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NATIONAL FOUNDATION FOR SOCIAL SCIENCES

HEARINGS

BEFORE THE

SUBCOMMITTEE ON GOVERNMENT RESEARCH

OF THE

COMMITTEE ON GOVERNMENT OPERATIONS UNITED STATES SENATE

NINETIETH CONGRESS

FIRST SESSION

ON

S. 836

A BILL TO PROVIDE FOR THE ESTABLISHMENT OF THE NATIONAL FOUNDATION FOR THE SOCIAL SCIENCES IN ORDER TO PROMOTE RESEARCH AND SCHOLARSHIP IN SUCH SCIENCES

FEBRUARY 7, 8, AND 16, 1967

PART 1

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NATIONAL FOUNDATION FOR SOCIAL SCIENCES

TUESDAY, FEBRUARY 7, 1967

U.S. SENATE,
SUBCOMMITTEE ON GOVERNMENT RESEARCH,
COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:12 a.m., in room 1318, New Senate Office Building, Senator Fred H. Harris (chairman of the subcommittee) presiding.

Present: Senators Harris, Mundt, and Hansen.

Also present: Dr. Steven Ebbin, staff director.

OPENING STATEMENT OF THE CHAIRMAN

Senator HARRIS. The committee will be in order. I apologize for being a little slow getting started this morning because of the snow.

First, let me make this statement. We have before us in this subcommittee a bill cosponsored by me and 19 other Members of the Senate to establish a National Foundation for the Social Sciences, the idea being that we need to give more attention and visibility and support to the social sciences as compared with the natural sciences, within the framework of Federal programs.

Yesterday, there was introduced in the Senate a bill by Senator Walter F. Mondale of Minnesota, for the establishment of a Council of Social Advisers to the President to make an annual social accounting to the President and the Congress so that such information can be utilized as social indicators to measure progress in meeting our needs. That, too, will be assigned to this subcommittee and in the course of our hearings, we will broaden our interest and our examination into the social sciences to include a study into that legislation, as well.

We are glad to have with us this morning a member of our committee, Senator Hansen of Wyoming.

Before proceeding to our first witness, the distinguished Secretary of Labor, I will place in the record at this point a copy of the bill S. 836; a speech I made on the floor of the Senate introducing S. 836; and a press release, issued by my office, setting forth the background and purpose of the hearings.

[S. 836, 90th Cong., 1st sess.]

A BILL To provide for the establishment of the National Foundation for the Social Sciences in order to promote research and scholarship in such sciences

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Foundation for the Social Sciences Act of 1966".

DECLARATION OF PURPOSE

SEC. 2. The Congress hereby finds and declares—

(1) that the encouragement and support of research in the social sciences is an appropriate matter of concern to the Federal Government;

(2) that democracy demands knowledge and insight into the problems that man and nations face in interacting one with the other;

(3) that it is necessary and appropriate for the Federal Government to support, complement, assist, and add to programs for the advancement of the development of research capability and basic knowledge in the social sciences as a means to increase understanding of our society, and the societies of other nations of the world;

(4) that it is necessary and appropriate for the Federal Government to support, complement, and assist the accomplishment of social science research which is entirely separate from the operating departments and agencies of the United States Government;

(5) that it is necessary and appropriate for the Federal Government to help sustain among social scientists a climate encouraging freedom of thoughts, imagination, and inquiry based on the democratic belief that the long-range interests of our Nation will best be served by a free and independent academic community;

(6) That leadership cannot rest solely upon superior power, wealth, or technology, but must be solidly founded upon our Nation's ability to maintain leadership in the realm of knowledge and ideas; and

(7) that in order to implement these findings, it is desirable to establish a National Foundation for the Social Sciences as an independent agency of the Government for the purpose of promoting research and scholarship in the social sciences.

DEFINITION OF SOCIAL SCIENCES

SEC. 3. As used in this Act, the term "social sciences" includes political science, economics, psychology, sociology, anthropology, history, law, social statistics, demography, geography, linguistics, communication, international relations, and other social sciences.

ESTABLISHMENT OF FOUNDATION

SEC. 4. (a) There is hereby established an independent agency to be known as the National Foundation for the Social Sciences (hereafter referred to as the "Foundation").

(b) The Foundation shall be subject to the supervision and direction of a Board of Trustees (hereinafter referred to as the "Board"), which shall consist of twenty-four members, to be appointed by the President, by and with the advice and consent of the Senate, and from among these individuals of the American public who are widely recognized for their knowledge of, or experience in, the social sciences or related public affairs, and who, collectively, will provide an appropriate balance of representation among such sciences. In making such appointments, the President is requested to give due consideration to the recommendations for nomination submitted to him by professional organizations or other qualified sources in such sciences.

