

Please return to Leo Filard.

Memorandum on "Citizens' Committee"

March 27, 1950

Dear Professor Einstein:

At the last meeting of the Emergency Committee, it was decided that the Emergency Committee shall initiate the setting up of an organization to study what type of an over-all Russian and American settlement would provide a framework in which international control of atomic energy could satisfactorily operate. In the following are summarized the considerations which I had presented to the Emergency Committee concerning the plan of setting up a "Citizens' Committee" that would conduct an inquiry into the considerations of a satisfactory over-all political settlement:

Prior to the meeting, between October, 1949, and March, 1950, I had discussed the possibility of setting up such a "Citizens' Committee" with the following persons:

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Laird Bell, Chicago
Pierce Butler, St. Paul, Minnesota
Henry B. Cabot, Boston
Grenville Clark, Dublin, New Hampshire
Gardner Cowles, New York
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Lloyd Garrison, New York
Palmer Hoyt, Denver
R. M. Hutchins, Chicago
Fowler McCormick, Chicago
Archibald Mac Leish, Cambridge, Massachusetts
Josiah Marvel, Wilmington, Delaware
Gideon Seymour, Minneapolis, Minnesota
James Warburg, New York
Gilbert White, Haverford, Pennsylvania

Most of those whom I saw in New York, I saw in the company of Marshall McDuffie, who was much interested in this project and who I hope will maintain his interest in it. Before the war, McDuffie was with John Foster Dulles' law firm. During the war, he was head of the Board of Economic Warfare in the

Middle East for about two years; subsequently with the State Department in charge of Lend Lease settlement; and after that, in charge of the UNRRA control commission in the Ukraine. At present, he is with Merck and Company of New York, and his assignment gives him enough free time to be able to render a public service when the need arises. I have known him now for about five years and had often asked him for guidance on issues which involved the public interest.

All those whom I saw in Minneapolis and St. Paul, I saw in company of Mr. and Mrs. Harris Wofford of Scarsdale, New York, and St. Paul, Minnesota, whom I have known over a period of years and who were very helpful on this occasion; they might make important contributions to this enterprise if they remain interested in it.

Only the names of those are listed above with whom I had a full personal discussion of the issue; the names of those with whom I did not fully discuss the matter or who were contacted by correspondence, are not included in the list.

All those with whom I have spoken showed a friendly interest in the project, the degree of interest varying from person to person. In some cases I was not able to gain a definite impression as to what the final reaction of the man might be if he gave the matter further thought. In one case, I found very strong interest but at the same time also strong concern about the difficulties and obstacles standing in the way of the proposed enterprise.

I believe that the final reaction of most of those whose names are mentioned above will depend on what kind of sponsorship will be forthcoming and on just how in detail we shall decide to proceed. The difficulties and obvious pitfalls of the enterprise were, of course, stressed by both Marshall McDuffie and me in all of our conversations.

The project as it shapes up in my mind at present as the result of all these conversations would be as follows:

- 1) The "Citizens' Committee" consists of a Commission and a Board.
 - a) The Commission is composed of about 15 men who will serve full time

for about six months. For a period of two or three months, the Commission may study jointly the issues involved, hear witnesses, and otherwise gather the required evidence. Then the Commission might find it advisable to form out of its members two teams of perhaps five persons each. These teams would be assigned the task of representing the real interest of America and the real interests of Russia, respectively, and they would engage in discussions or "negotiations" with each other in order to see whether it is possible for them to reach an agreement on all outstanding issues involved, including the issue of putting an end to the present arms race.

b) The transcript of these negotiations and the final agreement, if one is reached, will go to a Board of no less than 15 or no more than 50 American citizens of national standing, hereafter referred to as the "Board" which will transmit it, together with its own findings and recommendations, to the American people.

The function of the Board is to decide whether the agreement worked out ought to be acceptable to the American people, assuming that it were acceptable to Russia. The Board will naturally not be in a position to say whether such an agreement ought to be acceptable to Russia.

Since the function of the Board is to testify as to the validity of the conclusions reached by the "American Team," the members of the Board (or at least the members of an Executive Committee of the Board which might comprize about 15 Board members) will have to follow the work of the Commission sufficiently closely to be able to form a considered opinion as to the validity of its conclusions. The members of the Board (or at least the members of its Executive Committee) might have to meet with the Commission perhaps for two full days every month in order to keep in touch with the progress of study, to familiarize themselves with the difficulties that stand in the way of a satisfactory agreement, and in order to fully understand why certain particular solutions were rejected and other particular solutions were adopted .

2) Because lawyers, by virtue of their profession, are accustomed to take on the case of a client--for a fee--it is natural to turn to lawyers when looking for men suitable to serve on the Russian team. It would be desirable to enlist the service of some of the leading corporation lawyers for this purpose, but this does not mean that all members of the Commission need to be lawyers.

Finding a satisfactory Russian team appears to be an easier task than finding a satisfactory American team, because the only requirement for a man on the Russian team is that he be "good," while on the American team, he must not only be "good," but also must enjoy the full confidence of the Board and a certain measure of public confidence. This is so because when it comes to details, the Board will have to rely to a large extent on the say-so of the American team when formulating its own opinion on the merits of the proposed settlement.

The transcript of the negotiations will show what the difficulties are which stand in the path of a satisfactory agreement, and it might show that the Commission was able to work out an agreement which in their opinion would safeguard the vital interests of America and Russia without infringing upon the vital interests of the other nations involved.

If the Commission succeeds in outlining such an agreement, and if their draft finds wide-spread acclaim in America at the time when it is made public, then it is conceivable that some spokesman of the Russian government and some spokesman of the American government might publicly recognize that draft as a suitable basis of discussion for governmental negotiations.

But even disregarding this possibility, there is much that could be learned from the transcript of the Commission's negotiations. On atomic energy control, for instance, the American government put forward in 1946 the Baruch Plan which the Russians rejected. The transcript of the negotiations might show that the "Russian team," composed of American citizens charged with representing Russian interests, also finds the Baruch Plan unacceptable. This in itself does not teach us anything much, but the reasoned argument of our "Russian team," stating why the Baruch Plan

is not acceptable to them, will probably show us what real interests were involved when the Russians rejected the Baruch Plan and thus possibly disclose the real reasons for Russian opposition to the Plan.

When the Russians opposed the Baruch Plan, they did not tell us their real reasons for doing so, and what they told us of their reasons, they said in a language which is not intelligible to the American people. Our "Russian team", on the other hand, will not only tell us why they find the Baruch Plan unacceptable from the point of view of their "client," but they will tell us their reasons in a language which we can understand.

The negotiations in the Commission are, of course, in no way a substitute for real negotiations, but on the other hand, they have from a point of view of intellectual clarification, certain rather important advantages over real negotiations. In the real negotiations, carried out by governmental representatives, the display of imagination and resourcefulness is greatly inhibited; such negotiations have to move with great caution since it is not easy to retract a point once it has been conceded. The negotiations in our "Commission" are not subject to such limitations; here it is possible for a "team" tentatively to concede a number of points and as the over-all picture emerges, either to retain or to reject what has been tentatively accepted. This makes for flexibility and speed in the "negotiations."

For America, faced with a difficult problem of reaching an over-all settlement with Russia, it might be of value to have the real negotiations preceded by such an intellectual clarification as might be attained through the devise here proposed.

5) The work of the Commission, in order to be effective, must be widely known, studied, and discussed. In order to achieve this, it is advisable at the very outset to make arrangements that will give the press a stake in the enterprise. If the progress of the negotiations is followed by the press, step by step when material about them is released, if we can be sure that columnists, radio commentators

and editorial writers study these transcripts, then we may assume that the staff of the State Department too will pay attention to them. And if we could at least achieve that the public discussion of the Russian-American conflict will be henceforth carried on more in terms of the real conflicting interests which are involved and less in the irrational terms in which it has largely been conducted in these last four years, then we would already have achieved something of importance.

4) One of the controversial points that arose in the conversations dealing with the problems of the "Citizens' Committee," was the question what the terms of reference of the Commission should be. Clearly the terms of reference of the Commission should enable them to deal with any issue that is relevant to the creation of a stable peace. On the other hand, most of those with whom I spoke agreed that the issue of transforming the United Nations into a world government or otherwise setting up a world government would go beyond the scope of the work of the Commission, as presently envisaged.

5) An important issue on which there was divergence of opinion is the terms of reference of the Russian team. Shall the men on the Russian team say what they themselves would find acceptable if they had the task of safeguarding Russia's vital interests or should the Russian team say what they think the Russians might find acceptable?

In favor of this latter point, it was argued that the Russians were not guided by rational considerations; that they were guided by irrational desires, peculiar theories about what is going on in the world and that they are suffering from all sorts of misconceptions. The opinion was expressed that the work of the Commission would be meaningless unless the Russian team, in place of saying what they would accept, did study the Russians and then said what they thought the Russians would accept.

