HOTEL DUPONT PLAZA WASHINGTON, D.C.

January 6, 1964

Dr. Jonas Salk The Salk Institute for Biological Studies Post Office Box 9499 San Diego 9, California

Dear Jonas:

I have your circular letter regarding Herman Muller. I have kept in touch with him regarding his retirement and it is my understanding that he is committed to go to the City of Hope in the Fall of 1964 for one year but has no plans for the time thereafter. At least this was the state of affairs when I talked to him in September of last year at the International Congress of Genetics in the Hague.

My suggestion would be that the Institute invite Muller to be a Visiting Professor for three years, preferably starting next summer if he can get out of his commitment to the City of Hope, otherwise, he could come to the Institute a year later.

When I last saw Muller he was just as lively as always and I think that his presence would be a great asset to the Institute.

Sincerely yours,

Lentre hund

Leo Szilard

PS Perhaps you would want to ask Muller to visit the Institute, not to give a formal talk, but rather to tell us what he is thinking about, at a time when the rest of us also speak about what we are thinking about.

HOTEL DUPONT PLAZA WASHINGTON, D.C.

January 6, 1964

Dr. Jonas Salk The Salk Institute for Biological Studies Post Office Box 9499 San Diego 9, California

Dear Jonas:

I meant to write to you about Don Glaser before this. I have been following the development of his interest in biology and when I last saw him it was clear that he is now definitely hooked. I think it might be desirable to ask him to serve as a Non-Resident Fellow, perhaps to replace me when I resign to become a Resident Fellow.

The concrete proposal which I want to make at this point is that we invite Glaser to be with us for one or more days during the meeting of the Fellows in February, the days when we are scheduled to discuss our scientific plans.

Sincerely yours,

Lentertund

Leo Szilard

PS On that occasion, he could tell us about his own work which would enable the Fellows to get an impression of his approach to biological problems



COUNCIL FOR A LIVABLE WORLD

National Office: 1346 Connecticut Avenue, N.W., Washington, D.C., 20036, Phone: 265-3800, ac 202, Cable: DELPHINI WASHINGTON, D.C.

BERNARD T. FELD ALLAN FORBES, JR. DANIEL M. SINGER H. ASHTON CROSBY JOHN SILARD

President Vice-President Secretary-Treasurer Executive Director Counsel

February 21, 1964

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Persons Interested in Leo Szilard's Speech "Are We on the Road to War?" and the Council for a Livable World

From: Bernard T. Feld, President

H. Ashton Crosby, Executive Director

You will remember that last spring we reported to you on the steps that had then been taken to implement Dr. Szilard's proposal to form a new type of political organization -- an organization dedicated to working for attainable measures to reduce the risk of war, to halt the arms race, and to progress toward disarmament.

MATTHEW MESELSON JAMES G. PATTON Denver, Colo. CHARLES PRATT, JR. New York, N.Y. This organization -- the Council for a Livable World -- was formed in June 1962 and, as you already know, participated in the September 1962 DANIEL M. SINGER Washington, D.C. congressional elections with impressive results. Supporters were asked

to send their contributions to the Council for transmittal to candidates recommended by the Council, and more than \$36,000 in campaign contributions were thus received. All five candidates recommended by the Council won their election or reelection to the The most outstanding example was George McGovern, who received from supporters of the Council over \$20,000, representing about one-fifth of his total campaign expenditures. McGovern was elected to the Senate by a margin of less than 600 votes -- the first Democratic Senator from South Dakota in twenty-six years! His maiden speech on the floor of the Senate, which you have already received, was a remarkable and courageous statement, and he has since addressed the Senate in equally impressive fashion on the need to cut the arms budget without impairing security and to reallocate the monies involved.

These events confirmed our belief that a relatively small group of dedicated individuals, by pooling their material resources, can achieve impressive results that are far greater than their numerical strength would indicate.

On the strength of this initial success, the Council has, during the past year, further implemented the twin proposals of Dr. Szilard:

- 1. Providing substantial campaign funds to outstanding congressional candidates;
- 2. Operating an effective lobby in Washington directed toward policies that can reduce the risk of war.

The Council's activities have been many: A legislative and policy program was initiated, including a continuing series of seminars for Senators and their top aides; testimony was provided in support of the test-ban treaty and the arms control and disarmament agency appropriations legislation; study papers were sponsored and disseminated to leading Senators and key officials on current U.S. strategic nuclear policy, the defense budget, and foreign policy; congressional hearings on the economic aspects of disarmament (by Senator Clark's Subcommittee on Manpower) were initiated. described in more detail in the November 1963 "Washington Bulletin," which is enclosed.

(The "Washington Bulletin" is distributed regularly to all Supporters of the Council; although this is not the most recent issue, it includes a summary of 1963 activities that will help bring you up-to-date on some past activities.)

The Council also recommended the support of three Senators who will be up for reelection in 1964: Senators Burdick, McGee, and Moss. The response to this request was exceptionally large. The Council transmitted (as of 1 February) about \$13,000 to Senator Burdick; \$7,000 to Senator McGee; \$7,000 to Senator Moss; and \$3,000 to other Senators (and, in addition, received substantial contributions to its general funds). It is considered unusual indeed for such sums of money to be transmitted to candidates by a group so small, and by any group so far in advance of the election itself. Needless to say, the recipients were highly gratified, and the status and effectiveness of the Council in its Washington activities has been commensurately increased.

The Council continues its Washington activities, and will be active in the forth-coming campaigns, both in providing assistance to additional Senators (to be recommended as soon as election situations crystallize in some areas) and in providing information and advice on certain issues.

We will inform you further of current activities and some plans for the future. We do so in the hope that you will seriously consider becoming a Supporter of the Council. We ask for what is admittedly a substantial commitment: Supporters of the Council are expected to expend two per cent of their income per year, or, if this is unrealistic, one per cent of their income or \$100 (forwarded annually, semi-annually, bi-monthly, or monthly, as you prefer). But we do so in the belief that your contribution, together with those of the scientists, scholars, professional persons, and others who already support the program of the Council, can have an important effect on ameliorating the arms race.

The enclosed questionnaire is provided for your convenience in replying. If you share our aims and our enthusiasm for this practical method of implementing them, we urge you to become a Supporter now.

Sincerely yours,

Bernard T. Feld,

President

H. Ashton Crosby,

Executive Director

A Note to Present Supporters of the Council: It is difficult to cross-check the list of all persons who initially requested this information against our membership records. If you are already a Supporter, just check the appropriate box on the enclosed questionnaire and we will be glad to clear our records.

COUNCIL FOR A LIVABLE WORLD-1346 Connecticut Avenue, N.W., Washington, D.C. 20036

QUESTIONNAIRE NO. 12

Name	
Address _	
口	I wish to become a Supporter of the Council for a Livable World.
	I enclose a check in the amount of \$ for one-half of my 1964 contribution.
	I enclose an initial contribution of \$, and I wish to be billed monthly in the amount of \$
	I enclose an initial contribution of \$, and I wish to be billed bi-monthly in the amount of \$
	I am not in a position to contribute substantially to the support of the Council at this time, but I wish to remain on the mailing list. I enclose \$10.00 to cover costs of preparation and mailing.
	* * *
	Please take my name off your mailing list.
	* * *
	I would like information on the Council to be sent to some additional persons. (Please list names and addresses on the reverse side of this sheet.)
	You may use my name in forwarding information.
	// Please do not use my name.

	Please send information on the Council for a Livable World to the following per	csons
1.	Name	1300
	Address	
2.	Name	
	Address	
3.	Name	ZZ.
	Address	
4.	Name	립
	Address	7.7
5.	Name	
6.	Address	
•	NameAddress	
7.	Name	
	Address	
8.	Name	
	Address	TA
9.	Name	
	Address	
.0.	Name	
	Address	

COUNCIL FOR A LIVABLE WORLD



WASHINGTON BULLETIN

November 1963

National Office: 1346 Connecticut Avenue, N.W., Washington, D.C., 20036

BOARD OF DIRECTORS: Co-Chairmen, WILLIAM DOERING, LEO SZILARD; Officers: BERNARD T. FELD, President; ALLAN FORBES, JR., Vice-President; DANIEL M. SINGER, Secretary-Treasurer; DIRECTORS: RUTH ADAMS, MAURICE S. FOX, JEROME FRANK, MARGARET BRENMAN GIBSON, MORTON GRODZINS, MATTHEW MESELSON, JAMES G. PATTON, ARTHUR PENN, CHARLES PRATT, JR., FRANKLIN W. STAHL

New Executive Director

Colonel H. Ashton Crosby became the Executive Director of the Council effective 1 November 1963. A word about his background is appropriate. He served twenty-two years as an officer in the Regular Army, received one battlefield promotion and a second pending at the end of World War II and was promoted on the truly outstanding (5%) list to full Colonel ahead of his contemporaries. Decorations include three Silver Stars, Croix de Guerre with palm, three Bronze Stars for valor and four Purple Hearts. He is a graduate of the Command and General Staff College, the Armed Forces Staff College and the Army War College. His civilian education includes a B.S. in Economics and an M.A. in International Political Relations. His basic branch in the Army was Infantry Airborne with a rating of Master Parachutist. He has served as a General Staff Officer and Troop Commander in Europe, the Far East and the United States.

