴² Another American observer thought that Bonner was too closed-minded on the subject, and a Russian-American historian has contended that the moral sympathies of many dissidents like Sakharov and Bonner for once oppressed Soviet nationalities led them to support positions that “helped destabilize and undermine the Soviet Union.”¹⁴³

Nationality issues were among the most difficult and contentious of the twentieth century and did help lead to the collapse of the Soviet Union in 1991. Following World War I, Woodrow Wilson had popularized the concept of the self-determination and the UN Charter had later paid homage to the principle. But interpreting it and implementing it was much more complex. To grant a nationality self-determination could threaten a country’s territorial integrity and lead to secession. And since very few parts of the world contained just a single nationality, the rights of minority nationalities among a larger nationality was also an issue.¹⁴⁴ Thus, judging the wisdom of various solutions to tangled nationality problems is difficult. But possessing political wisdom is as much about addressing important issues, and in an open tolerant manner seeking solutions to them, as it is about always having the “correct answer” to them.

Arms Agreements

Although Sakharov believed that the observance of human rights was “the only sure basis for genuine and lasting international cooperation” on nuclear weapons and other issues,¹⁴⁵ his concern with the testing and possible use of such weapons predated his focus on human rights and continued until the end of his life. His position on the linkage between nuclear arms reduction and human rights is sometimes presented in the manner suggested by Fred Coleman, who was one of the Western correspondents who interviewed him in Moscow: “America could insist that unless the Soviets improved their performance on human rights, they would not make the progress they wanted in all other fields, from trade to arms reduction,” and “Sakharov wanted Western trade, aid, and political cooperation with Russia clearly linked to Moscow’s actual performance on human rights.”¹⁴⁶

It should be noted, however, that Sakharov did not say that the United States should refuse to negotiate arms reductions with the USSR unless it ceased to violate human rights. Although he believed that they did not go far enough, he supported the negotiating and concluding of the SALT I treaties of 1972, which limited ABMs and capped the number of intercontinental ballistic missiles (ICBMs), missile-launching submarines, and submarine-launched ballistic missiles (SLBMs) that either side could deploy. He also supported, again with

¹⁴¹ Mikhail Gorbachev and Daisaku Ikeda, *Moral Lessons of the Twentieth Century* (New York: I. B. Tauris, 2005), 93.

¹⁴² Jack Matlock, *Autopsy on an Empire: The American Ambassador’s Account of the Collapse of the Soviet Union* (New York: Random House, 1995), 168.

¹⁴³ Zubok, 349.

¹⁴⁴ For more on this problem, see my *Age of Progress?*, 99-106.

¹⁴⁵ Nobel lecture at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

¹⁴⁶ Fred Coleman, *The Decline and Fall of the Soviet Empire* (New York: Macmillan, 1997), 108, 426-27.

some reservations, further limitations made at Vladivostok in 1974 and in SALT II. In the late 1970s, Senator Ted Kennedy was quoted as saying:

When I met last year with Andrei Sakharov in Moscow he stressed that that the greatest threat to humanity and human rights is the threat of nuclear war. His plea to us is to ratify SALT [II]: not only to reduce the threat of nuclear war but also to create the mutual confidence necessary to resolve the other important issues between the Soviet Union and the United States. Let the advocates of linkage explain how the cause of human rights in the Soviet Union will be served by Senate refusal to ratify SALT [II].¹⁴⁷

In various statements, Sakharov insisted, as he did in 1977, that “it was intolerable to impose conditions on arms negotiations; they should have absolute priority.”¹⁴⁸ In 1980, he wrote: “Despite all that has happened, I feel that the questions of war and peace and disarmament are so crucial that they must be given absolute priority even in the most difficult circumstances. It is imperative that all possible means be used to solve these questions and to lay the groundwork for further progress. Most urgent of all are steps to avert a nuclear war, which is the greatest peril confronting the modern world. The goals of all responsible people in the world coincide in this regard, including, I hope and believe, the Soviet leaders.” He reiterated this position in another statement the same year when he said, “I am convinced that the prevention of thermonuclear war is our most important problem and must take absolute priority over all other issues.” He added that he supported Salt II, the arms limitation treaty that had been signed by the USA and USSR but not ratified because of the Soviet invasion of Afghanistan in late 1979. In a 1981 article, he insisted that human rights continued “to be flagrantly violated in the USSR,” but that “it is again necessary to return to the Salt II Treaty”—due to continued Cold-War tensions in the early 1980s, however, the treaty never formally came into being.¹⁴⁹

When reading over Sakharov’s various statements on nuclear weapons over several decades what strikes one is how detailed, carefully thought out, and balanced were his views. A U. S. physicist who knew Sakharov well and shared his passion for controlling nuclear weapons, summed up Sakharov’s position this way: “The four principles that I derive from Sakharov’s writings and my discussions with him are, briefly stated: 1) deterrence is inescapable; 2) strategic parity is essential; 3) negotiations are of primary importance; and 4) trust, developing from cooperation and openness, is a prerequisite for progress.” This same physicist wrote that “nuclear proliferation was a major concern of Sakharov.”¹⁵⁰

Sakharov’s first and second principles meant that he accepted the reality of nuclear weapons and that it was acceptable and even sensible to attempt to maintain parity. In 1983, he wrote that “*nuclear weapons only make sense as a means of deterring nuclear aggression by a potential enemy* [italics are Sakharov’s], i.e., a nuclear war cannot be planned with the aim of winning it. Nuclear weapons cannot be viewed as a means of restraining aggression carried out by means of conventional weapons.” He pointed out that the USA had attempted to do just that since the early days of the Cold War, but that it was an unacceptable policy and that instead

¹⁴⁷ The SALT II Treaty: Hearings before the Committee on Foreign Relations, United States Senate, September 1979, at http://www.archive.org/stream/saltiitreatyhear04unit/saltiitreatyhear04unit_djvu.txt.

¹⁴⁸ Sakharov, *Alarm and Hope*, 109.

¹⁴⁹ *On Sakharov*, 213, 225, 266-67.