To me it seems that we ought to reject this approach. Naturally neither the government of the United States nor the Russian government will in fact follow an entirely rational course. As far as either of these two governments are concerned,

what they can do and what they cannot do will be influenced by the political system within which each one has to operate. Both the American and the Russian team must naturally be cognizant of this factor and even without any conscious effort to do so, they will, of course, take into account the political systems in which the contracting parties will of necessity have to operate.

But while the men on the "Russian team" can say with some degree of assurance what they themselves (using their own judgment and their own appreciation of the issues involved) would accept in the interest of their "client," they cannot with any degree of certainty say what the Russians might find acceptable. Any attempt on the part of the "Russian team" to do so would involve not only the Russians' misconceptions, but also their own misconceptions of the Russian misconceptions. I personally do not think that an attempt to "play the Russian" would be of much value and it certainly could not claim any objective validity.

I believe that this point is so important that it ought to be clarified in the statute setting up the "Citizens' Committee," and that it certainly ought to be clarified before anyone is solicited to serve on the Board or on the Commission or anyone is asked to contribute funds to the "Citizens' Committee."

The difficulty of predicting what the Russian government might do in any given set of circumstances ought perhaps to be compared with the difficulty our meteorologists had a generation ago in predicting the weather. Meteorology was at that time in such a state of imperfection that the simple prediction of fair weather tomorrow if the weather was fair today, or rain for tomorrow if it rained today, could favorably compete with the prediction of the meteorologist. Thus following the thumb rule that "The weather never changes" was about the best prediction that one could make.

Similarly, the thumb rule that the Russian government will act as we ourselves would act if placed in similar circumstances and entrusted with their responsibility will today give as good forecasts (and do it much less painfully) than the contro-

versial forecasts one could obtain by a discussion of Russian psychology.

Naturally, neither of these thumb rules will give the correct answer always. The weather does sometimes change and the Russian government does sometimes act differently from how we would act in similar circumstances. Yet if one accepts the point of view that we have primarily to deal here with the conflict between two nations and their respective allies, and that even this perhaps oversimplified problem will require much ingenuity and resourcefulness for its solution, then one will be inclined to think that its solution would provide us at least with a framework for actual negotiations between the Russian and American governments.

6) The United States and Russia are not the only major countries whose vital interests have to be taken into account in an over-all settlement. While it is probably not practical to have more than two teams negotiating with each other, members of the Commission who are not assigned to any team may be assigned the task of representing the interests of one or another of the countries involved and acting as spokesmen for those interests. These spokesmen would sit in on the negotiations of the two teams and currently make it clear to the two teams where they would infringe upon the interests of those other countries. The countries in Western Europe will certainly be very strongly affected by any over-all settlement that might be reached, but the effect of the agreement on other countries will have to be considered also.

Since the number of men serving on the Commission who are not assigned either to the Russian or the American team will not be large (perhaps no more than five) their assignment to represent other nations will have to be kept rather flexible.

7) The Commission must have at its disposal an adequate staff to assist in its work, and must have facilities to obtain the assistance of experts on a part-time basis.

8) It was emphasized by various persons that it would be important to clear with the State Department or with the White House this enterprise at the outset or

at a somewhat later stage. Some thought that the enterprise could obtain Truman's blessing, perhaps in the form of a letter in which he would ask that a transcript of the negotiations be submitted to him. Others thought that this would be difficult to get without the blessing of the State Department and that rather than asking for the blessing of the State Department, we ought to merely "clear" the matter with the State Department. All these comments were made before Acheson's press conference of February 8, and I do not know how these comments would be modified in the light of that press conference.

9) Funds for the "Citizens' Committee" may be raised through private donations elicited by personal contacts, through contributions of foundations, and through public fund-raising. The last of these methods has the advantage of giving the public a stake in this enterprise and ought therefore to be used at least as one of the methods by which funds are raised. Fund-raising should be aimed at no less than half a million dollars and no more than one million dollars.

10) It was proposed that the Emergency Committee create a Committee of Arrangements which will have the responsibility of initiating the setting up of the "Citizens' Committee." The Committee of Arrangements could help the "Citizens' Committee" to assemble a suitable Commission, but the appointment of the Commission is the responsibility of the Board of the "Citizens' Committee" and not of the Committee of Arrangements. Once the "Citizens' Committee" is set up with its Board complete and the Commission appointed, the Committee of Arrangements will have no further functions.

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Sincerely yours,

Leo Szilard

May 15, 1950

The enclosed ditto contains copies of communications

from Carter, Ledyard and Milburn to Harrison Brown
from David Noyes to James Patton
from Josiah Marvel, Jr. to Leo Szilard
from Leo Szilard to Grenville Clark
from Grenville Clark to Leo Szilard
from Walter Orr Roberts (Director of the High Altitude
Observatory of Harvard University and University of Colorado)
to Leo Szilard
from Henry B. Cabot, Boston, to Leo Szilard
from Karl Compton, Chairman of the Corporation MIT
to Henry B. Cabot
from Albert Pratt (Paine, Webber, Jackson and Curtis, Boston)
to Henry B. Cabot
from J. Killian, Jr., President MIT, to Henry B. Cabot
from Phillip Ketchum (Herrick, Smith, Donald, Farley, and
Ketchum, Boston) to Henry B. Cabot
from Stringfellow Barr to Leo Szilard

CONFIDENTIAL: Please do not transmit to
anyone without first checking with
Leo Szilard, Harrison Brown or Joseph Mayer.

May 14, 1950

Copies of documents giving reaction to the plan
of the Emergency Committee of the Atomic Scientists
for setting up a citizens inquiry into the conditions of peace.

Carter, Ledyard and Milburn
Counsellors at Law
2 Wall Street, New York 5, N.Y.

March 16, 1950

Dr. Harrison S. Brown
Emergency Committee of Atomic
Scientists, Incorporated
956 East Fifty-eighth Street
Chicago 37, Illinois

Dear Dr. Brown:

Since talking to you and Dr. Szilard on Monday, I have discussed your proposals with my partner Jesse Fillman, who is a specialist in the tax law. He confirms the advice which I gave you on Monday.

Inasmuch as I promised Dr. Szilard some confirmation along these lines, and do not know his address, I would appreciate your passing the word along to him.

Sincerely yours,

Edward F. Clark, Jr.

P.S. Fillman has some interesting ideas on how to get an advance exemption ruling.

The following is a telegram from Dave Noyes.

1950 Apr 20 PM 1153

Hon. James Patten
954 Bonnie Brae Blvd Dvr
Los Angeles Calif 20

Have just returned from an extended stay in the East. The proposal submitted to you by the distinguished professor is new in concept and provides an interesting approach to the problem. It also however poses many collateral difficulties. I shall be going east again shortly and will be eager to arrange a meeting. With warm regards,

Dave

From: Josiah Marvel, Jr.
Continental American Building
Wilmington, Delaware

March 28, 1950

To: Professor Leo Szilard
1155 East 57th Street
Chicago 37, Illinois

My dear Professor Szilard:

I was very glad to receive your letter of March 23rd outlining to me the steps which have been taken regarding the establishment of a "Citizens' Committee for Studying the Requirements of an Overall Settlement."

As I indicated during our conversation in Princeton, I am still most interested in the proposals and purposes of this contemplated study, and I look forward to hearing from you what progress is being made.

Sincerely yours,

Josiah Marvel, Jr.

From: Leo Szilard
1155 East 57th Street
Chicago 37, Illinois

April 25, 1950

To: Mr. Grenville Clark
31 Nassau Street
New York, New York

Dear Mr. Clark:

Since our very pleasant luncheon in New York, the Emergency Committee of Atomic Scientists has decided to initiate the setting up of an organization for the purposes which we discussed in New York. The Emergency Committee has appointed Professors Joe Mayer, Harrison Brown, and myself to act for her in this matter as the "Committee of Arrangements".

We are proposing that an organization to be called "Council of Inquiry into the Conditions of Peace" be set up entirely independent of the Emergency Committee and be organized on a tax-exempt basis. This "Council" might operate along the lines discussed in Memorandum dated March 27 which is enclosed. An appendix to this memorandum, containing a further discussion of the terms of reference of the "Commission" of the "Council," is in preparation.

We are asking Mr. Hutchins to act as chairman of the Board of the "Council", and Mr. Clarence Pickett to act as its vice-chairman. Mr. Hutchins has accepted, and we hope that Mr. Pickett will accept also. We recommended to Mr. Hutchins to choose the initial members of the Board of the Council from among the following list of names, Laird Bell, Henry B. Cabot, Grenville Clark, Marshall Field, Reuben G. Gustavson (University of Nebraska), Fowler McCormick, R. L. Stearns (University of Colorado), and James G. Patton. Mr. Hutchins leaves for Europe on May 2, and by that time we hope

Mr. Grenville Clark -- continued

3.

to have the initial board members lined up so we can proceed to incorporate the Council. Carter, Ledyard, and Milburn, who have been acting for the Emergency Committee, will be asked to act for the Council also and to try to obtain an advance ruling from the Treasury concerning tax exemption. No public announcement of formation of the Council is planned until we have secured a fund of perhaps \$200,000. for the Council.