Current Activities

- a. <u>Seminars</u> -- As mentioned in the August newsletter, the Council has been active in promoting and sponsoring a foreign relations forum. To date, the first highly successful meeting has already been held -- with Mr. Averell Harriman as the speaker. Future meetings on a regular basis will include other prominent speakers from the Executive branch and our own membership. These talks are to be expanded, as a separate endeavor, to the Republican Senatorial area.
- b. <u>Disarmament and the Economy</u> -- The Subcommittee on Manpower, Senator Clark, Chairman, began hearings on 6 November on the issues as proposed by the Council early in 1963, i. e. (1) the prospects for qualitative or quantitative reductions in the defense program in coming years, (2) the potential economic impact on industry and manpower of defense industry reductions, and (3) the nature and impact of outgoing defense industry shifts and relocations and the role of the Federal government in these shifts.

The Council can take full credit for the initiation of these hearings for it is generally recognized that the Council's analytical memorandum on this subject and its sponsorship of two meetings between government experts, outside experts and the Senate staff triggered the decision to hold the hearings.

John Silard, General Counsel for the Council for a Livable World, is a special consultant to the subcommittee Chairman, Senator Clark.

Roger Fisher, an Advisor to the Council, will address the subcommittee under the auspices of the Council.

c. Foreign Policy Study -- The Council is sponsoring a study prepared as a book by Richard Barnet and Marcus Raskin of the Institute for Policy Analysis on United States Foreign Policy. The study analyzes current United States foreign policy, the basic assumptions, shibboleths, and fixed ideas under which it functions and which in effect stultify liberalizing efforts, and proposes a series of unilateral actions by the United States which the authors consider will do much to ease tensions in Western Europe and lead to the possibility of a real detente. The resulting book is stimulating and will, it is hoped, provoke thought and discussion in the Executive and Legislative branches of the government. An advance edition at a special price to Council members will be made available; publication should be in early 1964.

Summary of Activities 1963

It might be well to summarize the activities of the Council during the past year: what has been accomplished plus an indication of what we hope to accomplish in 1964.

- a. The Legislative and Policy Program was initiated -- Seminars are now being held on a regular basis bringing together informally top Administration officials and/or Council personnel for the purpose of education and cross fertilization of ideas. It is hoped to continue these from time to time.
- b. The Test Ban Treaty -- Dr. Matthew Meselson testified in the Senate in support of the Test Ban Treaty under the auspices of the Council. In addition, the Council was active in generating support and publicity for the treaty and called upon its Scientists Committee with good effect.
- c. <u>Arms Control and Disarmament Agency</u> -- Professors Feld, Rich, and Fisher testified for the Council in regard to the Arms Control and Disarmament Agency appropriations legislation. Professor Feld testified on 2 May 1963 before the House Committee on Appropriations, Professor Fisher before the Senate Foreign Relations Committee on 10 April, and Professor Rich before the House Foreign Affairs Committee on 10 September.
- d. <u>Economics of Disarmament Hearings</u> -- The Council acted as the catalyst in the initiation of Senator Clark's Subcommittee on Manpower which began hearings on 8 November on the economics of disarmament, reconversion and automation.
- e. <u>Study Papers</u> -- The Council is sponsoring the preparation of a Foreign Policy Study in book form by Messrs. Raskin and Barnet of the Institute for Policy Analysis. In addition, the Council had prepared various study papers and in 1963 the following were published and forwarded to our supporters:
 - 1. Current United States Strategic Nuclear Policy -- Michael Brower

- 2. The Defense Budget: Selected excerpts from the Statement of Secretary of Defense Robert S. McNamara before the House Armed Services Committee -- Bernard Feld.
- f. <u>Defense Budget Amendment</u> -- Two highly successful seminars to a bipartisan Senate group were conducted by the Council. The first seminar was conducted by Dr. Freeman Dyson, Theoretical Physicist at Princeton Institute for Advanced Study, and the second by Dr. Ralph Lapp, Physicist and Executive Director of Quadri-Science, Inc.

The effort was directed primarily to those Senators whom the Council hoped would amplify and develop on the Senate floor some of the ideas discussed. In fact, Senator McGovern did propose an amendment to the defense budget but since it came up for action on the day following the signing of the Test Ban Treaty, the hope for discussion did not materialize. However, the concepts proposed were valid and will certainly be proposed again by Senator McGovern and other Senators. The Council will continue to contribute efforts toward making such discussions as fruitful as possible.

- g. $\underline{\text{Direct Mail}}$ -- Four direct mail campaigns were made to enlist new members, the most recent of which was mailed to approximately 100,000 persons, and has been underway for about one month.
- h. Administration -- The appointment of a full-time Executive Director, the appointment of an Executive Committee, the acceptance on the Board of Directors of Drs. Meselson and Frank, and the appointment of Advisors: Richard Barnet, Roger Fisher, Hans Morgenthau, and Freeman Dyson. The Executive Committee meets at least once every month and the Board of Directors about four times a year.

1964 Program

- a. The direct mail program will be continued and expanded to enlarge Council membership and effectiveness.
- b. The Board of Directors will be expanded for the purpose of broadening the Council's base and insuring greater objectivity and potential support.
- c. <u>Current Seminars</u> will be continued and a new series for Republican Senators will be initiated.
- d. For the 1964 Campaign recommendations will be made by the Council to its supporters concerning the selection or re-election of selected Senators and Representatives.
- e. A basic statement of Council aims with respect to United States Foreign Policy in Western Europe will be developed. This will be the foundation of the program which the Council will develop and emphasize in our contacts with the Administration and Congress.

f. <u>Some speakers on the basic subjects</u> of disarmament, foreign policy and armaments will be sponsored by the Council. Depending on the potential size of this audience, certain Senators have indicated a willingness to talk under Council auspices.

The Support of Council Members

The Council invites its supporters to advance suggestions and recommendations to improve its operations, membership, and effectiveness, and welcomes your ideas. Please write the Washington office.

Council for a Livable World 301 Dupont Circle Building 1346 Connecticut Avenue, N. W. Washington, D. C. 20036

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1346 Connecticut Avenue, N. W.

Washington, D. C. 20036

2 March 1964

Dr. Leo Szilard
The Salk Institute for Biological Studies
La Jolla, California

Dear Dr. Szilard:

This letter will confirm our arrangements to appoint you a Resident Fellow of the Salk Institute effective 1 April 1964, generally in accordance with the option contained in my letter of 21 May 1963.

In line with the current policies of the Institute, your annual salary as a Resident Fellow would amount to \$25,000 and continue for life, except that there would be deducted from this salary any retirement annuities due you from T.I.A.A. when you reach the age of retirement at the Salk Institute. As you know, we have not yet set a retirement age for Fellows of the Institute although our retirement plan calls for the retirement of other employees at age 65. We have discussed, but not settled upon, a retirement age of 68 for Resident Fellows. When such a retirement age is established for Resident Fellows at the Institute, your annual salary of \$25,000 would be reduced by the amount of your current retirement annuities. Also, at that time your group life insurance will be reduced from three times the annual salary to one time the annual salary.

Your budget for secretary, travel and other incidental expenses in connection with your duties as a Resident Fellow would be \$10,000 per year, as set forth in my letter of 21 May 1963.

Sincerely yours,

Jonas Salk

Figures subjectivele

FROM:

Leo Szilard

March 2, 1964

SUBJECT:

The Estate of Resident Fellows

It is assumed that the estate of a Resident Fellow will amount to \$100,00 per year. To this estate will be charged his salary and benefits, estimated at \$31,500 and direct costs up to \$28,500 (\$170,000 for six Resident Fellows for such direct costs as salaries of animal man, mechanic, glass blower, etc.) This leaves a residue of \$40,000 which the Fellow could spend for his research.

It is estimated that a Resident Fellow will need for his research \$55,000 and another \$15,000 for his contribution to the salary of a tenure position in his department or a total of \$70,000 per annum.

This will leave a deficit of \$30,000 per annum in years in which the Fellow has no Government grant. It is proposed to resolve this problem, not by increasing the estate, but by giving each Fellow at the outset a revolving fund of \$90,000 out of which he could cover the deficit for a period of three years. After that time he would have to apply for a grant if he wishes to continue operating at full capacity.

If a Fellow were to operate for three years without a grant and thereafter receive a grant of \$50,000 a year he could replenish his revolving funds at the rate of \$20,000 a year, i.e. after 4½ years would have replenished his revolving fund of \$90,000.

If we assume that on the average grants will amount to \$50,000, on the average the Resident Fellow should be able to save \$20,000 per year. The saving would go into reserve funds in order to retain the incentive for the Fellow to save, but prevent the accumulation of excessive reserves it is proposed that

whatever a Fellow has in reserve in excess of \$90,000 - his revolving fund - should be taxed at the rate of 20% per annum in favor of the general expenses of the Institute.

It is proposed that revolving funds which would amount to \$540,000, forsix Resident Fellows, be raised as part of the funds necessary to equip the Institute and the sum needed for equipment which was estimated at \$1,000,000 should accordingly be raised to \$1,540,000.