¹⁵⁰ Sidney Drell, “Andrei Sakharov and the Nuclear Danger” *Physics Today on the Web* (May 2000), <http://www.aip.org/pt/may00/sakharov.htm/>.

it was “necessary [for the West] to restore strategic parity in the field of conventional weapons.” He further stated that this “restoration of strategic parity is only possible by investing large resources and by an essential change in the psychological atmosphere in the West,” and he realized this would require some Western economic sacrifices, but that it was “necessary to prevent nuclear war, and war in general.”¹⁵¹

He went on to say:

Of course I realize that in attempting not to lag behind a potential enemy in any way, we condemn ourselves to an arms race that is tragic in a world with so many critical problems admitting of no delay. But the main danger is slipping into an all-out nuclear war. *If* the probability of such an outcome could be reduced at the cost of another ten or fifteen years of the arms race, then perhaps that price must be paid while, at the same time, diplomatic, economic, ideological, political, cultural, and social efforts are made to prevent a war.

Of course it would be wiser to agree now to reduce nuclear and conventional weapons and to eliminate nuclear weapons entirely. But is that now possible in a world poisoned with fear and mistrust, a world where the West fears aggression from the U.S.S.R., the U.S.S.R. fears aggression from the West and from China, and where China fears it from the U.S.S.R., and no verbal assurances and treaties can eliminate those dangers entirely?

I know that pacifist sentiments are very strong in the West. I deeply sympathize with people's yearning for peace, for a solution to world problems by peaceful means; I share those aspirations fully. But, at the same time, I am certain that it is absolutely necessary to be mindful of the specific political, military, and strategic realities of the present day and to do so objectively without making any sort of allowances for either side.¹⁵²

This statement is typical of Sakharov's reasoned, nuanced, and wise approach. He ardently wished agreements and eventually an end to stockpiling nuclear weapons, but wanted to insure that every step along the way reduced the odds of a nuclear conflict. In the early 1970s, although he generally supported the arms treaties between the USA and USSR, he believed that the West had not insisted enough on proper verification and that in future agreements there should be more stress on “verification, including on-site inspection.”¹⁵³ He also criticized these agreements for not doing more to limit *MIRVs* (multiple independently targetable reentry vehicles), which meant putting more than one warhead on a missile, as both sides did.

In February 1987, at a Forum for a Nuclear-Free World and the Survival of Mankind, Sakharov strongly criticized President Reagan's Strategic Defense Initiative (SDI), which would have eventually placed defensive nuclear missiles in space. He thought SDI was too expensive and destabilizing –in late 1988, when he met with Reagan, he tried to convince him that SDI was not a good idea, but Reagan repeated his old argument that SDI would make the world safer.

¹⁵¹ Andrei Sakharov, “The Danger of Thermonuclear War,” *Foreign Affairs* 61, no. 5 (1983), 1006-07; the article is also available at http://www.physics.harvard.edu/~wilson/sakharovconference/Suggested_Reading/The_Danger_of_Thermonuclear_War.pdf.

¹⁵² *Ibid*, 1010-11.

¹⁵³ Sakharov, *My Country*, 67.

Despite his opposition to SDI, Sakharov thought the chances were slim that it would ever become operational. Partly for this reason, he believed that the Soviet Union should not continue to insist on the U. S. abandonment of SDI development as a precondition for signing arms limitations agreements. Soon after the forum, which Gorbachev attended, he basically accepted Sakharov's position. This cleared the way for agreeing to an Intermediate Nuclear Forces (INF) Treaty, which was signed later that year and ratified in 1988. It mandated the destruction of a whole class of weapons—all Soviet and U.S. land-based nuclear missiles in the 300-to 3400-mile range—and it contained strict verification procedures. Sakharov continued to insist, however, that Soviet opposition to SDI also be dropped as a precondition to signing an agreement on long-range missiles. In September 1989, just a few months before Sakharov's death, the Soviet foreign minister announced that it had now adopted that position, and in July 1991 the Strategic Arms Reduction Talks (START) Treaty was signed promising an approximate 30 percent cut in long-range nuclear weapons over the next seven years. These U.S.-Soviet agreements of the Gorbachev period, among others, owed not a little to Sakharov's influence.¹⁵⁴

During and after the final stages of the Cold War, some defenders of SDI claimed that President Reagan's pursuit of it "spurred the USSR to disarmament negotiations," partly because trying to deal with SDI would "exhaust and ruin the economy of the USSR." Sakharov argued that such a view was wrong and that it threatened to further destabilize U.S.-Soviet relations.¹⁵⁵

Sakharov's final thinking on nuclear arms was presented in Article 13 of his draft constitution:

The Union affirms the principle of refusing to be the first to employ nuclear weapons. . . . Nuclear weapons shall be only a means of staving off a nuclear attack by an adversary.

The long-range goal of the Union shall be the complete elimination and prohibition of nuclear weapons and other means of mass annihilation, on conditions of parity in ordinary weapons, upon resolving regional conflicts and upon the overall reduction of all factors giving rise to tension and mistrust.¹⁵⁶

Environmental Issues

Besides his concern with nuclear arms, Sakharov was also concerned with the peaceful use of nuclear energy. His general position was summed up near the end of his life, when he said that "mankind cannot renounce nuclear power, so we must find technical means to guarantee its absolute safety and exclude the possibility of another Chernobyl. The best way is international legislation requiring that all new nuclear reactors be sited deep enough underground so that even a worst-case accident would not discharge radioactive substances into the atmosphere. Existing aboveground reactors should be protected by reliable containment structures."¹⁵⁷

The safe use of nuclear energy was interconnected with his overall view of environmental problems. In 1988, he wrote, "I am now inclined to regard the many-faceted ecological threat to our environment as our most serious long-term problem." [409] The next year he added, "The environmental situation of our country is catastrophic," and in his draft constitution declared that

¹⁵⁴ Matthew Evangelista, *Unarmed Forces* (Ithaca: Cornell University Press, 2002), 328-29.

¹⁵⁵ Sakharov, *Moscow and Beyond*, 22-23.

¹⁵⁶ <http://www.sakharov-archive.ru/English/Constitution.htm>.

¹⁵⁷ Andrei Sakharov, "Mankind Cannot Do without Nuclear Power," *Time* (May 21, 1990), <http://www.time.com/time/daily/chernobyl/900521.sakharov.html>.

