

SOCIO-POLITICAL THOUGHTS OF EINSTEIN*

“As long as I have any choice, I will stay in a country where political liberty, toleration and equality of all citizens before the law are the rule.”

Albert Einstein (1879-1955) made this famous declaration in 1933 when his land of birth (Germany) started crawling into the fen of fascism. This declaration formed the bedrock of his socio-political philosophy. He believed in humanity, in a peaceful world of mutual helpfulness and in the high mission of science. This is why, even today, this man is being drawn into the whirlpool of political passions and contemporary history. Anything without human and democratic (Greek = demokratia: demos—people+kratia ‘power’/‘rule’) face was not acceptable to Einstein.

Einstein was awarded the Nobel Prize for Physics in 1921. From this time on, his contribution to the world became more and more non-scientific. As a celebrity, he was able to influence the causes that were of interest to him, such as pacifism, world government and Zionism. He travelled the world for the next thirteen years, giving both scientific lectures and interviews and speeches on his thoughts and beliefs on various political and humanitarian matters. He travelled to the United States, Japan, China, Palestine and South America, as well as England and other European countries. Unfortunately, he did not visit India, then of course a British colony. He kept up a lively correspondence with friends and colleagues all over the world, leaving a permanent record of his activities and interests.

In 1925 he, with Mahatma (Mohandas Karamchand) Gandhi (1869-1948) and others, signed a manifesto against obligatory military service. He told the Disarmament Conference of 1932:

“.... The State is made for man, and not man for the State.....the State should be our servant and not we its slaves. The State transgresses this commandment when it compels us by force to engage in military and war service....”

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He was a pacifist to the core of his heart.

Zionism and Einstein

“Zion” (Hebrew-probably ‘fortress’ or ‘rock’) is the term used in the Old Testament and Jewish literature in various ways: for one of the hills in Jerusalem; for the mount on which the city and Temple of David was built; for the Temple itself; and symbolically for Jerusalem or even Israel as a whole. Today, ‘Mount Zion’ usually denotes the South West hill in Jerusalem just south of the city wall.

Zionism is the movement which sought to recover for the Jewish people its historic Palestinian homeland (“the Eretz Israel”) after centuries of dispersion. The modern movement arose in the late 19th century with plan for Jewish colonization of Palestine, and under Theodor Herzl (1860-1904), a Hungarian Zionist—first President of the World Zionist Organization (established at the first Zionist Congress held at Basle, Switzerland, 1897), also developed a political programme to obtain sovereign state rights over the territory. Gaining support after World War I (1914-1918), its objectives were supported by the British Balfour Declaration in 1917, as long as rights of non-Jews (Muslim Arabs and Christians) were not impaired. After World War II (1939-1945) the establishment of the Jewish state in 1948 received United Nations’ support. Zionism is still active, as a movement encouraging diaspora Jews to immigrate to and take interest in the state of Israel (Medinat Yisrael). There is no official state religion. Official languages are Hebrew and Arabic. It is the only democratic and developed country in the Middle East. It is the beacon of light in the darkness of the deserts of still medieval West Asia. It is the only oasis of enlightenment in the dusty deserts of medieval Middle East. Late in 1919 Einstein had his first contacts with Zionists, whose goal was to establish Jewish home state in Palestine. Einstein lent his name to their cause, though his view of Zionism was cultural, rather than political. “Zionism, to me, is not just a colonizing movement to Palestine. The Jewish nation is a living fact in Palestine as well as the diaspora, and Jewish feelings must be kept alive wherever Jews live”, he wrote in 1921. His Zionism, he said, did not exclude internationalism. His thoughts always remained global rather than nationalist, no matter where he lived or whom he supported.

After the death of the first President (1949-1952) of the state of Israel—Chaim Azriel Weizmann (1874-1952) in 1952, Einstein received an offer to become Israel's second President. He did not accept and replied humbly and politely:

“I am deeply moved by the offer from our State of Israel, and at once saddened and ashamed that I cannot accept it. All my life I have dealt with objective matters, hence I lack both the natural aptitude and the experience to deal properly with people and to exercise official functions. For these reasons alone, I should be unsuited to fulfill the duties of that high office, even if advancing age was not making increasing inroads on my strength. I am the more distressed over these circumstances because my relationship to the Jewish people has become my strongest human bond, ever since I became fully aware-of our precarious situation among the nations of the world.”

Einstein fought for a cause always both in science and in public life—never hankering after political power. He was very proud of Jewish tradition.