Leo Szilard

Szilard's Counter Proposal to Administrative Policy Committee Proposal of March 10 regarding College Benefits

Children of Resident Fellows who go to college or graduate school shall be offered by the Institute a loan of up to \$2,000 per year up to a total of four years, i.e. up to a total of \$8,000, which is repayable by the recipient free of interest in 25 yearly instalments. (i.e. The instalments could amount to a maximum of \$320 a year). The first instalment shall be due at the end of the fourth year after the recipient is leaving college or graduate school, whichever is later.

To:

Salk
Bronowski
Lennox
Cohn
Glazier

Dear Leo, I want to add a few remarks about Jack Sadler which I may not have expressed in my phone call. 1) He has the attractive virtue of great enthusiasan

for good ideas. If someone offers him an idea better than his own he has no psychological difficulties and will

work enthusiastically on the better idea.

2) He was raised in the West and has the cheerful open personality of westerners, but he clas has gained by the years he spent at Oxford.

as played are very important love in our work. In fact it was his experimente and ideas which convensed me that the represen "turns-over,"

4) We are currently working on a number of quite complex experiments and he is very able to keep on

top of them all.

to your community (Brenner liked him very much). He will make no commitment until after he has visited La Jolla.

on the nervous system work.

and Wel. Blease give my best to Trudy and to Sugarne Bestregards,

darm

John Richard Sadler

Born Jan. 13, 1984 in Edgemont South Dakota

Graduated from Lovell Public High School, Lovell, Wyoming Jume 1952

Graduated from Reed Collège, June 6, 1956 major in chemistry

Awarded Rhodes Scholarship-Wyoming & Brasenose College Oxford in January 1956

Received Honours Dequee in Chemistry from Oxford U.

Received D. Phil From Oxford U. in July 1961:

Thesis Topic. Aspects of C2 metabolism in micro-organisms.

Tuesis Advisor. Dr. Have L. Kornberg- (now Prof. al. U. of

Married Julia Renate Tecklenburg in Lichterfelde, West Berlin July 28, 1961

A son, Wilfrid Jörg Sadler, born July 7, 1963.

Publications

1) Acetate Metabolism in Eschevichia coli. Kovuberg. H.L. Phizackerley P.J.R., & Soclen J.R.

2) The oxidation of Glycollate in Micro organisms. Kornberg & Sadler, Nature

3) Synthesis of Cellular Material from Acelute in C. coli Kornberg, Phizackerley& Sadler Brochem. J. 1960

4) Oxidation of Glycollate via a Dicarboxylic Acid Cycle. Kornberg & Sadler Biochem J. 1961

1 June 1964

We are all saddened beyond words at the passing of Leo Szilard whom we have all loved and respected. We will miss him deeply.

Out of respect to his memory, the Laboratory will close at Noon.

A Memorial Service, to express our feelings, will be held at a later time.

Cremation is to take place at 1:00 P.M. and will be attended only by those related to him. Mrs.Szilard will receive visitors later this afternoon and tomorrow at their home, in the Del Charro Hotel.

Jonas Salk

(This letter was originally sent to supporters of the Council.)

COUNCIL FOR A LIVABLE WORLD

National Office: 1346 Connecticut Avenue, N.W., Washington, D.C., 20036, Phone: 265-3800, ac 202, Cable: DELPHINI WASHINGTON, D.C.

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Executive Director

June 3, 1964

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JAMES G. PATTON Denver, Colo.

ARTHUR PENN New York, N.Y.

CHARLES PRATT, JR. New York, N.Y.

DANIEL M. SINGER Washington, D.C.

Dear Supporter:

It is with profound sorrow that the Council for a Livable World informs you of the death of its founder, Dr. Leo Szilard. Dr. Szilard died quietly, in his sleep, on May 30, 1964, at the age of 66. At the time, Dr. Szilard was in La Jolla, California as one of the permanent fellows of the Salk Institute, working on a new theory of the biochemical basis of the memory process.

Leo Szilard will be remembered as one of the major figures in the explosive development of physics and biology in the 20th century. In Berlin in the early 30's, where he worked with Einstein and von Laue, his pioneering papers on the relationship between the statistical behaviour of complex physical systems and the organization and utilization of information in general, laid the groundwork for and anticipated many recent developments in information theory and cybernetics.

With the seizure of power by Hitler, Szilard left Germany for England. Here he undertook work in nuclear physics, first in London and then at Oxford. Of the many ingenious and important investigations carried out by him during this period, one can, in retrospect, observe as an underlying theme the search for nuclear processes which gave promise of providing means for releasing the energy stored in atom nuclei. While in England, he helped to set up an organization which arranged for the escape of a large number of distinguished scholars from Nazi Germany. Convinced by Munich that war in Europe could not be far off, he came to America in 1939, where he was welcomed as a visiting scholar at Columbia University.

Szilard was among the first to recognize the tremendous potentialities inherent in the discovery of nuclear fission; he and W. H. Zinn carried out one of the earliest experiments demonstrating that, through the emission of neutrons, the fission process had the potential for a sustained nuclear chain reaction. His role in establishing the Manhattan project, and in its success, is well known. He shared with Enrico Fermi the basic patent for the nuclear chain reaction, and he was awarded the Atoms for Peace prize in 1959.

Perhaps the outstanding feature of Szilard's contribution to the Manhattan project was his remarkable ability to foresee well in advance those aspects of the problem which would in later stages present the greatest difficulty, and to begin well in advance the necessary researches for overcoming these difficulties. Thus it was Szilard who anticipated the need to obtain pure graphite and pure uranium metal in very large quantities; and it was on his initiative that research was started in time to make feasible the Hanford reactors.

He also saw early and with great clarity what would be the consequences of nuclear weapons and their spread, and he took the initiative in bringing these problems to the attention of President Truman before the first bombs were available, urging a demonstration before they were used against population centers.

After the war, Leo Szilard started a new career in science—in the field of microbiology and genetics. In this field his contributions have also been marked by that special ingenuity and penetrating clarity which was the hall-mark of all Szilard's work, both in science and in politics.

In the last 20 years, Leo Szilard devoted the major part of his efforts to the problems of avoiding nuclear war. He organized, with Einstein and others, the Emergency Committee of Atomic Scientists, which launched a major program of public education on the implications of nuclear energy and, in particular, the necessity for effective international control over the growth and spread of nuclear weapons. Dr. Szilard was one of the original signers of the Einstein-Russell appeal which led to the Pugwash Conferences on science and world affairs. He participated in most of these conferences and could be unfailingly depended upon to introduce that necessary ingredient of goodhumored novelty and consistent attention to essentials, without which the conference might many times have foundered.

In 1959, Dr. Szilard was stricken with cancer. His cure, due in no small measure to his own ingenious variation of the medical techniques available, was followed by a renewed interest in political problems. In 1961, Dr. Szilard started the Council for a Livable World and in the ensuing years he personally gave it direction and meaning. The Council will remain a monument to his idealism and practicality.

chain resotion. His role in establishing the Marlantean project, and in the

the nuclear chain reaction, and he was awarded the atoms for Peace orise in

to America in 1939, Whole he was

Sincerely,

Bound T. Deld

Bernard T. Feld,
President

THE HOLTER RESEARCH FOUNDATION

A NON-PROFIT CORPORATION

HELENA, MONTANA

TRUSTEES

HUGH GALUSHA, JR., HELENA JOSEPH A. GENGERELLI, LOS ANGELES JOAN T. HOLTER, HELENA NORMAN J. HOLTER, HELENA ROGER R. REVELLE, LA JOLLA

June 3, 1964

OFFICE
25 W. 6th AVENUE
TELEPHONE 442-4820
LABORATORY
100 NEILL AVENUE

TELEPHONE 442-3325

Mrs. Leo Szilard c/o Salk Institute of Biological Studies La Jolla, California

Dear Mrs. Szilard:

Mrs. Holter and I were shocked to read of the sudden tragic loss of your husband. I felt privileged indeed to have made his brief acquaintance during my recent stay in La Jolla.

We extend our deepest sympathy to you on your loss. The loss to science generally and to the Salk Institute in particular is profound.

I trust that you might consider residing in La Jolla where you would make a host of new friends and lead an interesting life with all the fine scientific and medical activity there.

I am joining the staff of the Institute of Geophysics and Planetaryphysics in October of this year and will be in La Jolla briefly the week of June 22nd in connection with my home, which is under construction. I will look forward to saying hello if you are there.

Again, our sympathy and best wishes for the future. With all the advantages of the past, the future has the great advantage that it can be changed.

Sincerely yours,

Norman J. Holter President

NJH/jn

cot Dr Jones Salk

I your

parms to go

Dear Mr. Eaton:

I know how close you were to LeoSzilard and thought you would like to know what is to take place.

If it would be possible for you and Mrs. Eaton to be here at this time, we would be very pleased as would Mrs. Szilard.

Sincerely,

Jonas Salk

Mr. and Mrs. Cyrus Eaton Acadia Farms Northfield, Ohio

9 June 1964

To : Dr. Bronowski

From : Jonas Salk

Subject: Commemoration Ceremony on Saturday, 13 June

Do you think that it would be well to let members of the local press know about this occasion that we might better control what might happen?