“enterprises shall in equal measure bear responsibility for the ecological and social consequences of their activity.”¹⁵⁸ His concern with the environment, however, was demonstrated long before that. We have already seen that in 1967 he telephoned Brezhnev to express his concern about Lake Baikal. In his essay *Reflections on Progress . . .*, which appeared two years before the establishment of the U. S. Environmental Protection Agency and the first Earth Day in 1970, he already outlined many of the global environmental problems that have plagued the earth ever since. In his chapter on pollution, he even alluded to a problem that few people then took seriously—global warming. “Carbon dioxide from the burning of coal is altering the heat-reflecting qualities of the atmosphere. Sooner or later, this will reach a dangerous level. But we do not know when.”¹⁵⁹ In his 1975 Nobel lecture and on other occasions, he repeated his environmental warnings and connected them with such global concerns as overpopulation, exhaustion of resources, famine, and excessive urbanization.

Like Albert Schweitzer, whom he greatly admired, Sakharov had a reverence for all forms of life. Elena Bonner recalled him picking up bottles when they walked in the woods and putting their openings into the ground so that ants did not climb into them and get stuck, and also taking a wasp buzzing around an indoor plant outdoors and freeing it.

A Global Approach

In 1991 one of Sakharov’s fellow dissidents who later became a U. S. professor declared that a “new global civilization is being formed right now and Sakharov is one of its prophets.”¹⁶⁰ Indeed, globalization was one of the most important phenomena of the late twentieth century, and from his first major essay in 1968 Sakharov had emphasized a global approach to the major problems of his day. This was one of the reasons for his strong support of the United Nations.

In his 1975 Nobel Lecture, he said, “I should also like to emphasize that I consider it particularly important for United Nations armed forces to be used more generally for the purpose of restricting armed conflicts between states and ethnic groups.” Although he did not agree with all of its actions—he was especially critical of a General Assembly resolution declaring Zionism a form of racism and racial discrimination—he added that he had “a very high regard for the United Nations’ potential and necessary role,” and that he considered “the institution to be one of mankind’s most important hopes for a better future.” He also called for the “setting up an international consultative committee for questions related to disarmament, human rights, and the protection of the environment, under the aegis of the United Nations.”¹⁶¹

In 1974, he wrote that there was not one “key issue that can be solved on a national scale.”¹⁶² Even the draft constitution that he prepared right before his death affirmed his global perspective. Article 4 stated:

The Union, through its government bodies and citizens, shall strive to maintain peace throughout the world, to maintain a habitable environment, to maintain the external and internal conditions for the existence of humanity and life on the whole Earth, and to ensure

¹⁵⁸ Sakharov, *Moscow and Beyond*, 125; <http://www.sakharov-archive.ru/English/Constitution.htm>.

¹⁵⁹ Sakharov, *Progress*, 48. See the pollution section of this essay online at http://www.sakharov-archive.ru/English/Raz_Engl_1.htm.

¹⁶⁰ *Andrei Sakharov: Facets*, 640.

¹⁶¹ From his 1975 Nobel-Prize lecture at http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

¹⁶² Quoted in Gorelik, 301.

harmony in economic, social, and political development throughout the world. Global aims for the survival of humanity shall have priority over any regional, state, national, class, party, group or individual aims. Over the long run, the Union through its government bodies and citizens shall strive to bring about a pluralistic rapprochement (convergence) of the socialist and capitalist systems, as a means of reaching a unified and coordinated decision of global and internal problems. Such rapprochement shall, in the future, find its political expression in the creation of a world government.¹⁶³

Whether it was human rights, the Arms Race, the environment, or a new constitution for the USSR, his natural inclination was to examine a subject from a global perspective. This was mainly because he approached issues from a scientific and moral viewpoint—as Ambassador Jack Matlock said about him, he possessed “an unerring moral compass.”¹⁶⁴ In his lecture in Lyons in 1989 he said, “Science is based on common laws, on common terms; this is the foundation for its internationality. . . . The general laws of nature, and those laws of society that arise from fundamental science, are the most universal, and therefore they draw us closer together.” In that same lecture, he affirmed Kant’s view that there was a “moral imperative within us,” and by us he meant all humankind.¹⁶⁵

Among the other global problems not already examined in detail, he addressed world hunger, regional conflicts, terrorism, and capital punishment, and, in his 1968 essay he devoted a chapter to hunger and overpopulation. In his 1975 Nobel Lecture, he said that “in a great many countries, particularly in Asia, Africa, and Latin America, the lack of food will be an overriding factor in the lives of many hundreds of millions of people, who from the moment of birth are condemned to a wretched existence on the starvation level.”¹⁶⁶ In a 1983 essay he spoke of both hunger and regional conflicts.

Millions of people are dying of hunger every year, hundreds of millions suffer from malnutrition and hopeless poverty. The West provides the developing countries with economic and technological aid, but this remains entirely insufficient. . . . Aid from the U.S.S.R. and the socialist countries is smaller in scale and, to a greater degree than the West's aid, military in nature and bloc oriented. And, very importantly, that aid is in no way coordinated with world efforts.

The hot spots of local conflicts are not dying but are rather threatening to grow into global wars. All this is greatly alarming.

The most acutely negative manifestation of Soviet policies was the invasion of Afghanistan which began in December 1979 with the murder of the head of state. Three years of appallingly cruel anti-guerrilla war have brought incalculable suffering to the Afghan people, as attested by the more than four million refugees in Pakistan and Iran.¹⁶⁷

After returning from Gorky, where he had been exiled to primarily because of his criticism of the war in Afghanistan, Sakharov continued to insist that Soviet troops should be withdrawn from there. In his first meeting with Gorbachev in January 1988, he told him this

¹⁶³ <http://www.sakharov-archive.ru/English/Constitution.htm>.

¹⁶⁴ Matlock, 281.

¹⁶⁵ Sakharov, “Lecture in Lyons,” 22, 23.

¹⁶⁶ http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

¹⁶⁷ Sakharov, “Danger of Thermonuclear War,” 1014-15.

personally. Although there were many reasons why Gorbachev removed the troops early the following year, for a decade Sakharov's voice had been the most influential one in the USSR calling for such a step, and it is probable it had an eventual effect on Gorbachev's decision.

