

January 17, 1957

STATEMENT

by Leo Szilard

There is some reason to suspect that the age specific death rate of men in their sixties who smoke a pack of cigarettes a day is increased by a factor of 1.8 over that of non-smokers. It should be comparatively easy to establish this through the projected study with a high degree of assurance within a period of three years. We would want to know whether the same ratio holds also for much older people including the age group around 70, and we would like to learn something also about the ratio for much younger men. It may take five to ten years, however, before the effect of cigarette smoking on much younger men can be established with a reasonable degree of assurance.

If we find - as we expect we may - that the age specific death rate of heavy cigarette smokers is appreciably increased, we would like to find out whether it is increased because these men smoke heavily or whether nervous tension causes both the heavy smoking and most of the increase in the age specific death rate. We might be able to find an answer to this question by learning not only about the smoking habits but also about the use of sleeping pills and tranquilizer drugs of the policy holder. There seems to be today a rapidly increasing consumption of tranquilizing drugs, such as Miltown (or Equanil) which begin more and more to replace sleeping pills. We are probably justified in assuming that those who take such pills are under nervous tension. And we may then compare the death rate of those who take tranquilizing drugs or sleeping pills but do not smoke cigarettes and those who take such drugs and smoke cigarettes, as well as those who neither take such drugs nor smoke cigarettes.

We hope that the study will show whether there is any difference in the age specific death rate of those who smoke cigarettes with filter tips and those who smoke cigarettes without filter tips.

We would like to find out something about the effect of cigarette smoking on the age specific death rate of women. However, we are uncertain whether the number of women who smoke cigarettes in the insured group is sufficient to make such a study appear promising enough to justify the added cost.

Fearing that cigarette smoking might turn out to be very harmful, we would like to know whether we may be justified in advising young men to smoke a pipe rather than cigarettes. We would want, therefore, the study to show whether pipe smoking has any appreciable effect on the age specific death rate.

It would be important to find out whether a middle-aged man can increase his life expectancy by stopping to smoke cigarettes. This, however, can be found out in a reliable manner only if we can recruit a group of volunteers who at present smoke one pack or more a day and who volunteer to participate in an experiment. In such an experiment some participants would be asked to keep on smoking cigarettes for another three years and others to stop smoking for three years. Whether the proposed study can be adapted to recruit a group of such volunteers is not clear at present.

The information needed can probably not be obtained by observing the age specific death rate of those who have stopped smoking cigarettes of their own accord. For it might easily turn out that this group has a higher death rate than a control group (who have not stopped smoking) since many of those who stop smoking do so for reasons of ill health. Therefore, only if it should turn out that those who have stopped smoking cigarettes of their own accord exhibit an appreciably lower death rate would observations of this type permit the drawing of some conclusions.

An attempt might be made to obtain in the proposed study some information relating to dietary habits by including in the questionnaire some questions in this regard. Accordingly, the covering letter may touch upon the possible relationship of the present American diet to the high coronary death rate. By this means we could prevent focusing the attention of the policy holders too sharply on the issue of smoking. At the same time we might thus prepare the ground for a possible subsequent attempt to recruit a group of volunteers who are willing to participate in an experiment on diet. In such an experiment some of the participants would be asked to retain their present diet for a period of three years, and others

would be asked to cut down radically their animal fat intake for three years. There is at present no more than a remote possibility that conducting such an experiment might later on prove to be feasible.

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Mr. Valentine Howell, Vice President
Prudential Insurance Company of America
Newark, New Jersey

Dear Mr. Howell:

I am writing in order to put on record my understanding of the conversation which I had with you and in order to amplify some of the statements that I made to you in these conversations. I hope that this will enable you to judge whether we have reached a meeting of the minds and to decide whether you want to proceed further with this matter. I shall now wait to hear from you whether my interpretation of your intentions is in fact correct.

Dr. E. C. Hammond of Yale University and I are prepared to explore the feasibility of setting up a five to ten year "project" at a suitable university or research institute aimed at determining the effect of cigarette smoking and various other factors on the age specific death rate. The funds for this study would have to come out of grants from foundations or government agencies. Dr. Hammond and I are thinking in terms of forming a three-men committee which would be in charge of the overall planning of this study. We are both prepared to serve on this committee and we propose to defer the choice of its third member until we know which organization will serve as the contracting agency for the funds that are required.

I understand that in principle the Prudential Insurance Company of America is willing to cooperate with such a "project" provided that the choice of the sponsorship and of the contracting agency meets with its approval. I also understand that if a questionnaire and a covering letter (which explains the purpose of the study) are drafted and meet with its approval, Prudential is willing to send these out on behalf of the project to certain policy holders and that the questionnaire may be returned by the policy holder directly to the "project". Prudential would subsequently notify the "project" of the death of these policy holders as well as of the cause of death listed in the death certificate. A contractual arrangement between Prudential and the contracting agency for the project shall regulate the reimbursement of Prudential for expenses that may be incurred on behalf of the project.

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Whether a really worth while study can be set up on this basis at the cost of several hundred thousand dollars, Dr. Hammond and I are not at present in a position to say. The answer to this question depends on the system that Prudential is using for keeping its records and for addressing its premium notices. For instance if their system permits us to mail out questionnaires in the form of prepunched IBM cards (on which is recorded the policy number, the age and sex of the policy holder), then the cost of the project can be made very low indeed. This is particularly true if the system permits us to limit the mailing to certain selected age groups.

The above assumptions are probably too good to be true and it seems likely that some compromise between what is desirable and what is feasible will have to be adopted. The cost of the project will very much depend on the skill employed in finding the right compromise. Dr. Hammond and I will not be able to make any concrete proposals in this regard until after we have had detailed discussions with officials of Prudential who are familiar with the system used by Prudential for keeping its records and addressing its premium notices.

On the enclosed sheet I have listed the kind of information which we would hope to obtain through a questionnaire sent out to a group of policy holders. Attached to this list is a statement on what we would want to accomplish through the proposed study, and you may gather from this statement my reason for having chosen the particular information that I have listed.

The actual phrasing of the questionnaire and the covering letter will require further thought. Dr. Hammond has considerable experience with mailing out questionnaires but nevertheless we believe that it will be necessary to draft several questionnaires and perhaps also several versions of the covering letter and to make several test mailings of 500 copies in order to see which version yields the highest response. These test mailings need not necessarily go to policy holders of Prudential but could go to members of some other more or less comparable group.

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In the past few weeks I had numerous conversations with Dr. Hammond and received from him a number of inter-office memoranda concerning the proposed study. I enclose two of these memoranda which might be of some interest to you. I should appreciate your returning these to me at your convenience.

Should I stay in New York the coming weekend I will contact your office by telephone next week. Failing this you can reach me by mail at my Chicago address.

It was a great pleasure to meet you and I hope that there will be further occasions for us to meet if the proposed study should materialize.

Sincerely yours,

Leo Szilard