Harold Keen of T. V. Channel 8 was to see you about a television interview with Leo and called the day he died. He would be very cooperative and appreciative to know what is to happen, if we are to bring communications people in and hope to maintain the dignity of the occasion.

June 7, 1964

Dear Jours

this contributions were but the kind tent lends itself to mistrationalization.

yet, we may be that his intentions and values will applicate and evolve through the cost init of there who work with your and it is an intentions.

Lyoner repards

INDIANA UNIVERSITY

BLOOMINGTON, INDIANA

DEPARTMENT OF ZOOLOGY 204 Jordan Hall

June 10, 1964

To the Fellows
The Salk Institute for Biological Challes
San Diego, California

Permit me to join with you in accuraing the tragic loss to your group and to the whole world of the greatest person of our time since Einstein -- Leo Tailard. His was the creative, constructive imagination which, more four that of anyone else, ushered markind into the atomic and the reinted out its unprecedented potentialities both for progress and for estastrophs, and which led the way in finding and a stomenting means of avoiding the catastrophs. Tailard's icons and the catastrophs are all affairs, and polities. He embodied the unity of culture and his science was a part of his humanism. His literary ventures are unsurpassed in their verve, originality, satirical effectiveness, and refreshing qualities.

although Leo Szilard was in residence at the Salk Institute for so short a time his connection with it was such an integral one that his spirit will continue to involgorate it. Although he would have been among the first to resource any hypocritical pretense of literal continuity for his personality after his passing away, nevertheless his spirit is in the best sense of the unit importal, and it will forever be associated with the Tall Institute.

HJM:slh

Hermann J. Muller

JUN 1 0 1964

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O SDA118(O PKB155) NL PD STANFORD UNIVERSITY CALIF 8 THE FELLOWS OF THE SALK INSTITUTE.

OR BIOLOGICAL STUDIES SAN DIEGO CALIFORNI

I FEEL CHEATED THAT I DIDNT GET TO KNOW LEO SZILARD BETTER HAVING KNOWN HIM WELL YOU MUST FEEL EVEN MORE SO. NEWSPAPER EDITORIALS HAVE ALREADY EULOGIZED HIS CONTRIBUTION TO ATOMIC ENERGY AND HIS COMPASSIONATE CONCERN FOR ITS PEACEFUL USE I JOIN YOU IN ANY SERVICE THAT COMMEMORATES HIS DEVOTION AND OUTSTANDING SERVICE TO MOLECULAR BIOLOGY AND I JOIN HIS CLOSEST COLLEGUES IN THEIR GRIEF THAT LEO SZILARD IS NOW REPRESSED. ARTHUR KORNBERG STANFORD UNIVERSITY.

448A PDT JUN 9 64

We share your grief on the untimely death of Leo Szilard. As personal friends, as members of the scientific community, and even more, as members of the human' race, we all feel a keen sense of loss that this brilliant light has been extinguished. His scientific contributions need no testimonial. What we miss most deeply is his untiring and imaginative leadership in the continuing struggle to secure for all the world an abiding peace.

Paul Berg David S. Hogness Dale Kaiser

Stanford University

received 12 June 11:00 a.m.

JUN 4 1964

VOD130

SA279 S CDU718 WUB525 RDF0667 30 PD INTL FR CD PARIS VIA RCA 2 1720

SALK AND FELLOWS SALK INSTITUTE

POB 9499 SANDIEGO(CALIF)

SHARE WITH YOU DEEP SORROW FOR LOSS OF GREAT SCIENTIST AND FRIEND STOP PLEASE EXPRESS MY PROFOUND SYMPATHY TO MRS SZILARD

MONOD

TELEGRAMS

Received by WESTERN UNION Saturday, 12 June, 1964 but could not transmit 'til 15 June

(1) Cambridge, England.

To: Director and Fellows of Salk Institute

Please add my many happy recollections of Leo
to your own.

Francis

(2)
Montreal, Canada

We join in highest tribute to Leo Szilard whose loss is keenly felt by us all especially for his promising recent contribution to molecular theories of memory. Heartfelt sympathy to Mrs. Szilard.

H. Jasper, McGill

- Felgi

June 10, 1964

Dear Dr. Salk:

Thank you very much for your kind invitation to the ceremony for Leo Szilard. We wish that we might be there to demonstrate our great admiration and affection for him.

Mr. Eaton, of course, knew him from the Chicago experiment days. For me he was the first of the long procession of eminent scientists whom it was my privilege to meet through the Pugwash conferences, and when I tell about them I always begin with Leo who arrived first minus his luggage but with all the wisdom necessary for the future.

I wish that those gathered on the 13th would know that we would have attended if we could, and that we are tremendously grateful for Leo's never-ending work for sanity.

I cannot write to you without expressing my great gratitude for your Vaccine. As a polio, '46, in a wheel chair, I have a profound appreciation of your great contribution.

Cordially,

(Mrs. Cyrus S. Eaton)

anne Eator

Dr. Jonas Salk Salk Institute for Biological Studies Post Office Box 9499 San Diego, California



June 10, 1963

Gentlemen:

I sincerely regret that other scheduled activity will make it impossible for me to join with you in the ceremony of commemoration for Leo Szilard on Saturday afternoon, June 13th.

I appreciate your thinking of me and look forward to other opportunities to participate in your activities as the occasion may arise and my schedule will permit.

Sincerely yours,

Frank Curran

Salk Institute For Biological Studies

Attention: The Fellows Post Office Box 9499

San Diego, California 92109

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

SANTA BARBARA, CALIFORNIA

OFFICE OF THE CHANCELLOR

June 11, 1964

Salk Institute for Biological Studies San Diego, California

Gentlemen:

I regret that I cannot attend the ceremony in commemoration of Leo Szilard on June 13, since that is the date of our Commencement exercises at UCSB. Thank you for your kind invitation.

Sincerely,

Vernon I. Cheadle Chancellor

Links and

FEBRUARY ELEVENTH EIGHTEEN HUNDRED NINETY-EIGHT

"What I brought into biology was an attitude: the conviction that mysteries can be solved. If secrets exist, they must be explainable."