“Embedded in the tradition of Jewish people there is a love of justice and reason which must continue to work for the good of all nations now and in the future. In modern times this tradition has produced Spinoza and Karl Marx.” (Albert Einstein: *The World As I see it*. Translated by Alan Harris, Carol Publishing Group, New York, 1993, p. 102).

Benedict Spinoza (1632-1677), a Dutch Jewish philosopher, was a believer in rationalistic pantheism. Karl Heinrich Marx (1818-1883) was a German Jewish philosopher, economist and social theorist—author of *Das Kapital* (1867-1895) and Father of Scientific Socialism.

Democracy, Socialism and Einstein

“My political ideal is that democracy. Let every man be respected as an individual and no man idolized”

So wrote Einstein. He was sceptical about wealth, and he said:

“I am absolutely convinced that no wealth in the world can help humanity forward, even in the hands of the most devoted worker in this cause...Money only appeals to selfishness and always tempts its owners irresistibly to abuse it.

Can anyone imagine Moses, Jesus or Gandhi armed with the money-bags of Carnegie?”

To elaborate, Andrew Carnegie (1835-1918) of Scottish extraction was the owner of the largest iron and steelworks of the day in the USA—a philanthropist who gave millions of dollars to public institutions in the UK and USA.

His views of socialism were incisive, penetrating, convincing and decisive without any ambivalence. His views on socialism are simple, understandable and transparent. He interacted with other socialist-minded personalities of Europe, namely, George Bernard Shaw (1856-1950), Nobel Laureate in Literature in 1925, Harold Joseph Laski (1893-1950), British political economist, and Sigmund Freud (1856-1939), Austrian founder of psychoanalysis.

Einstein was of the opinion that the “economic anarchy” of capitalist society is a source of evil because individuals depend on society (which he called “a fact of nature”) and that individuals are crippled (i.e., they can lose their jobs) by the profit motive and the competition of capitalists. He advocated a socialist economy, where the means of production are owned by society in a planned way, but his “socialism” was different from state capitalism. What he meant by profit motive seemed to be identical with Marx’s “surplus value”. He wrote:

“.....The profit motive, in conjunction with competition among capitalists, is responsible for an instability in the accumulation and utilization of capital which leads to increasingly severe depressions. Unlimited competition leads to a huge waste of labor, and to that crippling of the social consciousness of individuals which I mentioned before.

This crippling of individuals I consider the worst evil of capitalism. Our whole educational system suffers from this evil. An exaggerated competitive attitude is inculcated into the student, who is trained to worship acquisitive success as a preparation for his future career.

I am convinced there is only one way to eliminate these grave evils, namely through the establishment of a socialist economy, accompanied by an educational system which would be oriented toward social goals. In such an economy, the means of production are owned by society itself and are utilized in a planned fashion. A planned economy, which adjusts production to the needs of the community, would distribute the work to be done among ‘all those able to work and would guarantee a livelihood to every man, woman, and child. The education of the individual, in addition to promoting his own innate abilities, would attempt to develop in him a

sense of responsibility for his fellow-men in place of the glorification of power and success in our present society.

Nevertheless, it is necessary to remember that a planned economy is not yet socialism. A planned economy as such may be accompanied by the complete enslavement of the individual. The achievement of socialism requires the solution of some extremely difficult socio-political problems: how is it possible, in view of the far-reaching centralization of political and economic power, to prevent bureaucracy from becoming all-powerful and overweening? How can the rights of the individual be protected and therewith a democratic counterweight to the power of bureaucracy be assured?"

["Why Socialism?"]-*Monthly Review*, 1.1 New York (May, 1949) 9-15.
Also reprinted in '*Ideas and Opinion*' (1954) 151-158].

Atom Bomb and Einstein

Unfortunately, it was Albert Einstein, "Newton of the 20th century", who triggered the formal initiation of the Nuclear Age (Manhattan Nuclear Project, 1943) when he signed the historic letter (**Appendix**) to Franklin Delano Roosevelt (1882-1945), the 32nd President (1933-1945) of the United States of America, on August 2, 1939, warning him of the dangerous implications of the discovery of nuclear fission by Nazi Germany.