It is our understanding that Mr. Hutchins will try to reach you before he leaves for Europe and ask you to serve as a member of the Board. We hope very much that you will accept. We realize, of course, that you cannot take on any duties that are very strenuous. Membership on the Board might involve your spending two days a month with the "Commission" of the Council which is the full-time organ of the Council; but if this should prove too strenuous for several Board members, it might be possible to form an Executive Committee of the Board and thereby to ease the burden of the Board members. An Executive Committee might have to be formed in any case if the Board should be enlarged much beyond 15 members.

Lately I have spent a week in Colorado and found such enthusiastic response to our "plan" that I feel quite heartened by it. This experience strengthens me in the belief that the Council will have to draw much of its strength from the Middle West and the West. I am also inclined to think that the formation of regional committees in Minnesota, in Colorado, and perhaps in Oregon might be very useful. These regional committees could be affiliated with the Council and would have the task to keep the people of the "region" informed of the activities of the Council.

With respect to the composition of these regional committees and also the Board of the Council, I believe we ought to make an attempt to enlist outstanding men who, in the past, have kept aloof from public affairs but who now, at last, are really concerned and are willing to take their share of the burden.

Sincerely yours,

Leo Szilard

cc: Joe Mayer
Harrison Brown

From: Grenville Clark
Dublin, New Hampshire

May 2, 1950

To: Professor Leo Szilard
Institute of Radiology and Biophysics
University of Chicago
Chicago 37, Illinois

Dear Mr. Szilard:

With regard to your letter of April 25, I am, as I told you in New York last winter, very interested in having carried out a careful study by non-official persons of what can be done to achieve an over-all East-West settlement, and to make progress towards world order. So I am glad to see that you are proposing to go ahead.

As to my own participation, I am complimented to be asked to go on the Board of the proposed Council and, as I also have confidence in Mr. Hutchins, I'd be glad to accept if I saw my way to it. But I regret to say that I cannot. I could not give it the necessary attention because I have all my time and energy tied up for quite a while ahead. I want to try to finish in the next year a piece of work I have in progress with Louis B. Sohn in the shape of "Detailed Proposals for Revision of the U.N. Charter". It is a long and difficult job and, with my other commitments, will take all my working time.

I realize what you say about having an Executive Committee and that not all the Board members would necessarily be expected to come to meetings, etc. But if I were on the Board, I would want to keep in close touch and, in the circumstances, could not do that.

I venture some comments on your letter and your memo. of March 27.

First, and most important from my standpoint, I certainly hope that the idea on p. 6 of your memo, that the "issue of transforming the U.N. into a world government or otherwise setting up a world government" would "go beyond the scope of the work of the Commission, as presently envisaged" will not be adopted. I think this would vitiate the whole project right at the start. This is because I don't think that there can be an East-West settlement or "stable peace" without general and universal disarmament (in all arms and by all nations); and I think it obvious that such disarmament can't be obtained unless a world government limited to the sphere of war prevention is established.

In the sentence on p. 6 preceding the intimation that the question of a world government (any world government apparently) would be excluded, you say that the "terms of reference of the Commission should enable them to deal with any issue that is relevant to the creation of a stable peace." Since I think that the creation of a world government is not only relevant to but a pre-condition of a stable peace, I think the two sentences are contradictory. When I read them together, I couldn't help thinking of the old rhyme: "Mother, may I go in to swim" Yes, my darling daughter. Hang your clothes on a hickory limb, and don't go near the water."

Seriously, I hope no limitation of this or any sort would be put on the Commission's thinking.

Second, I wonder whether the enterprise needs so much elaboration. What is really required is some hard thinking by a few competent independent people who are not over-burdened like the officials, by day-to-day duties and not inhibited by tradition and politics, like most of the State Department. There is ample material; in fact, it is easy to bog down in it. Also, if the Commission is large, they might well bog down in interminable discussions and have too many divergent views. I should think about five good men on full time for six months (with a few assistants) could do better than 15. And I think a Board or Executive Committee or Advisory Committee of 6-10 would be enough to keep in touch, criticize and advise.

When it comes to putting out the Commission's Report and having it widely discussed, that is another matter; and there I can see a function for a large Citizens' Committee and regional committees.

If it were pruned down in this way, \$200,000. should do the whole thing.

Third, I like the idea of two teams. But they needn't necessarily all be Commission members. Two teams of three or four each could be recruited for two-three months after the Commission had defined the issues somewhat, - partly composed of Commission members and partly of others.

Fourth, I don't like any idea of trying to get a governmental blessing for the enterprise. Citizens have a right to study a subject and submit their conclusions to the people and the Government without anyone's blessing. They had better do just that here. I don't know what "clearing" the enterprise with the State Department or White House means. It may seem to imply asking approval. That approval might be withheld and what then? You have either to drop the project or go ahead against the Government's opposition. Or if approval were granted, would it strengthen the enterprise or weaken it by giving the impression that it was a sort of agency of the State Department? In getting up the Selective Service Act in 1940, the Citizens Committee of which I was Chairman, didn't ask the blessing or approval of the War Department or President. We just went ahead, drew our Bill and got it introduced. In this way, we avoided the complications of possible disapproval on the one hand or having it an Administration measure on the other. It was much better that way.

This isn't a case of negotiating with a foreign government, where the Logan Act might apply. It is simply doing what all citizens have a right to do without any permission from anyone.

This isn't to say that any secret should be made of the enterprise or that the State Department and President shouldn't be informed. They both should be, just as we informed the War Department and President Roosevelt of the move for a Selective Service Act. All that needs is two letters politely informing them of the project and its purpose. This should be done, I think, only after the enterprise is actually organized and ready to function; and the letters should be carefully framed to avoid any implication that any permission or approval is requested.

The enterprise will succeed or fail by virtue of the wise and constructive character of the Report or the opposite and the success or lack of success in getting it publicly discussed. It is quite unnecessary and I think unwise to try to "clear" it with anyone in the Government.

Some of these comments may seem unsympathetic. But that is not my intention. I have long thought that our Government people are incapable (for a variety of reasons) of producing the ideas essential to achieving disarmament and a "stable peace" and that these ideas must come from non-official sources. Believing this, I have been trying myself as a sort of one-man "Commission" to produce a set of ideas and I shall get out a document within six weeks which is what I would recommend if I were a member of a group such as you envisage. It will be in the form of "A Statement for a Sub-committee of the Foreign Relations Committee of the U.S. Senate". I think I'll have the temerity to call it a "Plan for Peace", since it will purport to be a program of ideas and procedure to achieve an over-all settlement.

So, I'm very sympathetic to such a study and would, indeed, like to see several such, provided they all were by experienced and competent persons. And if the Commission isn't excluded or discouraged from canvassing or recommending limited world government (which, as I say, would, in my opinion, render the enterprise futile or worse), I'd be just as much interested in its work, even though I couldn't be active in it.

I'm sending a copy of this to Bob Hutchins, whom I like and admire.

Sincerely yours,

Grenville Clark

From: High Altitude Observatory of
Harvard University and University of Colorado
Boulder, Colorado

24 April 1950

To: Dr. Leo Szilard
Institute of Radiobiology and Biophysics
University of Chicago
Chicago, Illinois

Dear Dr. Szilard:

I have just returned from a long discussion with President Stearns about the committee for Colorado to be associated with the national activities. We also discussed at some length the plan as a whole.

Stearns felt that the choice of Henry, Swan, White, and Hoyt was excellent. Regarding Hoyt he said that he felt that the choice of Hoyt to the committee would assure the minimization of the importance of the group by the Scripps-Howard (competing) newspaper. And it might be possible in some way to get the support of both papers if neither editor or if both editors were on the committee. However, he thought that as a calculated risk the choice of Hoyt alone would be O.K.

So far as Patton is concerned, he felt that Patton was one of the most able members of the committee, would contribute a lot of energy and activity, but that with a large segment of the agricultural population of the state and the area the committee would have a left wing appearance. The reason for this is that Henry, Swan, and White would be relatively little known to the farmers, whereas Patton would be extremely well known.

Stearns thought, however, that Patton should definitely be on the committee, but perhaps balanced by a man active in farm circles of slightly more conservative stripe, but still with great public interest. Stearns suggested two men, father and son, who might well qualify. The father is Harry W. Farr of Greeley, Colorado. The man is an alumnus of the University, and is widely known among farmers in the area for his activities in important farm issues. I regret to say that I failed to find out whether he is associated with the National Grange or some other of the farm groups. I believe that Stearns' implication was that the man is associated with one of the more conservative farm organizations.

The son, William Farr, like his father, is extremely well known in farm circles, and has been very prominent in public affairs, also like his father. Stearns seemed to think that either of the two men would be equally good.

As for myself, I know nothing about either of the men, and so am not able to make any independent evaluation.

.....