Against terrorism and capital punishment Sakharov spoke and wrote often. A 1977 statement sent to the Amnesty International Conference on the Abolition of the Death Penalty stated:

While still a child, I read with horror the remarkable collection of essays *Against the Death Penalty* published in Russia with the participation of my grandfather I. N. Sakharov in 1906-1907 during the wave of executions following the 1905 revolution. I have read the impassioned statements of Tolstoy, Dostoevsky, Hugo, Korolenko, Rozanov, Andreyev, and many others. . . . I share their conviction that the death penalty lacks any moral or practical justification and represents a survival of barbaric customs of revenge—coldblooded and calculated revenge

. . . I am of the opinion that the death penalty is completely ineffective in the struggle against terrorism and other political crimes committed by fanatics. In such cases the death penalty serves only as a catalyst for the psychosis of lawlessness, revenge, and savagery. I do not in any way sanction the current phenomenon of political terrorism, which is often accompanied by the death of random persons, by the taking of hostages (including children), and by other dreadful crimes.¹⁶⁸

In 1981, he wrote that “there must be a renunciation of support for international terrorism, which is a criminal and destructive weapon No goals, national or social — not even vengeance for horrible crimes already committed — can justify the cruel murder of innocent people.”¹⁶⁹ In his *Memoirs*, he pointed out that he condemned “terrorism on principle,” and had spoken out both against Palestinian terrorism and Israeli terroristic actions. [373]. Article 8 of his draft constitution stated, “No one shall be subjected to torture or cruel treatment. Capital punishment shall be prohibited on the territory of the Union during peacetime.”¹⁷⁰

As Article 4 cited above indicated, Sakharov desired an eventual “world government.” This was a dream he had already proposed in his 1968 essay. Before suggesting it, however, he wrote the following in his typically humble way: “Having examined . . . the development of mankind according to the worse alternative, leading to annihilation, we must now attempt, even schematically, to suggest the positive alternative. (The author concedes the primitiveness of his attempts at prognostication, which requires the joint efforts of many specialists, and here, even more than elsewhere, invites positive criticism.)” Then, after suggesting three previous stages of development, he wrote: “In the fourth stage, the socialist convergence [with capitalism] will reduce differences in social structure, promote intellectual freedom, science, and economic progress, and lead to the creation of a world government and the smoothing of national contradictions.”¹⁷¹ The mention of a world government occurring after “convergence” in both his 1968 essay and his draft constitution two decades later indicates that he consistently believed that capitalism and socialism, spurred on by adherence to human rights, would have to

¹⁶⁸ Sakharov, *Alarm and Hope*, 120-21; also at <http://www.sakharov-archive.ru/English/Death.htm>.

¹⁶⁹ *On Sakharov*, 268.

¹⁷⁰ <http://www.sakharov-archive.ru/English/Constitution.htm>.

¹⁷¹ Sakharov, *Progress*, 81, 83.

converge and Cold-War problems be overcome before a world government could come into existence.

The Convergence of Capitalism and Socialism

“Economic, social and ideological convergence, Sakharov thought, “would embody the positive features of both systems.”¹⁷² In 1968, he correctly perceived that “competition with socialism and the pressure of the working class” had moved capitalism closer to socialism. He believed that was a positive development, but he also perceived many defects in the Soviet system and thought it could improve by adopting some of the practices of Western democratic capitalist societies.¹⁷³

Between 1968 and 1989, however, his views on the respective merits of “socialism” and capitalism changed.¹⁷⁴ In his 1968 essay he still believed that in its ideal form socialism stood for “lofty moral ideals” and that “only the [capitalist] competition with socialism and the pressure of the working class made possible the social progress of the 20th century and . . . it took socialism to raise the meaning of labor to the heights of a moral feat.” Of course, to him Stalin represented a deviation from socialist ideals, a “pseudosocialism of terroristic bureaucracy.” But he still had hopes for a brighter socialist future, especially in lights of the reforms then still occurring in Czechoslovakia. “Today the key to a progressive restructuring of the system of government in the interests of mankind lies in intellectual freedom. This has been understood, in particular, by the Czechoslovaks and there can be no doubt that we should support their bold initiative, which is so valuable for the future of socialism and all mankind.” Overall, he described positive and negative aspects of both capitalism and socialism and believed that up to 1968 they had “played to a tie.”¹⁷⁵

Solzhenitsyn severely criticized Sakharov for not being more critical of socialism and for not seeing that Lenin was essentially no different than Stalin.¹⁷⁶ As Zubok and others have indicated, however, most Soviet dissidents for long after 1968 continued to believe in socialist ideals and thought Stalin, much more than Lenin, had betrayed them.

By 1973, Sakharov himself had become much more critical of socialism. In an interview he said, “What is socialism? I began by thinking that I understood it and that it was good. Then gradually I ceased to understand a great deal—I didn't even understand its economic [basis]; I couldn't make out whether there was anything to it but mere words and propaganda. . . . I am skeptical about socialism in general. I don't see that socialism offers some kind of new theoretical plan, so to speak, for the better organization of society.” He was especially critical of the “very extreme” and single-party state socialism of the USSR, and added that “quite possibly the single-party system is excessively and unnecessarily rigid.”¹⁷⁷ In 1975, he listed instituting a multiparty system as one of the reforms necessary to bring his country “out of a constant state of general crisis.”¹⁷⁸

¹⁷² “Years in Exile,” at <http://www.time.com/time/printout/0,8816,970185,00.html>.

¹⁷³ Sakharov, *Progress*, 71-79; quoted portion on p. 78.

¹⁷⁴ Like many in the Union of Soviet Socialist Republics, Sakharov generally used the term socialist to include communist systems. For a treatment of the terms capitalism, socialism, and communism, as well as the welfare state (sort of a converged capitalist-socialist system), see my *Age of Progress?*, Ch. 3.

¹⁷⁵ Sakharov, *Progress* . . . , 27-28, 66, 67, 71, 78.

¹⁷⁶ Alexander Solzhenitsyn, et al., *From Under the Rubble* (New York: Bantam Books, 1976), 8-9, 12-13.