European scientists, including Niels Bohr (1885-1962), Nobel Physics Laureate in 1922, who took refuge in the USA during the Nazi tyranny, suspected that German scientists might be working on nuclear fission in order to produce "the ultimate weapon". Uranium was available from the mines in occupied Czechoslovakia. Experts in the US thought German science could have a lead in the nuclear race because a noted German physical chemist—Otto Hahn (1879-1968), Director of the Kaiser Wilhelm Institute for Chemistry in Berlin in 1927, and Nobel Laureate in Chemistry in 1944, had discovered nuclear fission in 1938 by bombarding uranium by neutral subatomic particles called neutrons (first chemical evidence of existence of several nuclear fission products). He continued his own research on nuclear fission-not as a part of any suspected/alleged atomic bomb programme in the then Nazi Germany. Hahn's discovery followed by works of "Leo Szilard (1898-1964), Hungarian-US physicist, and one of Einstein's close friends, and others, in fact, led to the establishment of the Manhattan Project in 1943 under the scientific leadership of Julius Robert Oppenheimer (1904-1967),

Director (1943-1945) Los Alamos Science Laboratory. An atom bomb was experimentally exploded in the New Mexico desert at dawn on July 15, 1945. The experiment was successful. The uranium-235-bomb ("Little Boy") was dropped by B-52 Bombers (Enola Gay) on Hiroshima on August 6, 1945, and plutonium-239-bomb ("Fat Man") was dropped on August 9, 1945, by the bomber-"Bock's Car". The nuclear age began.

Incidentally, Werner Karl Heisenberg (1901-1976), Nobel Laureate in Physics in 1932—Father of Uncertainty Principle in Quantum Physics and Director of Kaiser Wilhelm Institute for Physics, was considered by many at the time to be at the centre of Nazi A-bomb project in Germany. But post-war research to date on the subject has not confirmed this suspicion so far.

Ironically, Einstein could not take part in the Manhattan Project. Though he had become an American citizen in 1940, he was not able to gain the necessary security clearance from the Federal Bureau of Investigations (FBI). The FBI proceeded to gather a huge secret file on him, observing his every activity and keeping copious notes. Because of his close association with liberal-minded people and organizations all over the world, whose stated goals were to work for world peace, understanding and reconciliation among all nations, Einstein was considered to be a security risk, and this very fact spared him any further involvement in the development of the atom bomb and, later, in its detonation. Therefore, he could honestly reflect later "I have done no work on the atomic bomb, no work at all." On April 5, 1940, President Roosevelt suggested a conference to tackle the subject of atomic bomb project, with Einstein selecting those who should attend. But Einstein did not appear then or at any subsequent conference, initially pleading a heavy cold and eventually persuading others that he was no expert on the subject. Instead, he busied himself with humanitarian efforts to help get Jews out of Europe and to find positions for refugee scientists in America during and after the war (World War II).

However, after the nuclear carnage in Hiroshima and Nagasaki in Japan, Einstein found himself plunged in stupendous sorrow, and is reported to have said in 1954 that if born again he would not become a scientist, but would rather become a plumber or a peddler. ("If Einstein Were Young Again, He Says He'd Become a Plumber." *New York Times*, Nov. 10, 1954).

At the Fifth Nobel Anniversary Dinner at the Hotel Astor in New York on December 10, 1945, honouring the Nobel Laureates, Einstein voiced his concerns about the bomb that physicists had delivered to the world that year. He soberly uttered the words that became world-famous: “The war is won, but the peace is not.” (Published in *Out of My Later Years*, New York: Philosophical Library, 1950.) What a prophecy! The nuclear legacy still continues unabated, even today. Horrors of nuclear holocaust still loom on the horizon.

Einstein advocated a world government for the purpose of controlling the use of atomic bombs and all armaments. It should be founded by three great military powers of the day: the United States, the Soviet Union and Great Britain. This world government would have power over all military matters and be able to intercede in countries where oppression occurs, because a world government is preferable to the far greater evil of wars. (“Einstein on the Atomic Bomb”, *Atlantic Monthly*-ed. Raymond Swing, vol. 176, Nov. 1945: Oct. 27 and 29, 1945: 43-45; also in the *New York Times*, Oct. 27 and 29, 1945). His ideas were too simplistic. However, in June, 1945, fifty-one founder nations signed the United Nations Charter in San Francisco, to go into effect on October 24 as successor to the League of Nations. The United Nations Organization (UNO) was born.

A week before his death on April 18, 1955, due to rupture of aortic aneurysm, Einstein signed the letter to Bertrand Arthur Russell (1872-1970), philosopher-mathematician and Nobel Laureate in Literature (1950), in which he agreed to sign a manifesto urging all nations to renounce nuclear weapons. This manifesto established the Pugwash Conference in 1957 at Pugwash, Nova Scotia, Canada. No fewer than ten of the signatories were past or future Nobel Laureates. Some 25 invited participants, mostly scientists, meet each year and read papers and discuss critical issues on arms control. They are encouraged to take the anti-nuclear message home with the hope of policy changes in their respective countries.