Very sincerely yours,

Walter Orr Roberts

From: Henry B. Cabot
140 Federal Street
Boston 10, Massachusetts

May 10th, 1950

To: Professor Leo Szilard
1155 East 57th Street
Chicago 37, Illinois

Dear Dr. Szilard:

I sent your memorandum about a settlement with Russia to the following persons: Mr. Albert Pratt, a partner of Paine Webber Jackson and Curtis, an investment firm; Mr. Lloyd Brace, President of the First National Bank of Boston; Mr. Phillips Ketchum, one of our leading lawyers; Judge Raymond Wilkins, a Justice of the Supreme Court of Massachusetts; Mr. Thomas Mahony, another leading lawyer; Mr. James R. Killian, President of Massachusetts Institute of Technology; Mr. Erwin Canham, publisher of the Christian Science Monitor; Mr. Harold Hodgkinson, General Manager of Filene's, one of our largest stores; and Mr. Karl Compton, Chairman of the Board of Massachusetts Institute of Technology. I have written replies from all except Messrs. Brace, Wilkins, Mahony and Canham. Mr. Canham is away in Europe and I haven't heard from him. Mr. Brace told me that he felt that the situation in the world was so serious that any step which might even have a very small chance of improving our relations with Russia should be taken and that he felt that a study such as you suggest was one of them. Mr. Mahony's reactions were very similar to those of Mr. Grenville Clark but, in addition, he felt that your memorandum put too great restrictions on the general point of view of the Russian team. Judge Wilkins was the only person who was unfavorable to the idea. He felt that it would be a good education for those participating in the project but for nobody else. I am enclosing the reports of all the other gentlemen.

My own feeling remains that a general study of the relations between the West and Russia would be beneficial. However, I agree with Mr. Clark that to leave out of consideration world federation is to leave out an essential part of any possible settlement and, as your memorandum stands today, I would not be prepared to go along with it for that reason. I have some other but lesser criticisms. I also judge from the reactions of these gentlemen that the question of raising money will not be easy.

.....

Yours Sincerely,

Henry B. Cabot

From: Karl Compton
Chairman, Massachusetts Institute of Technology

8.

May 1, 1950

To: Mr. Henry B. Cabot
140 Federal Street
Boston 10, Massachusetts

Dear Mr. Cabot:

I have read the memorandum by Professor Szilard which you sent with your letter of April 25, and I am returning it to you with the following comments.

The suggestion is an interesting one, but I find it very difficult to come to any conviction as to whether it would likely work out successfully or not. On the one hand there is obviously a very important point in bringing about public understanding and public consideration of these questions, and there is also the fact that an independent committee of very able citizens might be able to make the suggestion which would break the present impasse. What may be needed might be a new idea or it might be some face-saving mechanism.

If this plan is carried out it would seem to me that a logical extension of its basic idea would be to provide two Russian teams, and not one. The first of these teams might approach the problem from the point of view of Russian self-interest along the lines suggested in Szilard's memorandum. We must admit the possibility, however, that the Russian government will not act, even as a first approximation, the way we would, and that it may have objectives definitely in view which are not susceptible or argument on the assumption of a desire for world peace and a free society. It might therefore be advisable to have a second Russian team which would go to the worst extreme possible, and assume that all the Russian objectives were of the type which we most dislike and most fear.

I have some qualms about the suggestion at the bottom of page five to the effect that the press should be brought into these discussions at the very outset. I would be afraid that this might result in an avalanche of political or prejudiced outpourings which would handicap the project at the start. I would think that a better procedure would be to carry through the study on a rather confidential basis until it has reached the stage of at least some tentative conclusions and some definitive formulation of arguments. Then might be the time to bring in the press for their reaction and for securing the reaction of the public through them.

Finally, there is another obvious difficulty. In order to bring in people who are best informed it would probably be necessary to call in people who have also been associated as members or advisers of the State Department on these issues, - to say nothing of men who have been associated with the work of the Atomic Energy Commission. On the other hand, it would be extremely difficult for any of these men to operate objectively, if at all, because it would be impossible for them to dissociate themselves with the arguments concerning these same questions in which they may have been involved in their governmental duties. Perhaps I feel rather keenly about this because I have had to write myself out of a number of interesting situations, since leaving the Research and Development Board, simply because I could not divorce myself from the discussions of these questions which I had heard in the War Council and other agencies.

As you may see, therefore, I am very much on the fence as to whether this is a good project or not, and by good I mean a project which can reasonably be expected to produce results commensurate with the cost in time and money. I do think that Szilard has made a very straightforward and skilful presentation of the plan.

Very sincerely yours,

Karl Compton
Chairman

The following is a copy of a letter from Albert Pratt of Paine, Webber, Jackson and Curtis, 24 Federal Street, Boston 10, Massachusetts.

Mr. Henry B. Cabot
140 Federal Street
Boston 10, Massachusetts

April 25, 1950

Dear Harry:

I have read with interest Professor Szilard's memorandum. I think he is overly optimistic of the possible results of his plan. I doubt that such a recommendation of a private commission can ever be accepted by both the American and Russian governments as a basis for negotiations. However, I do believe that his idea has merit as a method of devising possible solutions, provided that the highest calibre brains are employed to work out a new approach entirely unhampered by preconceived ideas.

In this connection I think there is some danger in unduly restricting the "terms of reference" as suggested in Professor Szilard's paragraph four.

I also have some doubt as to his conclusions in paragraph five as to the point of view which the Russian team should adopt. It seems to me that this team must try as best it can to take into the act the Marxian method of thinking of the Russians. Otherwise the procedure will be entirely unrealistic and of no value.

I also doubt the practicality of the press coverage proposed in paragraph three. I don't think that it is the kind of "news" that will be used and there is some doubt in my mind as to whether premature publicity might not destroy the value of anything which the commission is able to work out.

I am returning to you the memorandum as you requested.

Sincerely,

Albie

From: J. R. Killian, Jr.
President, Massachusetts Institute of Technology.

10.

To: Mr. Henry B. Cabot
140 Federal Street
Boston 10, Massachusetts

May 8, 1950

Dear Mr. Cabot:

It was good of you to send me a copy of Professor Szilard's letter to Professor Einstein. I return the copy as you requested.

I feel very strongly that we need more public discussion of the whole atomic energy problem, and aparticularly we need to face up to the question of the advisability of a further effort to reach an agreement with Russia. For this reason I am generally in favor of systematic efforts to study the problem. You may be interested in the marked passage in a speech of mine made on the west coast some weeks ago in which I discussed this problem.

I was awfully disappointed that I could not get to the meeting at your house recently.

Yours sincerely,

J. R. Killian, Jr.
President

From: Herrick, Smith, Donald, Farley and Ketcham
1 Federal Street
Boston 10, Massachusetts

April 27, 1950

To: Henry B. Cabot, Esquire
140 Federal Street
Boston, Massachusetts

I received yours of April 24th with the enclosed memorandum of Leo Szilard which I have read with great interest. It raises two questions.

1. Would the Commission which he plans produce a valuable advance in thinking about a possible agreement between Russia and the U.S.A. within which there could be International control of Atomic Energy?

2. Would the money, namely, from \$550,000. to \$1,000,000. for the work of the Commission and the Board be obtainable?

Dealing with the second question first, I think it would be extremely difficult to raise the money unless a few large donors were prepared at the outset to give most of it.

As to whether the Commission would produce a worthwhile idea, I feel unable to have a sound opinion. The chances I should think would not be as favorable as 50-50. Inevitably such a Commission works in a somewhat academic atmosphere and the ability of those representing Russia to really understand the Russian point of view would be subject to considerable doubt. A great deal would depend upon the genius of the members of the Commission working on the two teams. How could one assume a probability that they would be up to the job? I find myself in a haze. I return herewith the memorandum.

Yours sincerely,

Phillip Ketchum

Stringfellow Barr, President
Foundation for World Government
From: Fifty-eight Park Avenue
New York 16, New York

May 5, 1950

To: Mr. Ieo Szilard
1155 East 57th Street
Chicago 37, Illinois

Dear Mr. Szilard:

May I confirm in writing what I told you orally at the Waldorf Saturday, namely, that at a meeting of our trustees on April 28 your application of April 24 was carefully considered. In view of their own present plans and policies they felt unable to go further than a token grant of \$10,000. which I hope may be of some help.

Will you tell me how payment should be made. Is the Emergency Committee willing to accept money from the Foundation? You may recall their public statement that they were not. On the other hand, our trustees would want to make the grant to some tax exempt body.

Cordially yours,

Stringfellow Barr

1 June 1950

MEMORANDUM of conversation with Dr. Szilard, Mr. Byron White, and Dr. Henry Swan.

SUBJECT: Possible organization of regional committees affiliated with the national organization of Dr. Szilard's proposed "citizens' committee".

1. Regional committee. This committee would be composed of a limited number of interested permanent members of the local community. Its primary functions would be:

- a. To enlist members in a group, possibly called affiliate membership of the "citizens' committee." These individuals would primarily be college graduate school students, or any other thoughtful member of the community.
- b. To aid in obtaining regional publicity for the activities of the national committee.
- c. To sift or strain communications from the affiliated membership addressed to the national committee.