(c) The term of office of each trustee of the Foundation shall be four years; except that the terms of one-fourth of the trustees first taking office after the enactment of this Act shall expire, as designated by the President at the time of appointment, at the end of each of the first four years. A trustee may not be eligible to serve more than two consecutive terms, but shall be eligible after a lapse of four years from the end of his second term. A vacancy shall be filled only for the unexpired portion of any term. The members of the Board shall receive compensation at the rate of $100 per diem while engaged in the business of the Foundation, pursuant to authorization of the Foundation, and shall be allowed travel expenses as authorized in section 5703 of title V, United States Code.

(d) The President shall call the first meeting of the trustees of the Foundation, at which the first order of business shall be the election of a chairman and a vice-chairman, who shall serve until one year after the date of enactment of this Act. Thereafter, each chairman and vice-chairman shall be elected for a term of two years in duration. The vice-chairman shall perform the duties of

the chairman in his absence. In case a vacancy occurs in the chairmanship or vice-chairmanship, the Foundation shall elect an individual from among the trustees to fill such vacancy.

(e) The Board shall meet at least once every six months and at such other times the chairman may determine, but he should also call a meeting at the written request of at least one-third of the members of the Board.

(f) Each member of the Board shall be given notice, by registered mail, certified mail, or telegram to his last known address of record, not less than fifteen days prior to any meeting, of the call of such meeting.

DIRECTOR AND DEPUTY DIRECTOR

SEC. 5. (a) There shall be a Director and a Deputy Director for the Foundation, who shall each be appointed by the President, by and with the advice and consent of the Senate. In such appointments, the President is requested to give due consideration to any recommendations submitted to him by the Board. The Director shall serve, as well, as an ex-officio, voting trustee of the Foundation. In addition, he shall be the chief executive officer of the Foundation. The Director shall receive compensation at the rate provided for level II of the Federal Executive Salary Schedule, and the Deputy Director shall receive compensation at the rate provided for level III of such Schedule. Each shall serve for a term of six years, unless previously removed by the President. The Deputy Director shall perform such functions as the Director, with the approval of the Foundation, may prescribe, and be acting Director during the absence or disability of the Director, or in the event of a vacancy in the office of the Director.

(b) The Director shall carry out the programs and policies of the Foundation, and such other functions as the Foundation may delegate to him, consistent with the provisions of this Act.

AUTHORITY OF THE FOUNDATION

SEC. 6. The Foundation is authorized to—

(1) develop and encourage the pursuit of a national policy for the promotion of programs of research and scholarship in the social sciences;

(2) initiate and support research and programs to strengthen the research potential of the United States in the social sciences, and to promote such research in foreign countries, by making arrangements (including grants, loans, or other forms of assistance) with individuals or groups, including other government or international agencies for such purposes;

(3) in making grants or other arrangements for scientific research, to utilize appropriations available therefor in such manner as will, in its discretion, best realize the objectives of (a) strengthening the research staff of such organization, particularly institutions of higher learning in the States, territories, and possessions and the District of Columbia; (b) aiding institutions of higher learning or nonprofit research organizations and foundations, which, if aided, will advance basic research; (c) encouraging social science research by individuals, university faculties, interdisciplinary teams of researchers, nonprofit and foundation researchers, and (d) to avoid the concentration of research grants in any one State or geographic region; and

(4) foster the interchange of information in the social sciences by disseminating the results of research projects in such sciences not otherwise published, providing at least annually a listing and description of all projects which are receiving assistance from the Foundation, and maintaining a current register of social scientists.

CORRELATION OF PROGRAMS

SEC. 7. (a) The Foundation shall correlate programs carried out pursuant to this Act, insofar as practicable, with existing Federal programs and with programs being carried out by other public agencies or private groups and shall develop the programs carried out pursuant to this Act, with due regard to the national interest and the contribution to the purposes of this Act, which can be made by other Federal agencies under existing programs.

(b) At the request of any department or agency of the Government, the Foundation may carry out any project within the purposes and authorization of this

Act. Such projects shall be carried out on a reimbursable basis, but the total amount expended on such projects in any fiscal year shall not exceed an amount equal to 25 per centum of the amount expended by the Foundation in such year for projects pursuant to this Act from funds appropriated to the Foundation.