¹⁷⁷ *Sakharov Speaks*, 167, 172, 176.

¹⁷⁸ Sakharov, *My Country*, 99-100, 102.

By 1977 he had become much more positive about capitalism than he had been a decade earlier. He now wrote that it “had proved its capacity for development and transformation” and achieved “a standard and ‘quality’ of life unprecedented in the history of mankind; there have been great advances in social welfare.” While acknowledging the material prosperity that capitalism had produced for many, he also thought that “the *ideas* of social justice, human rights, and democracy . . . play no less a significant role in capitalist society.”¹⁷⁹

Yet by 1989 he was still sympathetic with socialist systems that approached his ideal of what socialism should be. In an interview with a Soviet correspondent, he spoke of Sweden as “an exemplary socialist country,” but he also thought that it reflected the convergence of socialism with capitalism, his long-cherished dream, which he also hoped to see realized in his own country. He said, “We need a pluralization of the economy so that all forms of property will finally become legally and economically equal.”¹⁸⁰ In his draft constitution that same year, he envisioned that mixed system that he hoped convergence would bring about. Article 11 stated:

No one shall live in poverty. . . . Benefits and other forms of social welfare must guarantee a level of life for all members of society that is not below the minimum standard. Medical care for citizens, and the educational system, shall be based on principles of social equity, so that minimally sufficient medical care (free and paid), [schools], and places of rest and recreation, without regard to material wealth, place of residence, or occupation, shall be available to everyone.

At the same time, paid systems of the highest levels of medical care, and schooling based on competition, shall also exist in the Union.

Many other articles spelled out the type of mixed economic system which Sakharov desired by the time of his death. Article 46, for example, stated, “The principles of the market and competition shall form the basis for economic regulation in the Union. State regulation of the economy shall be exercised through the economic activity of state enterprises and through legislative support for market principles, pluralistic competition, and social justice.”¹⁸¹

Sakharov and Politics

In a brief essay on Sakharov entitled “Scientist and Prophet,” fellow physicist and human rights activist V. F. Turchin distinguished between leaders and prophets. He pointed out that Sakharov never wished to set himself up as a leader, but was a prophet who spoke the truths he perceived.¹⁸² Others also wrote or spoke of him in a similar vein. U. S. Ambassador Matlock referred to him as “the conscience of his nation,” and said that what he left his country “was not so much a political program, admirable as his might have been, but an attitude, a moral stance.”¹⁸³ One of the USSR’s most distinguished academics, Dmitri Likhachev, who along with Sakharov had become a deputy in the Congress of People’s Deputies, said at his funeral: “He

¹⁷⁹ Sakharov, *Alarm and Hope*, 103.

¹⁸⁰ Andrei Sakharov, “Dimensions of Freedom,” in *Perils of Perestroika*, ed. Isaac J. Tarasulo (Wilmington, DE: SR Books, 1992), 343.

¹⁸¹ <http://www.sakharov-archive.ru/English/Constitution.htm>.

¹⁸² *Andrei Sakharov: Facets*, 638-40.

¹⁸³ Matlock, 280.

was a prophet, a prophet in the ancient sense of the word. That is, he was a man who summoned his contemporaries to moral renewal for the sake of the future.”¹⁸⁴

Ironically, Sakharov himself was skeptical of any “prophet” who didn’t recognize that “the truth is never simple.” As he wrote in his *Memoirs* about political matters, “I hope that no one will claim to know the final answers; no good comes from prophets. . . . We must nevertheless continue to think about these matters and give the advice to others that intellect and conscience dictate.” [165] This combination of acting politically based on moral convictions and yet realizing the complexity of truth led Sakharov to adopt a political philosophy that was morally based but undogmatically pragmatic. It reflected the twin pillars of his political approach, morality and science. While always relying on his central values and principles, he was willing to be flexible when it came to the means of achieving them politically and was always willing, like a good scientist, to subject his political ideas to the tests of reason and evidence. He had indicated this in his Nobel Lecture, where he also said, “We need reform, not revolution. We need a pliant, pluralist, tolerant community, which selectively and tentatively can bring about a free, undogmatic use of the experiences of all social systems.”¹⁸⁵ A few years earlier talking about political change, he said “there always must be some kind of continuity and some kind of gradualness, otherwise there would again be the terrible destruction through which we have passed several times and a total collapse. Thus, I, of course, am inclined to gradualness. I am a liberal or a ‘gradualist,’ if you please.”¹⁸⁶ One of his reasons for disagreeing with Alexander Solzhenitsyn in the 1970s was “his lack of tolerance for the opinions of others,” as well as his underestimating “the need for a global approach.” [407] In writing of his own experiences in the First Congress in 1989, Sakharov praised one his political allies who sought compromise and stressed that “politics is the art of the possible.” And Sakharov spoke favorably of those who “proved capable of revising their ideas” as a result of new arguments and facts.¹⁸⁷ In regard to foreign policy he also stressed the need for compromise. In a 1988 article, for example, he wrote that “compromise and a willingness to make concessions are required from Israel and from the Palestinians and the Arab states as well.”¹⁸⁸

In this same article he recognized his own limitations. After making some specific economic suggestions, he wrote: “Not being a specialist, I refrain from discussing important economic issues in depth and limit myself to a few remarks of an ‘outsider.’ It is necessary to create an economic and legal environment, which encourages initiative, a flexible response to the economic situation, technical innovation, and excellent individual work without any impediments or restrictions imposed by ideological dogma.”¹⁸⁹

The proper combination of an approach to politics that was both moral and scientifically pragmatic was a subject upon which Sakharov reflected. In his *Memoirs* he wrote that “life’s casual connections appear so abstruse that pragmatic criteria are often useless, we must rely on our moral code.” [561] Bonner stated a similar idea when she wrote that “Sakharov’s ethical

¹⁸⁴ Quoted in Remnick, 288.

¹⁸⁵ http://nobelprize.org/nobel_prizes/peace/laureates/1975/sakharov-lecture.html.

¹⁸⁶ *Sakharov Speaks*, 175.

¹⁸⁷ Sakharov, *Moscow and Beyond*, 120.