2. Affiliated members

a. An affiliated member would pay a specified sum each month, tentatively suggested from \$2.00 to \$5.00, which monies would go partially to the regional committee, and partially to the national committee, for which the member would receive:

- 1. Confidential releases from the national committee from time to time; a service which he desires for the purpose of self-education.
- 2. The right to obtain a hearing of his own ideas and viewpoints before the national commission as strained through his regional committee.

b. Possibility of establishing at college or graduate school level voluntary courses. Using the restricted releases as the basis for the course material was suggested.

mlm

For N.Y.

[84]

Conversations with Mr. H. Graham

John Gossuch (NY)

Ben Churston

Charles Mumfield (DC)

Jacques Woodruff (DC)

Lenesh (DC)

Dean Roberts Episcopal

Cultural

William W. Grant Jr. (Pres. Polacy

For Los Angeles:

Manager for Andy N...

Corey Mac. Williams

(Author) knows many people
would be interested identified with
left wing right of progressive party

Robert Kennedy / generally general
under Olson / pres of Nat.
Coyne Gold. / knows Los Angeles

For N.Y.

Eldred Pratt in N.Y.

[48]

Robert Freeman
" leaderman
" Kovan

X X X X

c o p y

GRAHAM AND SCHEUNEMANN
Attorneys at Law
Symes Building
Denver 2, Colorado

June 12, 1950

Dr. Leo Szilard
Institute of Radiobiology and Biophysics
The University of Chicago
Chicago 37, Illinois

Dear Dr. Szilard:

Please find enclosed a copy of a letter sent today to Eliot Pratt. I certainly hope he gets involved because he could do a great deal, both in the contribution of his own support, and in a financial way to help the project along.

I have not had much time to give further thought to the question of possibilities here for the regional organization. I did have one or two ideas though I thought I would send along for you to check against those of others with whom you are consulting.

A lad I used to know pretty well and for whom I have a very high regard is an architect named Tom Moore. He was formerly associated with one of the leading firms of architects in Denver and is now engaged in the practice of his profession in the city of Grand Junction, Colorado. I can't vouch for the position that Tom may have vis a vis the USSR, but I suppose that could be checked fairly easily. I know he is a very good friend of Henry Swan's, and perhaps Henry could give you further information on that.

The Dean of the University of Montana law school, Bill Leaphart, is another person whom I would recommend very highly. He has a very clear and honest and realistic point of view on matters of this sort. I haven't seen him for several years, so again here there would be the desirability of some sort of check.

I talked with a friend of mine in the University of Denver about faculty people who might be helpful. He suggested Dr. Ben Cherrington who has some sort of consultative position with UNESCO. He suggested also Dr. Francis Brush. He mentioned also the names of Floyd Sampson in the Department of Philosophy, Lloyd Garrison, Dean of the Graduate College, and Harold Dunham of the Social Science Division. He seemed to feel that all of these would have the right general political point of view and at the same time combine the other qualities so essential for the enterprise.

If in the rush of events other names of possible candidates for help on this occur to me, I'll take the liberty of sending them along to you. Here's wishing you the best of success.

Sincerely,

Charles A. Graham

CAG:C
Encl.

M^{rs} CUTCHEN, THOMAS, MATTHEW, GRIFFITHS & GREENE

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SAN FRANCISCO 4

June 23, 1950

Dr. Leo Szilard
Institute of Radio Biology and Biophysics
University of Chicago
Chicago 37, Illinois

Dear Dr. Szilard:

I regret my delay in answering your letter of May 17th, but it has been unavoidable. I now give you my comments as follows:

1. I endorse heartily the establishment of a committee along the lines you describe, provided it consists of Americans of the highest standing whose loyalty is beyond question. I cannot emphasize too strongly the necessity, in my view, for standing and complete loyalty in the public mind. Some of the names you mention do not seem to me to meet this very exacting test.
2. You are entirely right in your requirement that full time be given by those who serve. Based on experience, I am clear that unless a man is willing without reservation to throw himself into this job, he should not be selected, and that no part time contribution would work out successfully.
3. I believe a committee of nine or eleven is preferable. A larger group expands discussion and impedes action. If it were not that public confidence requires a fairly large geographical distribution, I would favor five.
4. I have some question as to the necessity or desirability of teams, but an answer on this question might well be left to your commission to determine after organization. The calibre of your men rather than means of operating is of major importance.

Dr. Leo Szilard -2-

5. I disagree with that part of your program which has to do with world government. It seems to me that any well-equipped group you may select will have to consider that question in connection with all the others, although I frankly wish this were not so.

6. I cannot endorse the suggestion that White House or State Department approval should be sought. On this subject I agree with Mr. Grenville Clark.

7. I think your estimate of costs is high, assuming, as I do, that the members of your committee will serve without pay. But the program should, of course, not be limited by inadequate financing.

Frankly, I am wholly behind exploration of our relations with Russia by a non-governmental group of loyal able representative citizens. Such a group may supply the initiative, originality and vision which a solution of this problem requires.

I recall with pleasure a very pleasant Sunday you spent with me some years ago at my home in Ross.

Yours sincerely,

A. Crawford Greene

COPY

July 12, 1950

Mr. Eliot D. Pratt
177 East 71st Street
New York City, N. Y.

Dear Eliot:

Please find enclosed certain materials forwarded to me by Dr. Leo Szilard of the Institute of Radiobiology and Biophysics of The University of Chicago. No doubt, you are familiar with the work done by Dr. Szilard, particularly in the field of nuclear energy.

Dr. Szilard is interested in the development of a plan that in my judgment is one of the very few that has a real likelihood of militating against the imminent danger of a third and final world war. The plan itself and the reaction it has elicited from many to whom it has been presented is pretty clearly set forth in the enclosures.

Two things are needed now to implement the plan. One, of course, is the inevitable need for financial support. The other is the need for people of a certain political complexion who can by their association with the activity and their support of it help towards its success.

Dr. Szilard is looking for individuals who have courage, intelligence and honesty and who now may be for the first time willing to involve themselves in some sort of effort likely to lead to peace. Of course, those who possess those qualities in a very high degree have in most cases already had the intelligence to see the danger, the integrity to realize that something is needed from us, as well as from the Russians, and the courage to say so. There are, nevertheless, many who have come awake, as it were, as a result of the grasping of the significance of nuclear fission and of the race for the hydrogen bomb.

Ideas that you may have of people of this sort would be helpful. Your own participation would be still more helpful. If the idea seems to be sufficiently challenging, Dr. Szilard would be glad to check with you on it the next time he is in New York.

COPY

I would recommend strongly, Eliot, that you indicate sufficient interest to justify Dr. Szilard in giving you a call. It seems to me that this is a field in which many of your efforts and energies might well produce results of great value.

If you do find yourself interested and want to hear further, let me know.

Sincerely,

Charles A. Graham

CAG:G

July 22, 1950

Memorandum on Ageing

by Leo Szilard

Dr. Novick and I recently found that a tryptophane requiring strain of ~~some~~ *Escherichia coli* can be kept growing ^(independently) at a rate which is much lower than its "normal" growth rate, i.e. the growth rate of the bacterium, in the synthetic medium containing a ^(sufficiently) high concentration of tryptophane. These low growth rates are obtained by maintaining a fixed, low, concentration of tryptophane in the medium. In our experiments we went down to growth rates of about one-tenth of the normal growth rate.

We found that ^{when} bacteria are thus maintained at a very low growth rate they ^{shall} keep on undergoing mutations at the ~~normal~~ rate and that also certain biosynthetic processes keep on at the ~~normal~~ rate.

It might be that we ought to regard bacteria, the growth of which is ^{thus} kept slow by keeping the growth rate under control of a growth factor (for instance, tryptophane) as a model ^(analogue) for somatic cells of metazoa. The growth and division of somatic cells in metazoa is kept under control in a manner which we do not ~~understand~~ understand and it might be that the control is ^(in fact) exercised ~~in metazoa~~ through the concentration of some growth factor upon which the somatic cell is dependent.

~~Considerations of this sort may lead us to ask~~ If this view is correct then we may ask whether mutations do not occur in somatic cells of metazoa at some rate characteristic of the species, and ^{and} if the process of mutations in fact keeps going in the somatic cells at a rate characteristic of the species, then this phenomenon alone could set a limit to the lifetime of the individual of the species. After a ^(sufficiently) long period of ~~time~~ ^{life} when practically all the somatic cells ^{of the individual} have undergone a large number of mutations, ^{and} the ~~individual~~ ^{organism} can hardly be expected to function as it ^{did} functioned in its youth before these mutations accumulated, ^{and the organism may be said -} ^{for every animal species}

This does not mean that ~~such somatic mutations will actually limit~~ the life span ^{is determined by the accumulation of somatic mutations} of every animal species. One might argue, however, that in the case of mammals

in general and ~~Man~~ Man in particular, the prolongation of the period of fertility and the life span ~~will~~ give an advantage to the species by virtue of the fact that mammals are able ~~to~~ accumulate experience and benefit from it. We might, therefore, take the view that during evolution the life span of mammals became longer and longer and has by now become so long that it is limited by the accumulation of somatic mutations in the body cells of the individual. ^{The age of} Mammals might then be measured by the number of mutations accumulated on the average per somatic cell.