(c) In the administration of this Act, no department, agency, officer, or employee of the United States shall exercise any direction, supervision, or control over the policy determination, personnel, making of loans and grants, or the administration or implementation of any research project funded by the Foundation, except as may be otherwise provided for herein.

INTERNATIONAL COOPERATION AND COORDINATION WITH FOREIGN POLICY

SEC. 8. (a) In carrying out projects pursuant to this Act the Foundation may support international activities, in the social sciences, consistent with the purposes of this Act, and the national objectives of the United States.

(b) No project pursuant to this Act shall be carried out in any foreign country (1) until forty-five days after the government of such country has been given notice of such project, and (2) at any time if such government objects to such project.

(c) If, in carrying out the provisions of this Act, any negotiation, other than the notice provided for in subsection (b) of this section, with the government of a foreign country becomes necessary, such negotiations shall be carried out by the Secretary of State at the request of the Foundation.

LIMITATION ON GRANTS

SEC. 9. (a) No individual formerly in the employment of the Federal Government shall be eligible to receive any grant or other assistance pursuant to this Act, or to serve as a trustee of the Foundation, in the two-year period following the termination of such employment.

PATENT RIGHTS AND FREEDOM OF INFORMATION

SEC. 10. (a) The results of research supported in whole or in part by the Foundation, shall be made freely available to the public.

(b) The Foundation shall not use any security classification nor may any research, or the results thereof, carried out pursuant to this Act, be placed under any security classification.

ADMINISTRATIVE PROVISIONS

SEC. 11. (a) In addition to any authority vested in it by other provisions of this Act, the Foundation in carrying out its functions shall have the authority—

(1) to prescribe such regulations as it deems necessary governing the manner in which its function shall be carried out;

(2) to receive money and other property donated, bequeathed, or devised, without condition or restriction other than that it be used for the purposes of the Foundation; and to use, sell, or otherwise dispose of such property for the purpose of carrying out its functions;

(3) in the discretion of the Foundation, to receive (and to use, sell, or otherwise dispose of, in accordance with paragraph (2)), money and other property donated, bequeathed, or devised to the Foundation with a condition or restriction, including a condition that the Foundation use other funds of the Foundation for the purposes of the gift;

(4) appoint employees, subject to the civil service laws, as necessary to carry out its functions, define their duties, and supervise and direct their activities;

(5) utilize from time to time, as appropriate, experts and consultants, including panels of experts, who may be employed by section 15 of the Administrative Expenses Act of 1946, as amended (5 U.S.C. 55a);

(6) accept and utilize the services of voluntary and uncompensated personnel and reimburse them for travel expenses, including per diem, as authorized by law (5 U.S.C. 73b–2) for persons in the government service employed without compensation;

(7) rent office space in the District of Columbia; and

(8) make other necessary expenditures.

(b) The Foundation, in carrying out its function, shall not have the authority—

(1) to operate any laboratories or pilot plants of any type;

(2) to contract for any research to be accomplished for its own purposes, nor shall it endeavor to do research on its own. It is not intended to be a research organ, but rather a sponsor of research.

AUTHORIZATION FOR USE OF PUBLIC LAW 480 FUNDS

SEC. 12. Section 104 of the Agricultural Trade Development and Assistance Act of 1954 as amended (7 U.S.C. 1704), is amended (1) by striking out the period at the end of subsection (t) and inserting in lieu thereof a semicolon, and (2) by adding at the end of such section a new subsection as follows:

"(u) for supporting projects and providing assistance, in such amounts as may be specified in appropriate Acts, in accordance with the provisions of the National Foundation for the Social Sciences Act of 1966".

AUTHORIZATION

SEC. 13. (a) For the purpose of carrying out the provisions of this Act, there is authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, not to exceed $20,000,000 for the fiscal year ending June 30, 1967, and each succeeding fiscal year plus such amounts as are provided for pursuant to section 12.

(b) appropriations made pursuant to the Authority provided in subsection (a) of this section shall remain available until expended.

SPEECH BY SENATOR FRED R. HARRIS, CHAIRMAN, U.S. SENATE SUBCOMMITTEE ON GOVERNMENT RESEARCH

February 6, 1967

Mr. President, for myself and Senators Mansfield, Tydings, Monroney, McCarthy, Gruening, Kuchel, Kennedy of Massachusetts, Kennedy of New York, Muskie, Hatfield, Hart, Fulbright, Yarborough, McGee, Mondale, Bayh, Inouye and Nelson, I send to the desk a bill to provide for the establishment of a National Foundation for the Social Sciences.

I ask unanimous consent that the bill first be referred to the Senate Committee on Government Operations and then to the Committee on Labor and Public Welfare.