Manhattan Project and the Cold War

Einstein is considered to be the conceptual father of the Anglo-American Atomic Bomb adventure—the Manhattan Project, supported by other eminent migrant physicists like the Danish Jewish scientist-Neils Bohr

(1885-1962), Nobel Laureate in Physics, 1922, Enrico Fermi (1901-1954), Italian physicist, Nobel Laureate in Physics (1938), Leo Szilard (1898-1964), Hungarian-US physicist and others, though he himself did not participate in the actual project. Contrary to his belief, the Manhattan Project (1943-1945) at Los Alamos, New Mexico, sowed the seeds of the cold war. In spite of being advised by Neils Bohr to take the ally—the Soviet Union—into confidence about the Project, other Allied Powers (USA and Britain) did not do that. Bohr tried to convince President Roosevelt and the British Prime Minister, Winston Spencer Churchill (1874-1965), Nobel Laureate in Literature in 1953, that he had positive information that Soviet scientists were also working on nuclear fission, and their work was in a pretty advanced stage. A leading Russian physicist, Peter Kapitza (1894-1984), Nobel Laureate in Physics in 1978 and Ex-Asst. Director (1924-1932) of the Cavendish Laboratory, University of Cambridge (UK) worked in Bohr's laboratory in Copenhagen, Denmark. Unfortunately, Bohr's advice was arrogantly ignored. History took a different turn. The Soviet Union exploded its first nuclear device in 1949 and its Hydrogen bomb (HB) in August (1953). Of course, the US also exploded its first HB at Eniwetok Atoll in 1952. The nuclear table was turned upside down. It all happened during Einstein's lifetime. To elaborate further, the Berlin blockade of 1948-1949 (11 months) added another insult to the injury already inflicted on the relationship of the Allied Powers.

Of course, the Cold War had an ideological root, a political root (Churchill's ill-famous Fulton (Missouri) speech in March, 1946: "From Stettin in the Baltic to Trieste in the Adriatic, an Iron Curtain has descended across the Continent."), a diplomatic root apart from the nuclear root. There was another view about the origin of the cold war. The dropping of the Atomic Bomb on Hiroshima and Nagasaki in August (1945) is the point in question. People still are asking in its 60th year (2005, August): Was it necessary to drop the bombs on Japan when Germany already surrendered in Europe and Japan was preparing for unconditional surrender? The general answer is an emphatic NO. Japan surrendered unconditionally on August 15, 1945.

Prof. Patrick Maynard Stuart Blackett (1897-1974), British physicist and Nobel Laureate in Physics in 1948, gave a more specific answer in his seminal book-*Military and Political Consequences of Atomic Energy* (1948) "The dropping of the atomic bombs was not so much the last military act of

the second world war, as the first act of the cold diplomatic war with Russia now in progress.” The bomb was directed more against the then emerging socialist giant the Soviet Union reborn out of the ashes of World War II (1939-1945) than against Japan already preparing for surrender.

When the USA was the sole nuclear power, Bertrand Russell even advocated a preventive nuclear war against the USSR (Soviet Union) in 1948 (Brian Redhead: *Plato To Nato: Studies in Political Thought*, Penguin/BBC Books, 1995 p.175). But at the fag end of his life, Russell had an ethical metamorphosis and was in the forefront of the anti-nuclear movement. Interestingly, in his earlier life, he was a pacifist (like Einstein) against the First World War (1914-1918) and against the British Government’s conscription (*The Principles of Social Reconstruction*, 1915). Russell read a paper-“The Philosophy of Pacifism” at the Conference on the Pacifist Philosophy of Life, held at Caxton Hall, London (July 8 and 9, 1915). His pacifism lost him his Fellowship of Cambridge University in 1916 and he was imprisoned for six months in 1918. Joseph Rotblat (1908-2005), Polish-Jewish-English physicist, Nobel Peace Laureate in 1995, resigned on moral grounds from the Manhattan Project—the only scientist to resign before the Trinity bomb test. He was shocked to learn that the atomic bomb would be used to contain the Soviet Union, a World War II ally. He was one of the 11 signatories of the famous Russell-Einstein Manifesto (1955) and a co-founder of the Pugwash Conference on science and world affairs.