For mammals ranging in body size from the mouse to the elephant, there is a decrease of the metabolic rate as measured in calories per kilogram body weight and the life span is inversely proportional to the metabolic rate, so that ~~approximately every species consumes during its life span about the same amount of oxygen per kilogram of body weight~~ an individual consumes during its life span about the same amount of oxygen per kilogram of body weight in every species.

Even though it is not known why there should be this parallelism between the metabolic rate and the life span of mammals, this correlation might guide us in interpreting the meaning of the observed life span of animals other than mammals. Thus if the life span of a species is very much shorter than would be the life span of a mammal ^{of} which had the same resting metabolism per kilogram of body weight, we shall tentatively conclude that the life span of that species is determined by

factors other than the mutations of its somatic cells. ^{circumstances} This would hold, for instance, ~~in general~~ ^{on this basis we cannot} for instance ~~for~~ insects. ^{say that the life span of insects is}

Whenever we have to deal with a proliferating cell population, such as a tissue culture (of the Carrell type), or growing bacterial cultures, mutations will be incapable of leading to an "ageing" of the cell population. For we may assume that practically all mutational steps lead to a cell which grows slower than the cell in which the mutation occurred, and therefore in a growing cell population the number of mutant cells will not exceed a certain fraction of the total population however long the cell population ^{may be} allowed to proliferate.

~~that~~ ~~the~~ ~~life~~ ~~span~~ ~~is~~ ~~not~~ ~~due~~ ~~to~~ ~~the~~ ~~accumulation~~ ~~of~~ ~~somatic~~ ~~mutations~~ ~~does~~ ~~not~~ ~~depend~~ ~~on~~ ~~the~~ ~~rate~~ ~~of~~ ~~mutation~~

in general is not the determining factor for the life span of insects.

In ~~the~~ metazoa, on the other hand, most somatic cells divide only slowly if at all and there is no mechanism by which the organism can get rid of mutant cells, so that mutations might accumulate and if the organism lives long enough, ~~as~~ *may be the case for "mammals,"* they might lead to ageing. *Insert #*

Let us assume, for instance, for the sake of argument, that in Man mutations occur at the rate of one per somatic cell per year and that each such mutation represents a slowing of the biochemical processes of the cell by about 1 per cent. In 100 years the somatic cells would then carry about 100 mutations on the average, and the rate of the biochemical processes would have fallen to about one-third.

If ageing in Man is in fact based on the mutations of the body cells such mutations should also occur in those cells of the ovary which eventually give rise to the production of an ovum. An ovum of a mother, say 30 years old, should because it is ~~haploid~~ *haploid*, carry ~~about~~ *for instance* 15 mutations, on the assumption that her diploid body cells carry an average of 30 mutations. We must distinguish here between dominant and recessive mutations and we shall assume that for the process of ageing we have to consider only the dominant mutations with the exception of the X-chromosome. In the case of the X-chromosome, recessive mutations might effect the "age" of the male while they would have no effect on the "age" of the female.

The offspring inherits from the mother the chromosome set contained in the ovum and thus inherits from the mother one half of her "age" at birth of the offspring. The offspring also inherits one set of chromosomes from the ~~father~~. However, this set of chromosomes is contained in one spermatozoon among many millions of spermatazoa, and we ~~now~~ assume that ~~the~~ *the* dominant mutations which ~~lead~~ *characterize* ageing represent a handicap for the spermatazoon which contains them *in the* competition with spermatazoa which are free from such mutations. We shall, therefore, *in general* assume that the offspring inherits only a fraction, alpha, of the mutations contained in the average ~~in the~~ chromosomes of the father (which determine the "age" of the father at conception of the offspring). ~~To begin with~~ *we* shall further assume *in*

probable alpha be zero ~~so~~ that the offspring ~~then~~ inherits no age from the father. *in which case*

(4)

Under this assumption, the age of the offspring at birth would then be one-half of the age of the mother at birth of the offspring, plus one-fourth of the relevant age of her mother, plus one-eighth of the relevant age of her mother, etc.

From these assumptions it follows (for $\alpha = 0$) that if we have a line of descent within a strain of a mammal at which the child is born to the mother at say 20, and if we compare this to another line of descent with the same strain in which the child is born to the mother at 30, the life expectancy in the first line of descent should exceed by ten years that of the second line. If α is not zero, the difference of the life expectancy within the two lines of descent is obtained by multiplying the difference for $\alpha = 0$ by the factor $\frac{1}{1 - \alpha}$.

Further, independently of the value of α , for brothers or sisters who differ in age by ten years, the younger sibling should have a life span which on the average is shorter by five years than the life span of the older sibling. This latter conclusion should be capable of a rather stringent test, provided a sufficiently large sample of family histories is available. A sample of families whose offspring were born between 1850 and 1870 would be desirable. ~~It would be of advantage to limit the sample to families in which two siblings, differing by at least 5 years, both survive 60 years.~~ (in order to reduce the variance due to infant mortality and accidental death, including certain infections). It would be of advantage to limit the sample to families in which two siblings, differing by at least 5 years, both have survived their 60th year.

Incidentally, this theory is consistent with the fact that the life expectancy of adult males is shorter than the life expectancy of adult females. Because the female has two X-chromosomes and the male has only one, the ageing of the male would be affected both by the recessive and dominant mutations in one X-chromosome, whereas the ageing of the female would be affected by the dominant mutations in both X-chromosomes. If, then, the recessive mutations exceed the dominant mutations, the male should be expected to age faster. It should be very difficult, however, to prove with any degree of certainty that physiological differences between males and females as well as their

5

environmental differences cannot also account for the observed differences in life expectancy.

June 30, 1950

Memorandum on Retirement Benefits

At the University of Chicago

By Leo Szilard

A retirement plan, in order to be satisfactory, will have to solve two problems with which we are faced. The first of these arises from the possibility that in the course of the next 35 to 50 years there might be a substantial fall in the purchasing power of the dollar and that under the present plan the younger members of the faculty are in no way safeguarded against this possibility. The other problem arises from the fact that there has been a considerable fall in the purchasing power of the dollar in the past ten years and many of the retired professors and those who are going to retire in the near future are faced with hardship.

Even though the second problem is not as important as the first, it is well to keep in mind that a community of scholars cannot be successfully established if "community" is limited to the purely intellectual level and if the members of the community are indifferent toward each other's welfare.

The sub-committee considered seven types of solutions, A to G. The plan which is proposed here is different from them and will be, for the sake of brevity, hereafter referred to as the H-plan.

The basic idea of the H-plan is as follows:

Today, 10% of the total salary volume is paid to T.I.A.A. and secures upon retirement at the age of 65 an annuity payment to the retired professor and, if desired, to his wife if she survives him.

Under the H-plan, these payments to T.I.A.A. would be discontinued, ~~and~~ 10% of the total salary volume would be paid into a Distributing Office (established by the University or set up as a separate corporate entity) and paid out in toto currently to the retired members of the faculty or their surviving wives. Under this plan, a man who serves for a certain number of years at the University and then retires or leaves the University will from his 65th year on receive a certain share in the total yearly disbursement of the Distributing Office. The share of any one person will be determined by the number of years of service at the University, the salary which he received at the time he left the University or was retired, by the age of his wife, and the reduction in his share which his wife will have to accept after his death.

The term "years of service" requires explanation:

Let us assume, for sake of argument, that the H-plan goes into effect on the 30th of June, 1950. For those who join the University of Chicago after that date, the number of "years of service" will be simply the actual number of years of service with the University under the H-plan. Those, however, who were in the employ of the University on June 30, 1950, or on leave of absence from the University, or who had retired before that date, shall be free to elect to be regarded as having served under the H-plan for as many years prior to its inception as they choose (but at the most from their 30th year on) providing that they turn over to the University a certain fraction of their "savings" (as defined by statute as explained further below) accumulated on the basis of their past income, ~~derived from the University.~~

Under the H-plan, members of the faculty would be pretty well safeguarded against a fall in the purchasing power of the dollar which might take place

in the next 30 to 45 years in so far as it may be assumed that salaries of the active members will be gradually adjusted to whatever long lasting change there may occur in the purchasing power of the dollar. Beyond that, retiring members of the faculty will benefit under the H-plan from any general raise in the productivity and standard of living of the country as a whole to the same extent to which active members of the University will benefit from them. In 50 years, since 1900, the real income per person has risen in the United States at an average rate of 2.5% per annum.

Members might be adversely affected under the H-plan only if there should be a substantial fall in the total volume of the academic salaries at the University of Chicago. But barring a universal national catastrophe or a general collapse of all private universities, it is not likely that such a fall in the total salary volume--if it ~~ever~~ comes to pass--should exceed 20 to 30%. This risk has to be weighed against the risk that the purchasing power of the dollar might fall over a period of 35 to 50 years by a factor of perhaps 3 or 4, even if the United States is not engaged in any major war or subject of any other m^r or national catastrophe.

Under the T.I.A.A. plan as it exists today, a person (single) starting out in 1949 will receive after 35 years of service upon reaching his 65th year an annuity amounting to 27% of his final salary under the assumption set forth on page 4 of the sub-committee's report.