> May Thirtieth Nineteen Hundred Sixty-Four

Leo Szilard

Jonas Salk

Quartet in C Major, No. 6

Andante

Mozart

Leo Szilard's Influence on Physics

Carl Eckart

QUARTET IN C MAJOR, Op. 76 No. 3
Adagio

Haydn

Leo Szilard in The Cause of Peace

Ruth Adams

Quartet in D Major, Op. 76 No. 5

Largo

Haydn

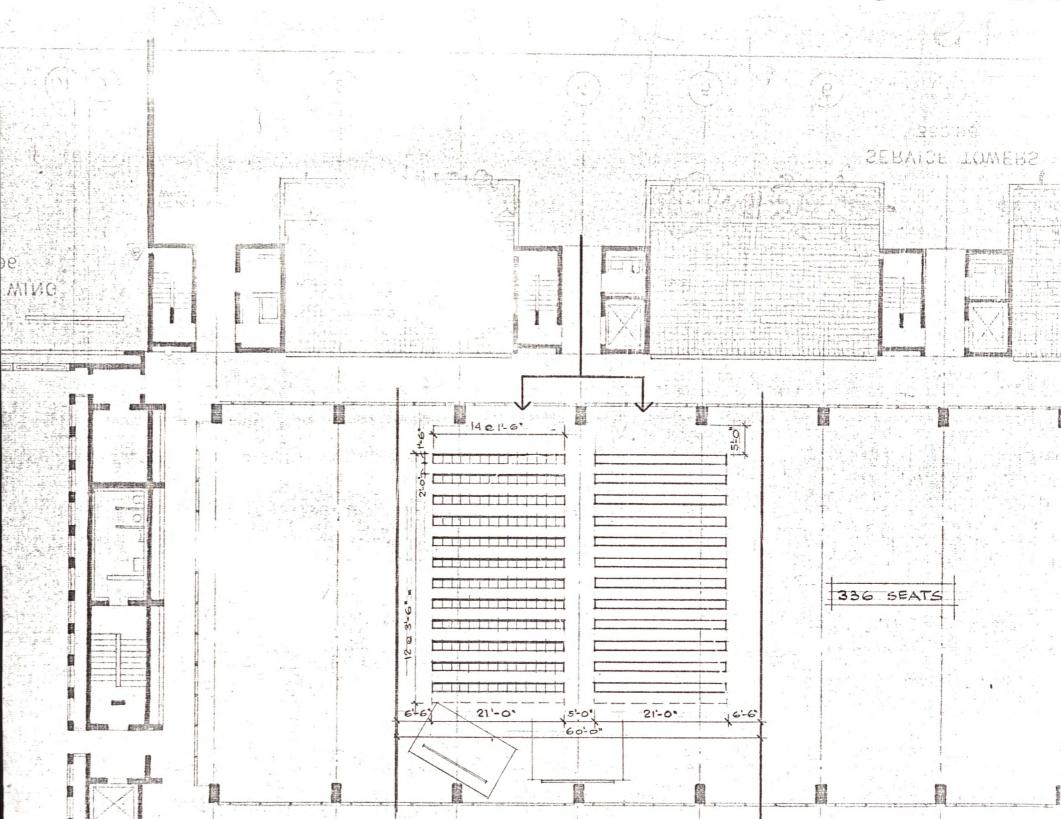
Leo Szilard, Biologist

Edwin Lennox

QUARTET IN D MINOR Andante

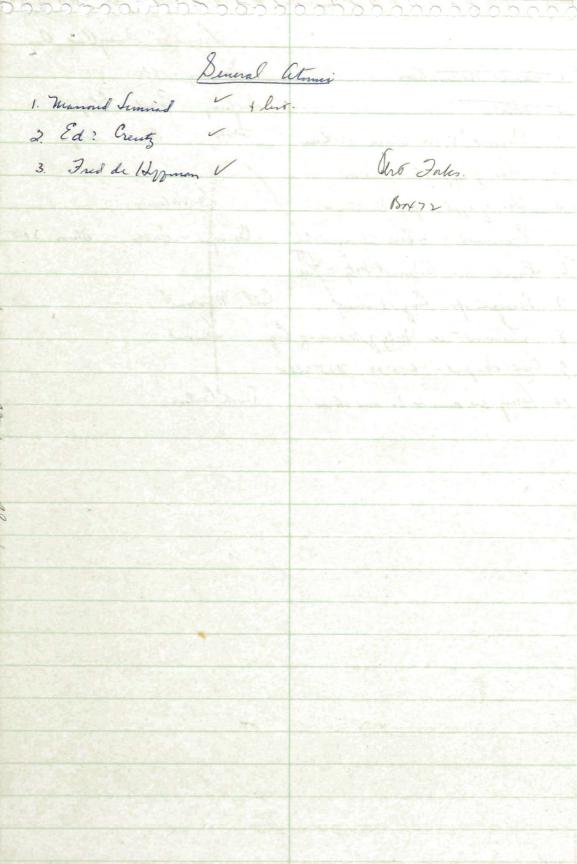
Schubert

JAMES GLAZEBROOK Violin
MARYLIN LAWRENCE Violin
SELMA KAMMERDINER Viola
JEAN MOE Cello



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THE SALK INSTITUTE FOR BIOLOGICAL STUDIES

TO:

J. Salk

DATE: June 10, 1964

FROM:

J. Bronowski

RE:

Leo Szilard's Work on Memory

In the two months that he spent at the Institute as a Resident Fellow, Leo Szilard had become deeply immersed in a new field of research: the working of the brain, and particularly the memory. He had written the draft of a substantial paper, which he intended to publish in the proceedings of the National Academy in three parts, and he had completed the first part and corrected it in proof: it will appear in the forthcoming issue of the proceedings under the title "On Memory and Recall", Part I. (As you know, I was collaborating with him on the mathematical formulation of the theory, and we intended to publish this in the proceedings with Part II.)

The outstanding feature of Szilard's new theory was that it provided an effective chemical basis for recording the manyfold parts which constitute a single memory in different cells in the brain. It made it possible to understand how a memory can be reinforced by repetition, and also how it can be extinguished (that is, forgotten) if it is not reinforced. As always, Szilard's theory was bold in general conception and yet searching in its detail: for example, it took account of the constant fluctuations in the level of chemical and electrical activity in the brain which no other theory had tried to accommodate.

J. Bronowski

LEO SZILARD

Lives of men are measured by what they have done with that which is revealed to them in the time at their disposal.

The significance of the revelations to Newton, to Darwin, to Einstein, have in time become clear. The depth and range of the revelations to Leo Szilard are surmised, but their full significance is yet to become known.

Some men have impelling visions that guide what they do.

It is the capacity to see beyond, to see relationships, to see the question, and to see solutions, that constitutes the mind that leads. Leo Szilard had this kind of mind. His was a rare gift which he appreciated in others even more than in himself. He urged that an Institute be created to be concerned with this human quality which needs to be cared for in special ways.

To those of us who had the privilege and pleasure of living with him in the last months of his life at the Institute, which his dreams helped create, he proved that happiness and productive creativity are not incompatible.

We will miss him for he can never be replaced. Men with such wisdom, in depth and in breadth, are rare. Chance alone limits their number. Such noblemen of science are not born to inherit by tradition the royal station which they attain. This they acquire through hard won respect, through the effort they expend in pursuit of that which they see sooner than do others.

Some minds convert detail to principle quickly while others move ponderously, defending all the way what earlier was believed to be true. Szilard wanted merely to know the facts which he then soon assembled into new forms of thought. This capacity to perceive the essence of things and to see and formulate fundamental principles was the nature of his wisdom.

He inspired those who value a man not alone for the qualities he possesses but for the way in which he uses these for the benefit of man. The effect he had upon others, and the effect others had upon him, brought into being much in which he was interested.

As he put it, Leo Szilard wanted "to do science." At the same time he had a devotion and dedication to the human problem, as was recognized by so many, and which, upon his death, brought world-wide admiration. Leo Szilard was a humanist with a powerful intellect. It was not his intellect alone that was so rare but the combination; and, it is this that must be perpetuated and proliferated.

At a time that is appropriate, we will bring together his thoughts and writings as a permanent part of the place upon which he had such impact at its very inception. There is much we need to learn about what it was that made him feel at peace and at one with himself here.

Eulogies will be recited by many, and each will reveal
a different aspect of this man of many parts. Eulogies are needed
by those who live on, to be able to say what is good about life
and what is good in life--because there is so much in life that is
otherwise.

These words merely touch lightly upon an admirable life, only a small part of which I have been personally aware. From what I have gleaned, the qualities of which I speak have always been there. Perhaps it was what his soul spoke out and the motives he revealed, even more than the solutions he proposed, that made one feel his greatness; and his solutions were so many and so brilliant as to have lighted wide and far the way for others to see.

Leo Szilard cared not to carry the torch but simply to light it; and, when there were not others to carry, he did so himself. Through him we realize not only how few there are to light the torch but how few there are to carry the torch. Of the torches he lighted, many have been carried far beyond his own visions.

He was always confident that others would eventually see what he saw and, therefore, did not spend his time on more than important issues. More in conversation, less in memoranda, and

still less in publication, he revealed the thoughts that came to him so quickly. He understood relationships clearly and sharply, and after thinking deeply about a problem which he had resolved to his own satisfaction, he then moved on to others, thus covering a range far greater than could otherwise have been possible.

To comment that he started something and did not always himself bring it to completion is to praise him for moving on when he had carried something as far as he could alone or with the resources then available. Leo Szilard was the rare prophet who did not stop to do battle in ways that would spend his creative energy wastefully.

Man moves forward as each generation reacts to its own time, seeing relationships which had not been seen by the generation before. A few men are in the forefront of their time. Leo Szilard was such a man. He was articulate and outspoken. He could be this way because of the strength of his conviction and because of his

courage. And, he was blessed with a sense of humor that was at the same time disarming and balancing.

Our memory of him will be not only that of a physicist, a biologist, and a politically-conscious scientist, but that of a man who was motivated toward relief of human suffering. His interest in peace and in problems of disease are all of one piece. As we have said, he was a humanist with a powerful intellect, but he was also a man with a warm heart.

It is regrettable that he could not have lived longer since he was on the verge of even greater contributions than those he had already made. Had he lived longer, he would have lit more torches, to shed more light, to be carried by others. We should feel neither cheated nor greedy; we should accept with gratitude his presence for three score years and six and acknowledge how much better is this world, and this life, for his presence.

Jonas Salk 13 June 1964

THE HOLTER RESEARCH FOUNDATION

A NON-PROFIT CORPORATION

HELENA, MONTANA

June 15, 1964

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Dr. Jonas Salk Salk Institute for Biological Studies La Jolla, California

Dear Dr. Salk:

Thank you so much for thinking of me in connection with the ceremony for Leo Szilard. This was forwarded to me at Helena, Montana and received yesterday. I regret very much that I was unable to be there to pay my respects.

Sincerely yours,

Tormen J. Holter Norman J. Holter

NJH/j

Signed by Anna Johnson in Mr. Holter's absence from the State

June 30, 1964

MEMORANDUM TO: Persons interested in the Council for a Livable World

SUBJECT: 1964 Congressional elections

This memorandum will bring you up to date on the candidates the Council recommends supporting in the 1964 congressional elections.

The Council has already recommended support of the following candidates for election to the Senate:

Gale W. McGee, Wyoming Frank E. Moss, Utah
Albert Gore, Tennessee Philip A. Hart, Michigan
Eugene J. McCarthy, Minnesota Edmund S. Muskie, Maine

To this list we now propose to add:

Joseph M. Montoya, New Mexico (present Representative and candidate for election to the Senate in 1964)

Ralph R. Harding, Idaho (candidate for reelection to the House of Representatives)

In the judgment of the Directors of the Council, on the basis of personal interviews with the candidates plus consultation with our political advisors and other knowledgeable persons in Washington, all of these candidates are worthy of your support, and the Council will be pleased to transmit contributions submitted in their behalf.

However, on the basis of the assessment of the status of their campaigns and of their relative needs at this time, the Council recommends that priority should now be given to support of the campaigns of McGee, Harding, Moss, Muskie, and Montoya. A brief assessment of each of these candidates follows:

JOSEPH M. MONTOYA, candidate for the Senate from New Mexico.