Finally, not taking the Soviet Union into confidence about the Manhattan Project must have hurt Einstein, because he was a strong advocate of forming a world government under the USA, the UK and the USSR to control further nuclear proliferation. (For details, see the author’s earlier articles in the *Frontier*: [“The Nuclear Legacy”, 26 (December 4, 1993) 6-9; “Origin of the Cold War”, 28 (June 22, 1996) 5-8; “Morality and Ethics of Nukism”, 31 (October 25-31, 1998) 4-8].

Mahatma Gandhi - His Mentor

‘Mentor’ means an experienced and trusted adviser and originated from the name of “Mentor”—the advisor of the young Telemachus in Homer’s epic poem—“The Odyssey” in the 8th century, BC. Einstein never met Gandhi, but the Mahatma influenced his pacifist thoughts to a great extent. On the

occasion of Gandhi's 70th birth anniversary in 1939, Einstein wrote:

“A leader of his people, unsupported by any outward authority; a politician whose success rests not upon craft nor mastery of technical devices, but simply on the convincing power of his personality; a victorious fighter who has always scorned the use of force; a man of wisdom and humility, armed with resolve and inflexible consistency, who has devoted all his strength to the uplifting of his people and the betterment of their lot; a man who has confronted the brutality of Europe with the dignity of the simple human being, and thus at all times risen superior.

Generations to come, it may be, will scarce believe such a one as this ever in flesh and blood walked upon this earth.” (Published in *Out of My Later Years*, New York, Philosophical Library, 1950).

Einstein met a fellow pacifist-Romain Rolland (1866-1944), French philosopher, Nobel Laureate in Literature in 1915, at Vevey near Lake Geneva on September 6, 1915. Rolland was impressed by his outspoken views about frenzied war advocates in Germany, including some of his own colleagues [among them, Walther Hermann Nernst (1864-1941), Nobel Laureate in Chemistry (1920) and Fritz Haber (1868-1934), Nobel Laureate in Chemistry, (1918)]. Rolland described him as “one of the very few men whose spirit has remained free among the general servility.”

Mahatma Gandhi was his moral mentor/guru. In his study at Princeton home among the sagging bookshelves and frayed books there were a photo of Gandhi and a print of English physicist and chemist Michael Faraday (1791-1867) and Scottish physicist-James Clerk Maxwell (1831-1879) in old-fashioned picture frames (Denis Brian: *Einstein-A Life*, John Wiley & Sons Inc., New York, 1996, p.406). Gandhi's autobiography (*My Experiments with Truth*) was one of his regular favourite readings.

The Epilogue

Rapid aging gripped him. Though Einstein remained physically strong, his face became gaunt and lined, his hair and moustache turned white, and his eyes lost all sparkle and seemed to give visual proof of his fears for humanity. But for today and for posterity his wise words are, and will, remain vibrant as a reminder of his empathy for humanity:

“We shall require a substantially new manner of thinking if mankind is to survive.”

APPENDIX

**THE FAMOUS LETTER TO PRESIDENT
FRANKLIN D. ROOSEVELT**

Peconic, Long Island,
August 2nd, 1939.

Sir,

Some recent work by E. Fermi* and L. Szilard**, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future. Certain aspects of the situation which has arisen seem to call for watchfulness and, if necessary, quick action on the part of the Administration. I believe therefore that it is my duty to bring to your attention the following facts and recommendations:

In the course of the last four months it has been made probable through the work of Joliot*** in France as well as Fermi and Szilard in America—that it may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the immediate future.

This new phenomenon would also lead to the construction of bombs, and it is conceivable—though much less certain—that extremely powerful bombs of a new type may thus be

* LEO SZILARD (1898-1964)

- Hungarian-US physicist. Initiated the idea of an atomic bomb through large-scale generation of energy by nuclear fission, and worked throughout World War II on this, and with E. Fermi on the first atomic pile.

**ENRICO FERMI (1901-1954)

- Italian nuclear Physicist-Nobel Laureate in Physics, 1938 played a prominent part in developing atomic energy, and constructed the first nuclear reactor in 1942.