¹⁸⁸ “The Inevitability of Perestroika,”

http://www.physics.harvard.edu/~wilson/sakharovconference/Suggested_Reading/The_Inevitability_of_Perestroika.pdf.

¹⁸⁹ *Ibid.*

credo [was]: ‘In the end, the moral choice turns out to be also the most pragmatic choice.’”¹⁹⁰ To Sakharov there was no contradiction between acting morally and in a scientific and pragmatic manner. A scientist writing about Sakharov believed that he reflected the fact that “the *activity of science fosters such moral virtues as tolerance, mutual respect, discipline, modesty, impartiality, non-manipulation, and, above all . . . ‘the habit of truth.’*”¹⁹¹

Although Isaiah Berlin could write about leaders like Bismarck or Churchill exercising political wisdom “whether they are wicked or virtuous,” he could not have written about the wisdom of political dissidents like Sakharov or Gandhi in the same manner. In addition, in assessing the wisdom of such latter men, the concrete political positions taken by them is not as significant as that taken by political leaders, and they need not have the political skills that many wise politicians have. What is more significant for men like Gandhi and Sakharov is that they perceive the most important problems of their era and address them intelligently. Sakharov certainly did that. Since, however, he served during the final year of his life in the Congress of People’s Deputies, it is fair to examine his specific political positions and skills and ask to what extent he acted wisely as a parliamentarian.

In his *Memoirs*, Mikhail Gorbachev pictures Sakharov as well-meaning but somewhat naïve and unrealistic—“an idealist, and [one who] did not always accurately weigh the consequences of his actions,” and one who was sometimes subject to the “insidious influence of certain people from his entourage.” At the Congress, Gorbachev thought it “was sad to watch how he would, too often, rush up to the podium and indiscriminately squander the respect he commanded on idle issues.” Overall, however, Gorbachev thought that he “was unquestionably the most outstanding personality at the Congress” and that he “made a constructive contribution to the work of the first Congress and to the establishment of a parliamentary system.” Referring to Sakharov’s draft constitution, Gorbachev also wrote that “we intended to use much of his wording.”¹⁹² Several years after Sakharov’s death, Gorbachev was heard to say: “If we had only listened more carefully to Andrei Dmitriyevich, we might have learned something.”¹⁹³

Another politician who allied with Sakharov in the reformist Interregional Group of Deputies had an even more favorable impression of him as a parliamentarian. This was Anatoly Sobchak, a law professor at Leningrad State University when elected to the Congress. He had once taught two future Russian presidents, Vladimir Putin and Dmitri Medvedev, both of whom also worked for him after he became mayor of St. Petersburg in the early 1990s. Sobchak was impressed that “Sakharov generally reacted to assessments of his [own] ideas and actions with utmost dispassion” because of his “lucid scientist’s mind which transcended praise or abuse, and the self-knowledge of a character that holds itself to such a strict account that outside words [of praise or abuse] have little weight or meaning.” The future mayor thought that “the push to democracy in the Soviet Union” was “embodied in the . . . spirit of Andrei Sakharov.” Although he recognized that Sakharov’s constitutional wording would have to be refined for legal purposes, he praised Sakharov’s draft, especially for its recognition that mankind now lived in a global age. Sobchak entitled a chapter of a book he wrote after Sakharov’s death “Deputy Sakharov’s Amendment.” The amendment he referred to was the one to repeal Article 6 of the

¹⁹⁰ Elena Bonner, “Lament in Oslo,” *Jerusalem Post*, May 24, 2009, at <http://www.jpost.com/servlet/Satellite?cid=1242212450779&pagename=JPost%2FJPArticle%2FPrinter>.

¹⁹¹ Partridge, “On ‘Scientific Morality,’” at <http://gadfly.igc.org/pomo/scimoral.htm>; for more on Sakharov views on science, politics, and morality, see David Holloway, “Scientists, Politics, and Peace during the Cold War” (a presentation made in Hamburg, Germany, 17 October, 2008), at <http://www.znf.uni-hamburg.de/presentation2.pdf>.

¹⁹² Mikhail Gorbachev, *Memoirs* (New York: Doubleday, 1996), 295-300.

¹⁹³ Quoted in Remnick, 282.

Soviet constitution, which sanctioned the dominant political position of the Communist Party (see above). Sobchak called “Sakharov’s amendment” the “focal point of 1989,” and regarding it he wrote that apart from a few people “in Gorbachev’s entourage, only one man had grasped and appreciated everything clearly from the beginning and this was Sakharov.”¹⁹⁴

Most deputies, including Sobchak, thought the amendment had little chance of passage in 1989 and, like many of Sakharov’s proposals, it “seemed untimely to his contemporaries.” In retrospect, however, Sobchak thought the physicist was correct to press the issue from the very beginning of the First Congress, and that Sakharov’s style of advocating changes based on principles, rather than on undo concern with timing, helped explain “why his ideas never became dated the following day.”¹⁹⁵ Years before Sakharov had returned from his Gorky exile a fellow dissident, Andrei Amalrik (1938-1980), made the observation that Sakharov was “a poor tactician,” but “a great strategist, and that cancels out his weakness as a tactician.”¹⁹⁶

Sakharov himself seemed aware that a time lag would exist between what he proposed and what eventually was enacted. In the case of his amendment to end the Communist Party’s privileged constitutional position, the period was fairly brief, coming early in 1990, just months after his death. Sobchak called the acceptance of “Sakharov’s Amendment” the “most radical event in our country’s life since October 1917,” when the Communists took over power.¹⁹⁷ Although a majority of the deputies rejected his amendment in the first two congresses, support for it among the public grew rapidly.

Besides his work in the Congress, Sakharov was busy on other political fronts. For example, in 1988 he agreed to serve on the executive council of the Memorial Society, which a group of young activists had just established to call attention to past repressions and assist those victims still alive. While in the United States late that year he telephoned Solzhenitsyn, attempting to get him to also be on the council, but the great writer refused. Because of government reluctance to allow its official recognition, its founding conference did not occur until late January 1989, and at the time of Sakharov’s death in December it was still being hampered. Yet even before the founding conference, Memorial chapters had sprung up in over 200 Soviet cities. In addition, it had sponsored a book, *No Other Way*, which included Sakharov’s essay “The Inevitability of Perestroika,” along with dozens of others. The book’s first printing numbered 100,000 copies, and one foreign correspondent wrote about it that “the presence of one author [Sakharov] . . . honored the entire project.”¹⁹⁸ Although far from being a forceful orator, Sakharov also spoke at several Memorial gatherings. Even though polls varied, one poll in a popular weekly publication indicated that Sakharov was the most popular politician in the country.¹⁹⁹ By the time of his death and in the last two years of Gorbachev’s rule that followed support for Sakharov’s political ideas continued to grow.