Joseph M. Montoya is now serving his fourth term as a Member of the U.S. House of Representatives. Immediately upon his election to the House he was elected to the House Judiciary Committee, the first New Mexican to serve on this important committee.

In the field of international affairs, Rep. Montoya has been selected by the President and by the Congress to represent the United States as a member of the Executive Committee of the Inter-American Parliamentary Organization and as a delegate to the Interparliamentary Conference. Congressman Montoya strongly supported H. R. 9118, the Arms Control and Disarmament Act. In addition, Congressman Montoya has been a strong advocate of the Nuclear Test Ban Treaty and, although as a representative, he did not have an opportunity to vote for the Treaty, he spoke in its favor and urged its support. Senator Mechem, his opponent, will have strong right-wing support and has opposed the test ban and virtually every other foreign policy move considered constructive by the Council.

Senator Mechem's voting record indicates 64 absents on roll call votes on major legislation, 1st Session, 88th Congress. Roll calls included absences on such bills as the Foreign Assistance Act of 1963; the Atomic Energy Commission Appropriation; the Convention and Ratification of the Chamizal; and the Foreign Aid Appropriations bill for FY 64. In addition, Senator Mechem's vote cancelled Senator Anderson's vote (Senior Senator, New Mexico) in the 1st Session, 88th Congress 110 times and in the 2nd Session to date 24 times.

GALE W. MCGEE, candidate for reelection to the Senate from Wyoming.

The Council once again recommends support for Senator Gale W. McGee who first won election to the Senate without prior political experience in 1958 while a Professor of American History at the University of Wyoming. In terms of Senator McGee's record, the Council feels amply justified in urging continued support. His voting record by Council standards has been outstanding, but in addition he has taken forceful and public stands on a variety of issues which have exposed him to attacks from the radical right. In speaking on the Senate floor on the Test Ban Treaty, Senator

McGee stated: "If the pioneers who settled the West had had the same state of mind as those who seek iron clad reservations to the Treaty, none would ever have passed the Mississippi. What the treaty is -- is a small chance to improve the outlook for human survival -- what the treaty does for us then is win a chance, albeit a small chance, to bring peace to mankind."

As a member of the Appropriations Committee, he has consistently fought for larger appropriations for major State Department programs such as the Agency for International Development, the United States Information Agency, The Alliance for Progress, Non-Military Oriented Foreign Aid Programs, and the like. His opponent will probably be John Wold, a former Republican State Chairman, who titles himself a Goldwater Republican.

EDMUND MUSKIE, candidate for reelection to the Senate from Maine.

Senator Edmund Muskie of Maine, running for reelection, has had a distinguished record. He first received national attention when he ran for the governorship of Maine in 1954 and won the election at a time when the Democratic party in Maine to quote Senator Muskie "was not at the bottom of the barrel, but under the barrel." After two terms as Governor, Senator Muskie ran for his present Senate seat in 1958, becoming the first Democrat ever to be elected to the Senate from the State of Maine. He has had an outstanding Senate record in the domestic field, and in the field of foreign affairs. He has been an active and outspoken champion of the United Nations, of Foreign Aid and various measures supporting the Arms Control and Disarmament Agency. He has been a consistent advocate of seeking ways to alleviate the arms race and has made a number of major speeches throughout the country on this subject. His record on foreign affairs by Council standards is excellent.

FRANK E. MOSS, candidate for reelection to the Senate from Utah.

The Council again recommends support for Senator Frank E. Moss of Utah now seeking a second term. Senator Moss' record on foreign affairs is outstanding. He has devoted much attention to foreign affairs and in connection with foreign aid programs has participated in study missions to Africa, Asia and South America. In addition, in 1959 he headed a special Senate Subcommittee to Russia to inspect the development of hydroelectric projects in the USSR. The report of the Subcommittee has been widely published and used in the United States. Senator Moss is running in a conservative and traditionally Republican State. His opposition will probably be the former President of Brigham Young University, a Goldwater supporter. The other individual who has filed in the primary is incumbent Congressman Sherman Lloyd whose current score under the criteria of the Americans for Democratic Action is zero.

RALPH E. HARDING, candidate for reelection to the House of Representatives from Idaho.

With this recommendation, the Council departs from its practice of soliciting support only for candidates from the Senate. However, in the case of Congressman Ralph Harding, of Idaho, conversations with Senators and other political advisors familiar with Idaho politics indicate that Congressman Harding will be the logical choice to run for the Senate against the incumbent, Senator Jordan, whose term expires in 1966.

Congressman Harding's record in the House has been excellent and our criteria relative to selected issues rates him at or close to a perfect score. On the contrary under our criteria, Senator Jordan's record has been dismal. Congressman Harding, even though he comes from a district that is strongly Republican in orientation and was the first Democratic Congressman to be elected in 24 years, has consistently supported progressive legislation in the House of Representatives. He has backed the nuclear test ban treaty, foreign assistance programs, and was one of the original supporters of the Peace Corps and is a staunch advocate of the United Nations.

Congressman Harding faces an especially difficult campaign for reelection, not only because of the normal conservative make-up of his district and his battle with the extreme right, but also because Senator Jordan recognizes that Harding appears at this time to be his most probable opponent in 1966. Senator Jordan is dedicating his office and the effort of his supporters to the defeat of Harding in the 1964 congressional election. In consequence, the Council believes it important that Ralph Harding be returned to Congress as an essential pre-requisite for his future campaign for the Senate two years hence.

(May we remind you that political contributions should be in the form of checks made out directly to the candidate, but sent to the Council office for transmittal. The Council further recommends that, unless you have specific desires relating to the support of some particular candidate, contributions now be given to priority candidates according to the following alphabetical apportionment: If you last name begins with letters A - D, contribute to the campaign of Congressman Harding; E - K McGee; L - P Muskie; Q - S Moss; T - Z Montoya.)



COUNCIL FOR A LIVABLE WORLD

National Office: 1346 Connecticut Avenue, N.W., Washington, D.C., 20036, Phone: 265-3800, ac 202, Cable: DELPHINI WASHINGTON, D.C.

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July 6, 1964

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MEMORANDUM

TO: Readers of the Bulletin of the Atomic Scientists

We are sending you this memorandum on the assumption that you MARGARET BRENMAN GIBSON that you MARGARET BRENMAN GIBSON stockbridge, Mass. may be interested in joining with us in a concerted effort to MATTHEW MESELSON CAMPBIGLIES. Mass. halt the arms race and avoid nuclear war. About two years ago, when the Council was organized, the prospects seemed re- ARTHUR PENN NY. mote for agreement among the major powers on a limitation of nuclear armaments. At that time, a number of us joined with the late Dr. Leo Szilard -- famed nuclear physicist and bio-

physicist, co-inventor with Enrico Fermi of the nuclear chain reaction and recipient in 1960 of the international Atoms for Peace award--in an active exploration of his proposals for an organization able to spark a new American initiative for negotiating nuclear disarmament and eliminating the threat of nuclear war.

The Cuban missile crisis of October 1962 served to remind us that the dangers of nuclear war are neither remote nor abstract. This realization has propelled the major nuclear powers into the first arms control agreements--the hot-line between Moscow and Washington and the partial test ban treaty. More recently, unilateral actions on both sides have resulted in a slowing down of the rate of accumulation of thermonuclear weapons and in minor cuts in our respective military budgets, with a detectable relaxation in the international atmosphere.

Today there is a widespread feeling that the arms race is reaching "saturation"--that both we and the Russians are rapidly approaching a stalemate in nuclear destructiveness, where neither side could under any conceivable circumstances hope to "win" a nuclear war. However, this stalemate is not stable -- in view of the inevitability that other nations will achieve independent nuclear weapons capabilities, and also because new technological developments are certain to lead to demands for new and different nuclear weapons and weapons systems -- unless the major nuclear powers, followed by other nations, can arrive at a workable and verifiable agreement limiting the numbers and types of thermonuclear weapons.

The Council for a Livable World is set up for the purpose of supporting those enlightened members of the Administration and the Congress, and their number is by no means negligible, who want to work toward this goal.

The Council's primary aim is to bring to Washington and to consult with and support an everincreasing number of enlightened Senators who understand the consequences and needs of this nuclear age and are willing to exert continuing and effective pressure for the achievement of responsible measures of arms control and disarmament.

Our plan for accomplishing this aim is simple. It is based on the fact that 10,000 people, having an average income of \$10,000 and willing to devote one or two per cent of their income to political campaign contributions, could provide an amount of one million to two million dollars a year toward the election of good Senators and Representatives. Such amounts, if wisely spent, could have profound effects on the composition of Congress and on its attitudes as well as those of the Administration.

The Council for a Livable World, with the help of a panel of political advisors in Washington, determines those political contests in which its supporters' contributions could have a significant effect toward the election of candidates whom we are prepared to support; it advises its supporters as to where their contributions would be most effective; and it then acts as an agent for transmitting checks from our supporters, made out directly to the candidate.

The Council also organizes seminars for Congressmen and their aides on the vital questions of the nuclear age, and brings to Washington scientists and other knowledgeable individuals to discuss these problems with Congressmen.