***FREDERIC JEAN JOLIOT-CURIE (1900-1958)

- French physical chemist—Co-Nobel Laureate in Chemistry, 1935, with his wife-Irene Joliot-Curie (1897-1956)
- Produced a nuclear chain reaction
- Son-in-law of Pierre Curie (1859-1906) and Marie Curie (1867-1934)
- Co-Nobelists in Physics, 1935 with Antoine Henry Becquerel (1852 -1908): (Marie Curie—again Nobel Laureate in Chemistry, 1911—First Double Nobel Laureate—Also First Woman Double N.L. so far.)
- Strong supporter of the Resistance movement in France during World War II against Nazi occupation
- Member of the French Communist Party
- High Commissioner for Atomic Energy (1946-1950)—President, World Peace Council
- “Stalin Peace” Prizewinner, 1951.

constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory. However, such bombs might very well prove to be too heavy for transportation by air.

The United States has only very poor ores of uranium in moderate quantities. There is some good ore in Canada and the former Czechoslovakia, while the most important source of uranium is [the] Belgian Congo. In view of this situation you may think it desirable to have some permanent contact maintained between the Administration and the group of physicists working on chain reactions in America. One possible way of achieving this might be for you to entrust with this task a person who has your confidence and who could perhaps serve in an unofficial [sic] capacity. His task might comprise the following:

- a) to approach Government Departments, keep them informed of the further development, and put forward recommendations for Government action, giving particular attention to the problem of securing a supply of uranium ore for the United States;
- b) to speed up the experimental work, which is at present being carried on within the limits of the budgets of University laboratories, by providing funds, if such funds be required, through his contacts with private persons who are willing to make contributions for this cause, and perhaps also by obtaining the cooperation of industrial laboratories which have the necessary equipment.

I understand that Germany has actually stopped the sale of uranium from the Czechoslovakian mines which she has taken over. That she should have taken such early action might perhaps be understood on the grounds that the son of the German Under-Secretary of State, von Weizsacker, is attached to the Kaiser-Wilhelm-Institut in Berlin where some of the American work on uranium is now being repeated.

Yours very truly,

Albert Einstein

Roosevelt replied, in part, thanking Einstein for his recent letter and important enclosure, on October 19, 1939, as follows:

“I have found this letter of such import that I have convened a board consisting of the head of the Bureau of Standards and chosen representatives of the Army and Navy to thoroughly investigate the possibilities of your suggestion regarding the element of uranium.”

(Rosenkranz: *Albert through the Looking-Glass*, 66-67. *Einstein Archive* 33-088.

Einstein's letter was bought at auction by the Forbes family.)

The new board met only two days later, on October 21, with Enrico Fermi, Leo Szilard, Edward Teller* and Eugene Wigner** serving as experts on nuclear fission.

A lesser-known letter was sent to Roosevelt five and a half years later, as Einstein came to fear the possible misuse of uranium:

March 25, 1945

Sir:

I am writing you to introduce Dr. L. Szilard, who proposes to submit to you certain considerations and recommendations. Unusual circumstances which I shall describe further below induce me to take this action in spite of the fact that I do not know the substance of the considerations and recommendations which Dr. Szilard proposes to submit to you.

In the summer of 1939 Dr. Szilard put before me his views concerning the potential importance of uranium for national defense. He was greatly disturbed by the potentialities involved and anxious that the United States Government be advised of them, as soon as possible. Dr. Szilard, who is one of the discoverers of the neutron emission of uranium on which all present work on uranium is based, described to me a specific system which he devised and which he thought would make it possible to set up a chain reaction in unseparated uranium in the immediate future. Having known him for over twenty years both from his scientific work and personally, I have much confidence in his judgment, and it was on the basis of his judgment as well as my own that I took the liberty to approach you in connection with this subject. You responded to my letter dated August 2, 1939 by the appointment of a committee under the chairmanship of Dr. Briggs*** and thus started the Government's activity in this field.

The terms of secrecy under which Dr. Szilard is working at present do not permit him to give me information about his work; however, I understand that he now is greatly concerned about the lack of adequate contact between scientists who are doing this work and those members of your Cabinet who are responsible for formulating policy. In the circumstances, I consider

*EDWARD TELLER (1908 -)

- US-Hungarian physicist. Worked on the atomic bomb project (1941-1946)-one of the architects of the crash programme to build and test (1952) the world's first hydrogen bomb.

**EUGENE PAUL WIGNER (1902-1995)

- US-Hungarian physicist, Nobel Laureate in Physics, 1963.

***DR. LYMAN BRIGGS

- Director of the Bureau of Standards, Government of the USA at the time.

it my duty to give Dr. Szilard this introduction and I wish to express the hope that you will be able to give his presentation of the case your personal attention.

Very truly yours,

A. Einstein

Roosevelt died April 12, 1945, of a cerebral hemorrhage. It is believed he never saw this letter.