After Sakharov’s death, Boris Yeltsin emerged as the leading politician in the Interregional Group. While Sakharov was alive, Yeltsin and he, along with five others were co-chairman of the group, but Yeltsin was the only one that sat on the Supreme Soviet. Like some of the other intellectuals of the group, Sakharov had his doubts about Yeltsin but believed he was a useful political ally to keep the reforming pressure on Gorbachev. Following an attempted coup

¹⁹⁴ Anatoly Sobchak, *For a New Russia: The Mayor of St. Petersburg's Own Story of the Struggle for Justice and Democracy* (New York: Free Press, 1992), 24, 36, 82, 87, 91-92.

¹⁹⁵ *Ibid.*, 83.

¹⁹⁶ Andrei Amalrik, *Notes of a Revolutionary*, (New York: Alfred A. Knopf, 1982), 301.

¹⁹⁷ Sobchak, 90.

¹⁹⁸ Remnick, 116-17.

¹⁹⁹ *Ibid.*, 281.

in August 1991 by those opposed to continued reform—a possibility Sakharov had feared—Yeltsin led the opposition to it as Gorbachev was held under house arrest. As the coup faltered, Yeltsin emerged stronger than ever, and it was only months later that he played the leading role in dismantling the USSR and bringing about the resignation of Gorbachev.

If one looks at what transpired under Gorbachev from 1985 to late December 1991, it is not difficult to see why so many people referred to Sakharov as a prophet. Gorbachev's domestic policy was sometimes summed up in three words: *glasnost* (openness), *perestroika* (restructuring), and democratization, which eventually led to allowing for a multiparty system. In foreign policy, Gorbachev pursued arms agreements, gave more support to the United Nations, and withdrew Soviet troops from Afghanistan. All of these policies, Sakharov had long been proposing and suffered for doing so. Gorbachev proclaimed that his own policy was based on recognizing that universal human values were more significant than class struggle. And he even acknowledged his debt to Sakharov's long-time emphasis on such values, and spoke of the "enormous moral significance" of Sakharov's human rights emphasis.²⁰⁰ Regardless of how much he was influenced by Sakharov, directly or indirectly, Gorbachev ended up pursuing much of what Sakharov had long advocated. A foreign correspondent writing of Sakharov's 1988 essay "The Inevitability of Perestroika," which reiterated many of his earlier positions, stated that "in the next two years, Gorbachev would follow Sakharov's prescriptions almost to the letter."²⁰¹ Yet, in some areas such as nationality policy, Gorbachev did not go as far as Sakharov desired, and from Sakharov's viewpoint the Soviet leader compromised too much in order to appease more hard-line Communists, alarmed by the changes sweeping over the USSR.

Despite Gorbachev's criticism of Sakharov's willingness to allow nationalities maximum freedom, he later admitted that as the leader of the USSR, he had failed to adequately comprehend early enough the depth of dissatisfaction among the many minority nationalities. Sakharov, on the other hand, was more cognizant of it. Although it is true that allowing the nationalities the freedom Sakharov suggested would have led to the disintegration of the USSR, it disintegrated anyway. And while some observers believe that wiser policies might have held the USSR together, it is difficult to see exactly how that could have been accomplished without restricting the type of human and national rights that Sakharov believed were essential. Furthermore, despite many of the difficulties of the 1990s and beyond, it is by no means clear that somehow holding the USSR together would have been wiser than allowing it to disintegrate. And this is even truer of somehow preventing the collapse of Soviet control over the Eastern European satellites.

More than a decade after Sakharov's death, Russians ranked the two leaders he was most associated with, Gorbachev and Yeltsin, at the bottom of their list of effective twentieth-century rulers. Clearly, most Russians did not think either man had been a very wise leader. In many ways, they both seemed like failures. At the beginning of Gorbachev's rule, the USSR was still a superpower, presiding over an Eastern European empire. Six years later the empire and the USSR itself had collapsed. During the remainder of the 1990s Yeltsin presided over the largest chunk of the old USSR, with three-quarters of its former territory and half its population. For a while Elena Bonner supported Yeltsin but then became disenchanted with him and some of his policies, especially his treatment of Chechnya. Many Russians were especially unhappy with his

²⁰⁰ Gorbachev and Ikeda, 41, 51; see also Daniel C. Thomas, "Human Rights Ideas, the Demise of Communism, and the End of the Cold War," *Journal of Cold War Studies* 7 (Spring 2005), 110-41, for how much the human rights ideas of Sakharov and other dissidents influenced Gorbachev's policies.

²⁰¹ Remnick, 117.

economic policies, which made the economic conditions of most Russians worse. Despite Bonner's growing disapproval of him, when the U. S.'s *Time* magazine asked him to name his "Man of the Century" he responded "Sakharov."²⁰²

The situation that the USSR faced under Gorbachev was very difficult, mainly because of a long backlog of accumulated problems. It is easy to criticize him, for he certainly made mistakes, but he also brought considerable freedoms to his country and played a major role in ending the Cold War. It is very difficult to say exactly what policies Gorbachev could have pursued that would have produced wiser and better results. Sakharov both supported and criticized Gorbachev, and in the last year or so of his life allied with Yeltsin. But we do not know for sure what Sakharov would have thought of Yeltsin's actions and policies from 1990 forward. We cannot even assume that Sakharov's positions on various issues would have been the same as Elena's Bonner's, or even that she would have taken all the positions she has if Sakharov had still been alive.

Conclusion and Legacy

If wisdom implies, among other things, concern with society's most important problems and good judgments about how to approach them, the mature Andrei Sakharov was one of the wisest individuals of his era. What global issues between 1968 and 1989 were more important than the Cold War, the nuclear arms race, the role of science, human rights, ethnic and national rivalries, the environment, globalization, terrorism, and world hunger? He dealt with them all and did so courageously, relying on rational analysis, tolerance, compassion, and humility.