The Board of Directors of the Council contains eminent scientists, scholars and men wellversed in practical problems. It includes William Doering, Director of the Division of Sciences, Yale University; Dr. Matthew Meselson, Professor of Molecular Biology, Harvard University; and James G. Patton, President of the National Farmer's Union.

In the 1962 Congressional election the Council recommended to those who sought its advice to concentrate their campaign contributions on three Senatorial candidates. The Council transmitted over \$20,000 to George McGovern, former Director of President Kennedy's Food-For-Peace Program, who was running for the Senate in South Dakota. He was elected with a margin of a few hundred votes, the first Democratic Senator in South Dakota in 26 years. To two other Senatorial candidates, the Council transmitted over \$10,000 and \$4,000 respectively, and both of them were elected.

In the Fall of 1963, pre-election contributions were transmitted to incumbent Senators Moss and McGee, to enable them to get an early start in their reelection campaigns. In 1964, the Council is supporting, on a priority basis, Congressman Harding for reelection to the House, Senators McGee, Muskie, and Moss for reelection to the Senate, and Congressman Montoya for election to the Senate. (The memorandum enclosed provides further information on these candidates.)

We realize that we are asking for a substantial commitment, i.e., a total of 2% of your annual income or 1%, or \$100, forwarded on whatever regular basis you prefer. We do this knowingly with the conviction that such contributions can have an important impact in Washington. We realize too that \$100 for many individuals is an impossibility. We ask these individuals to contribute what they can, with a minimum of \$10 per annum to remain on our mailing list and cover costs of preparation and mailing.

If you believe that you might be interested in becoming a supporter of the Council, please fill out the enclosed form and mail it to the Council for a Livable World, 1346 Connecticut Avenue, N.W., Washington, D.C., 20036. A pre-paid envelope is enclosed for your convenience.

Bound T. Deld

Bernard T. Feld,

President

BULLETIN OF THE ATOMIC SCIENTISTS

A Journal of SCIENCE AND PUBLIC AFFAIRS

935 EAST 60TH STREET • CHICAGO • ILLINOIS 60637

DORCHESTER 3-5225

30 September 1964

EUGENE RABINOWITCH

Editor

Dr. and Mrs. Jonas Salk La Jolla, California

Dear Donna and Jonas:

The sad news about your mother reached me belatedly here in Chicago, where I have spent the past five days. I can understand only too well what you must have gone through, as I heard that this event also was sudden and unexpected. If I had been in New York, I surely would have come to see you.

I expect to return to New York in time for the APHA meeting, which starts with the Association of Teachers of Preventive Medicine on Sunday, October 4th. I have made reservations to return to La Jolla, finally, on October 14th, and expect my brother to visit me in La Jolla two days later. I hope, Jonas, that you will be in town then, and I shall call you on my return.

Kindest regards to the whole family.

Trude

Sincerely,

Gertrud Weiss Szilard, M.D.

c/o L. Racker

454 Prospect Avenue

Mount Vernon, New York

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H. J. Muller • J. Robert Oppenheimer • G. B. Pegram (1876–1958) • I. I. Rabi • Julian Schwinger • Frederick Seitz • John A. Simpson • Cyril S. Smith • Leo Szilard (1898–1964)

Edward Teller • Harold C. Urey • V. F. Weisskopf • Hugh C. Wolfe • Sewall Wright • J. R. Zacharias

TELEPHONE CONVERSATION WITH MRS. SZILARD November 17, 1964 New York

Trudy Szilard told me today that she had been appointed a Consultant with the NIH on some sort of a deal that she can do a lot of the work in La Jolla or, for that matter, anyplace she wants. She is quite delighted at this. She was told that she shouldn't take a full time job anywhere until she checked back with the NIH people.

She was wondering whether or not she ought to come back to La Jolla before the first week in October. She rather feels that she should in order to "keep in good touch with her many friends". I told her I thought that she should do exactly what she wanted to do, that her friends out in La Jolla would certainly understand if she elected not to come back for awhile. She is obviously fishing around for some long-term arrangement with the Institute. Probably if it can't be worked out we ought to gently begin to let her know.

bc: Mr. Glazier Friday File

27 May 1965

Dear Trudi:

The year since Leo's death has revealed how prominent is the influence of some even after they are gone; our thoughts have been of and about him frequently. We have missed his wisdom, his humor, and even his occasional irritating prodding; we simply miss him.

That others may develop an interest in at least one of the subjects that concerned Leo, the Fellows have chosen to mark this 30 May 1965, by establishing a fund to acquire a special collection of books, dealing with the brain, to be housed in the Institute Library, and to be suitably inscribed. We shall keep you informed of the details as they develop.

At this time of the year, when we think of him reverently, we want to communicate to you this expression of deep respect for Leo's memory.

Our thoughts are with you.

As ever,

Jonas Salk

Mrs. Leo Szilard 2380 Torrey Pines Road La Jolla, California To:

J. Salk

Subject: Book Collection in Memory of Leo Szilard

Bronowski has already told me that you have concurred with the recommendation of the Committee of Fellows that \$10,000 of the NIH General Research Support Award should be used for setting up a collection of books on the brain in memory of Leo Szilard.

I have drafted a letter from you to Trudi Szilard telling her about our decision.

WG:ak

Attachment

Mrs. Leo Szilard 2380 Torrey Pines Road La Jolla, California

Dear Trudi:

The Fellows of the Institute are marking this anniversary of

Leo's death by establishing a fund which will be used to set up

a special collection of books on the brain in the Institute library.

These books will be suitably inscribed in Leo's memory.

in the new library facility that you will accept our invitation to visit the Institute and examine the collection.

Sincerely yours,

Jonas Salk

Agrand Dale
Mr 14mm
8-20-68

LEO SZILARD'S INFLUENCE ON PHYSICS

If one thinks of Szilard as a physicist, the immediate question is: Was he an experimentalist or a theoretician? And then it becomes clear that Szilard cannot be considered within the confines of any one category. His work as a physicist had biological overtones; and when he was being most coldly scientific, there were warm undertones of the man and the citizen. This awareness of organic interconnections was the cause of that farsightedness which led him to anticipate so many things that later came about, and perhaps others that are yet to come.

In his earlier years, Szilard was not a prolific writer, and a simple list of his publications will give a false impression of his influence on physics during his stay at the University of Berlin. Someone with a sense of esoteric humor bestowed upon him the title "Katholisator", explaining that, in medieval universities, this was the official who had to make sure that students and visiting scholars met the right people. This duty Szilard imposed upon himself. Many physicists of all countries remember the easy energy with which he performed it, and thus helped unify the profession with ties of personal friendship.

That was the time when the "new" quantum theory was being constructed. Szilard did not immediately publish in this field, but he sat, with Erwin Schrödinger, in the front row of John von Neumann's seminar.

And it was Szilard who asked the penetrating questions, while the others tried, as best they could, to follow into the unfamiliar reaches of Hilbert Space.

Despite the preoccupation of physicists with these exciting developments, Szilard's <u>Mabilitations-schrift</u> was the subject of lively discussion and even debate. I believe this paper was written sometime in 1925 and submitted to the editor in January, 1928, but it was not printed until March, 1929. The reasons for these delays care be only trapedly reconstructed.

Today, we can formulate Szilard's thesis in three words:

"Thinking generates entropy" -- and no one contests it. It is difficult to recapture the attitude of those past times. Perhaps a quotation from Smoluchowski (himself a major contributor to thermodynamic theory) will help: "... There can be no automatic perpetuum mobile, but one might well be possible if it were suitably operated by intelligent beings." Many less careful physicists tended to replace "might well be" with "would certainly be" -- did not this have the sanction of James Clarke Maxwell? Hence the debate.

Szilard's matter-of-factness² contrasts strikingly with both of the above formulations: "The accomplishment of any physical effect, by action of the sensory and motor nervous systems, is always accompanied by a degradation of energy, quite apart from the fact that their very existence depends upon a continual dissipation of energy."

And, even after we had convinced ourselves of the correctness of Szilard's analysis, we remembered it only on that one day out of every year or so, when we lectured on the relevant part of thermodynamics. Not until nearly twenty-five years later, when others were groping in this same area, did we realize that we had witnessed the laying of the cornerstone of psychophysics.

of mind and matter, just as Einstein had already eradicated the less ancient dichotomy of energy and matter. If this seems too sweeping, let it be admitted that both iconoclasms were inherent in the Zeitgeist of the early twentieth century. It is enough to have established that Szilard was, more than ordinary, sensitive to his intellectual environment and helped us to see what otherwise might have gone unnoticed.

But, long before all this was clearly recognized, the good days at the University of Berlin had come to an end, and Szilard was an exile from the Continent, working in a London hospital. There, he and Dr. Chalmers discovered the radium-beryllium source of slow neutrons.

No one, except perhaps Szilard himself, fully realized the importance of this discovery. It was, at the time, only an advance in laboratory technique. But now, it is seen as the necessary prerequisite for Otto Hahn's fateful discovery of fission.