Under the H-plan, a person (single) with 35 "years of service" should be able to receive when passed 65, an annuity ~~amounting~~ of about 60% of his final salary. As we shall see later, this goal is attainable under the H-plan without ^{at any time} putting an increased financial burden on the University.

~~Because~~ The savings of many of the present members of the faculty, whether invested with Teachers' Annuity or some other insurance company, have fallen in purchasing power to about half. In spite of this, the above stated goal

of the H-plan is attainable without putting an additional burden on the University. This is so only because of the fact that the number of academic employees has greatly increased in past ten years and that the age distribution at present is very favorable. There are today only about 100 retired faculty members for 950 active members, and there will be in the next 10 years no substantial change in the ratio of the number of retired members to the number of active members.

In drafting the detailed provisions under which the H-plan may operate a compromise will have to be made between considerations of equity and considerations of simplicity. The set of detailed provisions given in this memorandum represents one possible set and by no means the best set that could be devised. It will nevertheless serve the purpose of illustrating the basic principles of the H-plan as well as some of the problems which it raises, and it will permit to estimate the revenue which the H-plan would provide to members passed 65 years of age.

In the following are given a set of provisions under which the H-plan might operate:

1) Faculty donation.

The present active members of the faculty who elect to be regarded as having served under the H-plan for a number of years (but at most from their 30th year on) will sign over to the University for every year they have elected from \$350 to \$500, depending on their age on June 30, 1950. For any age between 30 and 65, the proper amount shall be computed by linearly interpolating between the two extreme values of \$300 and \$500. The present average age of the members is 45 and the corresponding amount is \$405 per year.

An indebtedness thus incurred by members of the faculty can be discharged by them in a number of ways, such as, for instance:

- a) By payment in cash.
- b) By turning over to the University his claims against T.I.A.A. or some other insurance company, in part or in whole, the "cash value" of which might be computed and defined by statute.

This mode of payment should be the most convenient one to those in the lower age brackets.

c) By amortizing it over a 15 year period at an interest rate of 4%.

Those who reach their 65th year and would have to continue to pay annuities to the University under this paragraph, will, however, be free from doing so and the Distributing Office will pay these annuities in their place.

Members of the faculty who had been retired from the University of Chicago before June 30, 1950, and wives who on the 30th of June, 1950, were widows of members who had been retired from the University of Chicago shall participate under the H-plan on the basis of 35"years of service." The share of the widow shall be one-half of what the share of the husband would be if he were alive. Members and widows falling into this category are not required to make any payments toward the Faculty Donation nor is the Distributing Office required to make any payments on their behalf.

The Faculty Donation will be administered by the University as if it were part of its general endowment. The revenue of the Faculty Donation will be calculated on the basis of the average revenue of the University's endowment and will be allowed to accumulate for 15 years. In 1965 this accumulated value of the faculty donation will be computed and from then on the revenue derived from the Faculty Donation (as computed on the basis of the yearly average revenue from the University's endowment) will be annually paid out by the University to the Distributing Office.

The revenue which the Distributing Office thus obtains, derived from the Faculty Donation, after 1965 should amount to about \$315,000 per annum. This value is computed as follows: It can be shown that under the assumption

of this memorandum, it is of advantage to all of the ^{younger} members who were in the employ of the University on June 30, 1950, to exercise to the fullest permissible degree their option so as to insure them the maximum number of "years of service" under the H-plan which is permissible under the statute. We shall therefore assume that, with only insignificant exceptions (of a few older members) all members of the faculty will so exercise their option. Because the average age of the members is 43 years and the number of academic employees is 950, the faculty donation should ^{then} amount to 5 million dollars. Assuming that in the next 15 years income from endowment will average 4%, the faculty donation will by 1965 increase to about 9 million dollars. Assuming further that from 1965 on the revenue from endowment will be about 3.5%, the Distributing Office should receive a revenue of \$315,000 derived from the Faculty Donation from 1965 on.

2) Salary adjustment at inception of H-plan.

At the time when the H-plan goes into effect, the members of the University shall accept a 5% cut in salary to take the place of the present 5% withholding of salary (in favor of the T.I.A.A. premium). It might even be advisable to take a 6% cut and this might be done without any loss in spendable income because about 1% of today's salary goes to the government in income tax, ^{100,} ~~levied~~ on that part of the salary which is withheld in favor of the T.I.A.A. premium.

Assuming for the purposes of this discussion that today's academic payroll is 4 million dollars and assuming a 6% cut in salary, the University could then pay to the Distributing Office, at the inception of the H-plan and for a number of years thereafter, \$432,000 or 11.5% of the new salary volume (which after the salary cut is \$3,760,000) without an increase in the University's budget.

Persons who join the University after the H-plan has gone into effect, will, of course, not take any salary cut since their salary is determined by negotiation. The University, however, shall keep the payments to the

Distributing Office at 11.5% of the salary volume or even raise it above 11.5% later when it becomes possible to do so without increasing the burden carried by the University.

It is important to avoid a situation in which the Treasury might rule that active members have to pay income tax on their future presumptive share in assets which may be transferred by the University to the Distributing Office. Presumably the Treasury will make no such demand if the active members of the University have no legal claim on the Distributing Office and are content to rely for their protection on the statutes under which the Distributing Office operates. Payments received from the Distributing Office by members or their surviving wives will then be taxable as income, but a tax advantage will nevertheless ensue because members passed 65 will presumably fall into a lower income tax bracket than before retirement.

3) The Effect of Future Raises in Salary.

If in the course of the next 10 to 15 years, the University will gradually reduce the number of professors on its payroll and grant corresponding increases in salaries (keeping the total expenditure for salaries substantially unchanged), the University will then be in a position gradually to increase its contribution to the Distributing Office without a corresponding increase in its budget, simply by keeping the salary raises somewhat lower than they might have been otherwise. The University ought to increase on this basis its contribution to the Distributing Office from 11.5% of the salary volume at the inception of the H-plan to perhaps 16.5% of the salary volume in 1965, corresponding, for instance, to a shrinkage of the faculty by 25%, and a rise in the average salary of 20% and leading to a ^{reduced} salary volume of \$3,570,000 in 1965.

4) The share of any member passed 65 in the funds annually handed out by the Distributing Office will be calculated from his key number which will vary from year to year. This key number will depend on whether he is single, or married and desirous to have his widow receive one-half of his "share"

~~benefit~~ for life if he should die after reaching 65. The key number of a married man will then depend on the age of his wife and on the average it will be about 20% lower than for a single man.

The key number of a member will be proportionate to the number of "years of service" as defined by statute and also proportionate to the man's "final salary" as defined by statute.

The "final salary" of a man who ^{had} left the University is determined by his actual salary in dollars at the time when he left the University multiplied by the ratio of the average salary of his age group during the current year to the average salary of his age group in the year when he left the University.

The "final salary" of a man who retires from the University upon reaching his 65th year, shall be the average of his actual annual salary in his last five years of service multiplied with the ratio of average salaries of the age group 60 to 65 in the current year to the average salary of the age group 60 to 65 in the year of his retirement.

The purpose of defining the "final salaries" in ^{this} ~~the~~ manner stated above is to safeguard those who are passed 65 against a fall in the purchasing power of the dollar and also to let them have the benefit of sharing any rise in the standard of living of the active members.

The above provisions, however, are subject to the following limitations:

No member (single) shall receive in any one year more than 60% of his "final salary" in toto from the Distributing Office and from T.I.A.A. annuities (or from some other insurance company from which he receives an annuity in ^{past} return for premium payments made in the ~~present~~ on the basis of 10% of his salary).

A corresponding limitation will hold for married members at 50% of their "final salaries" and for widows at 25% of the "final salaries" of their husbands.

Because of this ceiling placed on the revenue that a member might derive from the Distributing Office, there will be some members, about 50 to 55 years old, who can count on a fairly large retirement benefit from T.I.A.A. and who will derive maximum benefit from the provisions of the H-plan by exercising their option with respect to "years of service" not to the fullest extent (i.e. as having served from the 30th year on), but rather by electing a smaller number of "years of service." Because of this circumstance, a correction will have to be applied to our previous estimate of the amount of the Faculty Donation and this amount will have to be corrected downward. It is not believed, however, that this correction is important enough to be significant within the limitations of the general accuracy of the estimates given in the present memorandum.

5) Overflow from the Distributing Office.

Because of the above discussed "ceilings," the Distributing Office might not be able to spend all of its funds received in each year, and in that case the overflow shall be paid by the Distributing Office to the University and shall be added to the Faculty Donation.

Financial Estimates.

On the basis of the above provisions and assumptions, we may expect, if the total expenditure of the University for salaries and payments to the Distributing Office does not change and the rate of revenue from investment also remains constant, the following figures:

The income of the Distributing Office will be at the inception of the H-plan 11.5% of the faculty salaries (\$3,760,000 after the 6% cut), i.e., \$432,000.