Living in the Soviet Union during the Cold War, his wisdom took on a different form than that of others who matured in different societies at different times. He was fortunate to be brought up by a family that possessed good values and to have a father that seemed very wise to his son. The young Andrei grew up appreciating both the humanities and sciences, and what he learned from them contributed to his growing wisdom. But the closed society of the USSR hindered him for many years from seeing Stalin, Soviet society, and the world as they really were. His work developing the Soviet H-bomb might seem like folly, the opposite of wisdom, to many, but a close examination of his motives indicates the issue is more complex than it first seems, and he gradually developed wiser judgments about how to deal with nuclear weapons. To live wisely, one has to balance one's life well. Early in his career, Sakharov was much more absorbed in his work than with his family, and he later regretted that he had not been a better husband and father. As he grew wiser after his first wife's death, he seems to have lived more wisely with his second wife, Elena Bonner. Many wise people, in addition to displaying concern and compassion for others, have paid more attention than Sakharov did to their own self-development and welfare, including their health. But Soviet conditions and his own personality dictated a different course for him, and as one scholar has written, each "wise person's wisdom . . . [has] a distinctive character."²⁰³

In the two decades since the death of Sakharov, his spirit and legacy have continued to ripple throughout the world. Sakharov streets, squares, and statues are found in such countries as Russia, Lithuania, Armenia, the United States, and Israel. Since 1988 the European Parliament

²⁰² <http://www.cdi.org/russia/johnson/4662.html>. *Time* selected Einstein, but Sakharov was selected as one of 100 most important people of the century; see <http://www.time.com/time/time100/heroes/profile/sakharov01.html>.

²⁰³ Macdonald, "Playing the Wisdom Game," at <http://www.copmacdonald.com/wisdomgame.html>.

has awarded an annual Sakharov Prize for Freedom of Thought honoring individuals or organizations that have fought for human rights. South Africa's Nelson Mandela, Burma's Aung San Suu Kyi, and China's Wei Jingsheng and Hu Jia are among those who have been honored for their fight against injustice and oppression. Other Sakharov prizes awarded include one given by the American Physical Society and an annual Russian Andrei Sakharov Prize for journalism. His spirit is also remembered in foundations, museums, educational institutions, and archives such as the Andrei Sakharov Foundation (USA), the Sakharov Museum and Public Center in Moscow, and the Sakharov Archives and Human Rights Center, first located at Brandeis University and now at Harvard University. The web sites of these institutions, plus others like one of the American Institute of Physics, feature important Sakharov exhibits or other materials.²⁰⁴ Conferences and meetings to honor his memory have also been held. Two recent examples were a meeting of Russia's leading liberals in May 2006 to celebrate what would have been Sakharov 85th birthday, and an international conference sponsored by Harvard in October 2008 which proclaimed:

The Conference's six panels will discuss reactions to the Sakharov's essays *Reflections on Progress, Peaceful Coexistence and Intellectual Freedom* (1968), *The Inevitability of Perestroika* (1988), and the continued relevance of his humanist vision; they will also address the nuclear issues he was concerned with, and improving relations between Russia and the West.²⁰⁵

As various speakers at these two gatherings pointed out, the world continued to need to draw inspiration from Sakharov's example. In his native Russia, human rights had become more restricted under Vladimir Putin as the director of the Sakharov Museum and others came under attack for nothing more than exercising freedom of expression. In China and many other countries, as the Sakharov Prizes testified, human rights also continued to be violated. In August 2008 Russian and Georgian troops clashed in South Ossetia, one of the many areas of ethnic dispute that Sakharov had examined. At the Harvard Sakharov Conference that October, Elena Bonner reminded her listeners that three decades earlier Sakharov had written an essay on "Nuclear Energy and the Freedom of the West" that had warned Western countries to wean themselves from being too dependent on foreign oil—a subject that Barack Obama, as first a candidate and then as U. S. president, also addressed. In July 2009, President Obama traveled to Moscow and discussed issues like missile reductions that had always been high on Sakharov's agenda. That same month *The New York Times* ran an essay entitled "Scientists Worry Machines May Outsmart Man" that called to mind Sakharov's four-decades old sentence mentioned above: "We also must not forget the very real danger mentioned by Norbert Wiener in his book *Cybernetics*, namely the absence in cybernetic machines of stable human norms of behavior."²⁰⁶

²⁰⁴ For links and more information, see the following web sites: <http://asf.wdn.com/>, <http://www.sakharov-museum.ru/museum/expositions/english/>, <http://hcl.harvard.edu/libraries/houghton/collections/modern/sakharov.html#description>, and <http://www.aip.org/history/sakharov/index.htm>.

²⁰⁵ See http://physics.harvard.edu/~wilson/sakharovconference/Sakharov_Conference; see also <http://www.amacad.org/publications/bulletin/spring2009/legacy.pdf>.

²⁰⁶ For Bonner's talk, see <http://asf.prime-task.com/asfConf2008/asfconf-lunchSp.pdf>; the essay, by John Markoff, is at <http://www.nytimes.com/2009/07/26/science/26robot.html?scp=1&sq=%22scientists%20worry%22&st=cse>; and the quote regarding Wiener is in Sakharov, *Progress*, 61.

Clearly the need to insure that scientific and technological advances contributed to real human progress, a subject Sakharov often spoke and wrote about, remained as relevant as ever. So too did the twin pillars of his political philosophy, which dictated arriving at decisions based on moral principles, but also on a reasoned and tolerant approach that recognized the complexity of reality. Finally, what Bonner called his “main talent”—the perseverance to finish what he started—was needed by people who desired to achieve goals similar to his, like peace. In medieval manuscripts “towers of wisdom” are often found, and in one featured on a Yale web site we see that “the height of the tower of wisdom is perseverance in good.”²⁰⁷ It is an appropriate epigraph for a study of Sakharov’s wisdom.

²⁰⁷ See <http://beinecke.library.yale.edu/speculum/1r-tower-wisdom.html>.