Even before Hahn's discovery, Szilard had recognized the possibility of a self-sustained, neutron-induced, chain reaction, yielding immense amounts of nuclear energy. He was therefore quick to begin experimenting with fission. Needing a powerful source of neutrons, he went into personal debt in order to rent a grain of radium. In these days of generous support for research, this must sound strange to young ears. But, we should remember that the increasing financial sources for research have followed—not led—and have not yet overtaken—our increasingly powerful sources of neutrons.

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In broad outlines, Szilard's part in the Manhattan Project is already a legend. He persuaded Einstein to write President Roosevelt; the first Dec. patent on nuclear energy names Szilard and Fermi as joint inventors. But the details are more numerous, and not insignificant; and it will be some time before they are all described in one document.

In the official, unclassified history of the Manhattan Project, H. D. Smythe suggests some of them when he says: "At that time, American-born nuclear physicists were so unaccustomed to the idea of using their science for military purposes that they hardly realized what needed to be done. Consequently, the early efforts both at restricting publication and at getting government support were stimulated by a small group of foreign-born physicists centering on Leo Szilard..."

At one state, these efforts resulted in an organization known publicly as Section S-1 of NDRC, and internally as the Uranium Section. It had several subsections, and both Szilard and Fermi were members of most of these, including the Theoretical Aspects Subsection. This Subsection met at irregular intervals in a small room at the Bureau of Standards in Washington.

It is very difficult to separate the contribution of these two men to the work of this Subsection. All major topics arose during dialogues between Fermi and Szilard, and only gradually did the other members join in the conversation. But, after each meeting, they returned home with new problems to work on. When Fermi and Szilard demonstrated a uranium-graphite pile with a neutron multiplication factor of 0.8, Section S-1 exploded into the Manhattan Project.

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In searching for the words with which to conclude this fragmentary account, it was inevitable that I should turn to Szilard himself for assistance. A short month ago, he gave me a preprint of his last paper, On Memory and Recall, Part I. In doing so, he said, "It was not easy to write and you will not find it easy to read. It may not be correct, but you will not find a counter-example in ten minutes."

Nobody but Szilard $\underline{\text{ever}}$ found a counter-example to one of Szilard's theories--in ten minutes.

FOOTNOTES

- 1. Vonträge über die kindtische Theorie der Materie und Electrizität, p. 89, Leipzig (1914). (Quoted in Ref. 2)
 - 2. Über die Entropieverminderung in einem thermodynamischen System bei Eingriffen intelligen ter Wesen. Zeitschrift für Physik, 53, p. 840 (1929).

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- 3. A. N. Whitehead, The concept of Nature. Cambridge University Press, 1920.
 - S. Freud,

Julian Hexley,

Theilhard de Chardin, The Phenomenon of Man.

4. Atomic Energy for Military Purposes. Princeton University Press (1945).

Dear Dr. Szilard:

At the meeting of Fellows on 19 May 1962 it was voted that upon your election you could choose to relinquish your role as Non-Resident Fellow and become a Resident Fellow. Now that you have indicated your desire to do so we would like to make the necessary arrangements.

I have been asked, by the Fellows whom I have told of your desire, what your intentions are with respect to biology. Would you tell me as much as is possible at this time of what you may now have in mind in this regard.

Would it be reasonable to assume that your principal contributions may be in the realm of biological theory from which experiments would be suggested? If this be so, then those who are responsible for the operation of laboratories would look upon you as a Fellow-at-Large, in a sense; experiments that are suggested by your formulations could be carried out in collaboration with one group or another. I would be pleased to offer laboratory-hospitality to develop a number of things that you might have in mind, and that for some time I have had in mind to discuss with you.

When the laboratory building is completed in the latter part of 1964, a study would be assigned to you, and in addition office space for yourself and a secretary. Policy in respect to Resident Fellows would require that the Institute make up the difference between your retirement and social security annuity and the \$25,000 salary for Resident Fellows which is to continue for life. To this will be added such insurance benefits as may be possible. A budget for secretary, travel, and other incidental expenses in connection with your duties as a Fellow would be \$ per annum, the unspent balance of which would accumulate and continue to be available for five years at the end of which time 20 per cent of the balance would revert to the Endowment Fund.

THE UNIVERSITY OF CHICAGO

CHICAGO 37 · ILLINOIS

THE ENRICO FERMI INSTITUTE FOR NUCLEAR STUDIES

Dear Dr. Salk:

Recently, I had occasion to prepare, jointly with Dr. William Doering, Yale, a Memorandum that proposes the creation of two closely connected institutes. We may call one of these - Research Institute for Fundamental Biology and Public Health - and the other - Institute for Problem Studies. The Memorandum was prepared for Mr. Cass Canfield, Chairman of the Executive Committee of the Board of Directors of Harper & Brothers, publishers, and will be sent to you by him together with such comments as he may care to make.

Although the planning is still in the dream stage, our thinking has reached the point where it is necessary to determine whether it is moving on the right track. This is my reason for writing to you. We should like to know whether you agree in principle with the proposal contained in the Memorandum, and whether you would be willing — if something along these lines should materialize — to serve as an Affiliate Member of the Research Institute. I am posing the same questions to others whose names are listed on the attached sheet and Doering, upon his return from an extended lecture tour, may contact a few others also.

As you will see from the Memorandum, the Institutes will not make great demands on the time of an Affiliate Member; we assume that they will spend one week each year at the Institutes. Nevertheless, the Affiliate Members will play a decisive role in both Institutes: they will have to approve the appointment of the initial group of regular Staff Members in the Research Institute. Subsequently, they will determine, together with the regular Staff Members, the appointment of new members, both Staff and Affiliate. Together with the regular Staff Members of the Research Institute, they will select the problems which the Institute for Problem Studies may take up. The Memorandum discusses their proposed financial compensation and other related matters.

Three years ago Doering and I had occasion to deal with a topic related to that of the Memorandum. At that time, along with others, we were mainly concerned with the conspicuous lag in research aimed at finding a biological method for controlling the birth rate - a method that would be adequate for the needs of the underdeveloped areas which are threatened by a population explosion. In the intervening three years it has become evident that making available funds in the form of grants-in-aid - even to the point where there is more money being offered at present than there are worthy takers - may not be all that needs to be done, either in the field of mammalian reproduction or in other fields of research which are of public importance.

The recent conversations with Mr. Canfield took their departure again from the problem of birth control - which is perhaps the most interesting of

several problems that seem to be ready for a concerted attack. The scope of these discussions, however, soon widened and we began to see, at least in outlines, the possibility for a new departure in advancing fundamental knowledge in biology as well as in applying available knowledge to important problems in the field of public health.

Mr. Canfield indicated that he was prepared to explore if funds could be obtained for the creation of an organization that would be adequate, and we talked about all this with Mr. John Cowles of Minneapolis, who in turn had some discussions with Mr. Gaither and Mr. Heald (Ford Foundation).

Having reached this point, Doering and I felt that Mr. Canfield could not go much further until we had determined whether our views were shared by others, and the Memorandum was written with this purpose in mind. The reactions which we obtain from you, and the others to whom this query is directed, will determine whether we shall go forward with this project. You may, at your convenience, reply either to me or directly to Mr. Canfield, who will see that Doering and I receive copies of your letter.

Naturally, we should be very glad if you were able to say on the basis of the sketchy material sent to you that you would be willing to serve as an Affiliate Member of the Research Institute. Otherwise - particularly if you feel that some major changes in the proposed plans are desirable - may I propose that either Doering or I discuss these plans with you on some suitable occasion? Either Doering or I could contact you, later on, in order to arrange a convenient date.

With kind personal regards,

Sincerely yours,

Lake Tand

Leo Szilard

Dr. Jonas Salk
Department of Preventive Medicine
The University of Pittsburgh
School of Medicine
Pittsburgh, Pennsylvania

LS: clp

P.S. With the Memorandum you will find enclosed, also, an Appendix. This contains my personal guesses on what kind of work might be done in the Institutes and by what kind of people. The Appendix was written in the hope that it might serve as the starting point of a later discussion among the Affiliate Members.

Dr. George Beadle
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The California Institute of Technology
Pasadena, California

Dr. Richard P. Feynman
Department of Physics
California Institute of Technology
Pasadena 4, California

Dr. Harrison Brown
Department of Geochemistry
California Institute of Technology
Pasadena, California

Dr. Linus C. Pauling
Division of Chemistry and Chemical Engineering
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Dr. Edward Teller
Department of Physics
The University of California
Berkeley, California

Dr. Tracy M. Sonneborn
Department of Zoology
University of Indiana
Bloomington, Indiana

Dr. H. J. Muller
Department of Zoology
University of Indiana
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Dr. Fritz A. Lipmann
Biochemical Research Laboratory (Marvard Medical School)
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Dr. Harold C. Urey
The Clarendon Laboratory
Oxford, England

Dr. Jonas Salk
Department of Preventive Medicine
The University of Pittsburgh
School of Medicine
Pittsburgh, Pennsylvania

THE FELLOWS ANNOUNCE THAT

THERE WILL BE A

SIMPLE CEREMONY

IN COMMEMORATION OF

LEO SZILARD

AT THE

SALK INSTITUTE FOR BIOLOGICAL STUDIES

IN SAN DIEGO

AT THREE O'CLOCK P.M.

ON SATURDAY, JUNE 13, 1964