Between 1950 and 1965, the annual income of the Distributing Office will gradually rise to 16.5% of the ^{a reduced} salary volume of \$3,570,000 i.e. to about \$590,000,

After 1965, the income of the Distributing Office should be \$590,000 + \$315,000 = \$905,000 or about 25.5% of the salary volume.

This has to be compared with the demands made on the Distributing Office on the basis of providing 60% of the "final salary" for single men, 50% of the "final salaries" to married men (who claim benefits of 25% of their "final salaries" for their widows), and 25% of the "final salaries" for widows.

At present, there are 100 retired faculty members and 50 widows.

Immediately after the inception of the H-plan, we shall, therefore, have to bring up 100 members (married) to 50% of their "final salary" and 50 widows to 25% of their husbands' "final salaries." We assume that the average of the final salaries is \$10,000, that the 100 members (married) have on the average from T.I.A.A. (or some other insurance company) an annuity of \$2500, and that the 50 widows have on the average an annuity of \$1250. On the basis of this assumption the Distributing Office will have to provide at the inception of the H-plan annually \$312,500. This compares favorably with the revenue of the Distributing Office at the inception of the H-plan which should amount to \$432,000.

For ten years from 1950 to 1960, there will retire twelve faculty members per year, on the average. Thus in the next ten years there should be no substantial increase in the number of retired faculty members or widows.

There may be, however, from 1950 to 1960, because of the discontinuation of further payments to Teachers' Annuity at the inception of the H-plan, a decrease in the average annuity of the retired members and widows from T.I.A.A. And also from 1960 to 1965 there should be a rise in the ratio of the retired members to active members. In spite of this, because the income of the Distributing Office should rise from \$432,000 in 1950 to \$590,000 in 1965, we may expect the Distributing Office to have a surplus, leading to an over-flow from the Distributing Office to the Faculty Donation, every year between 1950 and 1965.

Some time after 1965, as the age distribution of the faculty changes and the ratio of the retired members to active members rises, we might ultimately be faced with a situation as follows:

We assume for the sake of argument that every member enters the service of the University at 30 and does not leave the University until he dies or is retired at 65. About 80% of those who join the University at 30 might then reach 65 and live, on the average, for 15 years thereafter.

We further assume that because of the changed age distribution their average "final salary" is $9\frac{2}{7}$ of the average faculty salary; that they receive from the Distributing Office 50% of their "final salary" (married); and that their widows receive from the Distributing Office 25% of their "final salary." On the basis of these assumptions, the Distributing Office would have to make annual payments amounting to about 27% of the salary volume.

This should be compared with 25.5% of the salary volume which should be available to the Distributing Office after 1965 under the assumptions of the estimates given above. In computing the figure of 25.5% we did not take into account that the Faculty Donation will be increased by the over-flow payments from the Distributing Office between 1950 and 1965, and possibly also for a number of years after 1965. It is therefore quite possible that a more accurate estimate would indicate that the Distributing Office could dispose of more than 27% of the salary volume after 1965. On the basis of a more accurate estimate, it might perhaps be possible to raise the ceiling, which has been imposed at 60% of the final salary for single men, etc., in this memorandum.

The H-plan as outlined thus far does not take care of the wives and families of members who die before reaching their 65th year. It is probably desirable to modify the H-plan so as to be able to take care of this aspect of the general problem on an optional basis. A member who wishes to provide for his wife and children in case he should die before reaching his 65th year could, for instance, have the option of securing for his estate, for 15 years, annuity payments in the amount of 25% to 50% of his "final salary", by accepting a reduction in his "key number" of about 10% to 20% respectively.

General Remarks.

The most uncertain point of the H-plan as described above consists in the reliance, after 1965, on a continued revenue derived at 3.5% from the Faculty Donation. Indeed in the years to come, there might be a substantial fall not only in the purchasing power of the dollar but also in the real revenue derived from the University's endowment. It may be assumed, however, that if under those conditions the University succeeds at all in maintaining the scope of its operations, this will be so because the University may acquire other sources of income and that the real income of the active members will then be maintained in the long run by resorting to salary raises from time to time. These salary raises will then give the University an opportunity to maintain the income of the Distributing Office at a fixed percentage of the "salary volume" through the device of keeping the salary raises below what they otherwise would be.

If we wish to compare the merits of the H-plan with the merits of the present system of retirement benefits, we shall have to make some guesses concerning the changes in the purchasing power of the dollar during the second half of this century. These changes will ~~not~~ be primarily determined not by economic, but rather by political factors. It is hardly permissible today to base a forecast on the experience accumulated in the United States prior to the New Deal. In view of the experience of 1929, the economic philosophy that is prevalent today, and the political pressures to which our political institutions are subjected, it appears very likely that in case of another major depression, the people will not be willing to stand for large scale unemployment over a long period of time and that in case of such a depression they will successfully press for major government expenditures of funds. While pressure for such expenditures will be strong in a depression, there will be no correspondingly strong political pressure for adequately increased taxation in times of full employment.

On this basis alone, it would appear as more likely than not that the purchasing power of the dollar will be considerably less at the end of this century than it is today.

In addition to the above considerations, there is also this to be said. International conflicts are likely to involve the United States much more profoundly in the second half of this century than they did in the first half. If there were a war, there is no reason why the dollar should be less affected than were in the last war the currencies of Britain or France. And assuming there will be no war, there still might be a succession of international crises leading to large expenditures for defense purposes not adequately covered by taxes.

Sent to
Kendy let
Director
Northrup
Shapiro
Hutchinson
Calwell
K. Block
Urey

not yet sent : July 13/50
~~Block~~
~~Urey~~

Attached to this list was also copies of letters sent to:

Carl E. Moore
Edward E. Levi
Paul R. Cannon
R. Wendall Harrison
James L. Cate

Louis Wirth
Warren C. Johnson
Clarence L. Parmenter
Robert L. Havighurst
P.P.H. De Bruyn

- K.L. Palmer 10-5-87

December 15, 1950

Memorandum on the Total Mutation Rate in Bacteria

There are methods which permit to observe for certain mutations which are easily observable the rate at which these mutations occur. Most mutations, however, are rather indifferent in nature and do not manifest themselves in easily observable character and if we wish to determine the total rate of mutations including these, all these non-observable mutations, some novel method will have to be adopted. The discussion here presented is based on the following assumptions: 1) that practically all mutations that the overwhelming majority of the mutations of any given strain of bacteria will manifest itself, if we compare the growth rate of the mutant with the growth rate of the strain from which it originates under conditions of starvation for their carbon source. Or to be more precise, if we put a marker on the mutant say (for instance if we use a B strain of coli and select from the mutant strain a second step mutant which is resistant to the bacterial virus T5) and grow a mixture of the mutant strain and the original strain in the Chemostat with lactate as a controlling growth factor and observe how fast the ~~xxxx~~ mutant disappears and compare this in a control experiment with the disappearance of the parent strain of the original strain that has been marked from a mixture with the unamrked mutant. We should be able then to estimate the effect which the indefinite mutation step has on the growth rate and we would expect this step to slow the growth rate in the overwhelming majority of cases; 2) we shall assume that if mutations are produced by ultra-violet radiation, the ratio in which different mutation~~x~~ rates are produced will remain about the same as the ratio of these different mutational steps not naturally occurring spontaneous mutations.

On the basis of these assumptions it is proposed to perform the following experiment: a bacterial suspension is exposed to a certain dose of ultra-violet~~x~~ and a sample of the irradiated culture is planted on agar. Of the cultures which will appear on this plant, a number are tested by comparing them with the parent strain in the Chemostat, operating with lactate as a controlling growth factor in the manner described above. By varying the dose we can then determine the dose for which about half of the culture obtained after radiation manifest the difference in their growth rate from the parent strain in the direction of slower growth. We then determine for this does the rate of mutation for certain specific character, for instance if we use the B strain of coli we may use as a suitable character resistant to a bacterial virus, ~~And~~ we determine at the same time the spontaneous mutation rate ~~xxx~~ with respect to this very same character. If the ratio of the number of mutants of this character produced by the ultra-violet rate D to the spontaneous mutation rate is given by q and if the spontaneous mutation rate for this specific mutation is per unit time, we may then say that a total number of spontaneous mutations occurring per unit time is given by

This result might, however, not be of very much interest if the strain which we picked undergoes very frequent mutations with respect to a few characters. In that case our experiment would give information about something special rather than the special problem in which we are interested. In order to be sure that we are not dealing with a few very frequent mutations, it would be

advisable to proceed as follows: the original strain is given a large ultra-violet dose and planted on agar and one colony of the survivor is picked and is made the starting point of the experiment that is itself regarded as the original strain, and we determined the dose for which one-half of the survivors exhibits hidden mutations inasmuch as it grows slower than the original strain if tested by the method outlined above. If our first result was due to few very frequent mutations, we should expect D_2 to be larger than D_1 .

This method of testing can be carried further, and we can compare D_3 with D_2 and D_4 with D_3 , etc., until we find that there is no further change in the D values obtained. With this the method here outlined should give an indication of the total spontaneous mutation rate in the bacterial strain which we subject to such an investigation.