Much discussion has taken place since the Camelot affair of 1965 about the state of social science research in this country. "Camelot", as you may recall, was a study of Chilean society—research into social and socio-economic factors of change and revolution. It was to be carried out by the Special Operations Research Office of the American University of Washington, D.C. and paid for by the U.S. Army. The disclosures concerning Camelot by the press cast a shadow over all U.S. social research abroad. I do not, Mr. President, care to dwell on the Camelot incident, nor to go into the details of "Project Simpatico" about which I spoke in the Senate last Spring. Much has already been said about these. Camelot and the other military supported social research projects pointed up a real need for the "civilianizing" of U.S. social science research abroad. There are unfavorable implications for foreign policy when such research has a military sponsor.

Looking into this general subject of federal support of social science research in foreign countries, our Subcommittee on Government Research of the Senate Committee on Government Operations has necessarily had to look at the broader subject of federal support for the social sciences generally.

If we were to compare the relative magnitudes of money available for research and development in this country, we would see that about $250 million are being spent by all agencies and departments of the federal government for social and behavioral research, while the total for all research in the natural sciences comes to roughly $6.5 billions. It is obvious that we are much more willing to spend our Nation's tax dollars on learning about space, atomic bombs and weapons development, than we are in learning about man and his behavior, or,

for that matter, the health problems which beset our Nation (approximately $800 million). I use this example only for illustrative purposes, and not at all to depreciate our national support for science and technology which is extremely important and necessarily costly.

There can be no argument that our investment in science has paid handsome dividends for our society, and the augury for the future is even brighter. But, neither can we afford to ignore our need to know much more about man himself and his social problems. The social sciences have lagged behind the natural sciences. Their development has suffered for a number of compelling reasons, one of which may be the low level of funds available for social research. Certainly, given the problems which we face as a Nation—problems of race relations, of life in the ghettoes, of overcrowding in our cities, of juvenile delinquency, of poverty, of problems in our educational systems and the myriad social, psychological, economic and political problems of modern life—we can ill afford to ignore these areas. The social sciences hold out great promise—but for now it is just a promise.

As I pointed out in my speech last October 11, when the bill I speak of today was first introduced in the Senate, "Man can accomplish so many things these days—not excluding world devastation—by merely pushing a button; we understand the button and the machine very well, but we are woefully weak in understanding the button pushers". Perhaps today, when we must consider the possibility of some 35 billions of dollars for a stepped-up arms race, when we are considering some $72 billion for defense, spending some $22 billions annually for the war in Viet Nam, $5.5 billion for space, $2.5 billion for atomic research, we might reasonably step up our effort to attempt to understand ourselves and how we operate within our own society and how we interact with others.

Mr. President, I strongly believe that we must turn our attention toward the social sciences in a way we have not done before. Existing federal support has only scratched the surface. No voice speaks on behalf of the social sciences, as there is a voice for the natural sciences. Social scientists have not found a vigorous advocate in the National Science Foundation for their research. That, however, I believe over the long run, may change—but change comes hard. Old attitudes die grudgingly.

The bill which I have reintroduced today will do nothing to stand in the way of any federal agency supporting any social research it supports now or will support in the future. It in no way discourages the growing interrelationship between the natural sciences and the social sciences. It simply provides for an additional and independent means of support, very important support, and needed visibility for the social sciences.

The bill which I introduce today would provide a source of funding for social science research and would give recognition to our continuing and growing need for knowledge and ideas, not only about our own society, but of others as well.

The bill would create a National Foundation for the Social Sciences, similar to the National Science Foundation, to encourage and support research in the social and behavioral sciences. The proposed foundation would be separate from the operating agencies and departments of the federal government which now support policy studies relevant to their missions.

The Foundation would do no in-house research but would, in keeping with the precedent set by the National Science Foundation and the National Foundation for the Arts and Humanities, underwrite, fund and support academic research in the fields of political science, economics, psychology, sociology, anthropology, history, law, social statistics, demography, geography, linguistics, international relations, and other social sciences.

The Foundation would be comprised of a Board of Trustees consisting of twenty-four prominent citizens from the social science community, both academic and practicing. There would, as well, be a Director and a Deputy Director, appointed by the President with the advice and consent of the Senate, in addition to such staff as the Foundation needs to administer such funds as may be appropriated for these purposes.

The Foundation would: develop a national policy for research and scholarship in the social sciences; support research and programs to strengthen research in the social sciences in the United States, as well as in foreign countries; appropriately assist social scientists where such assistance would lead to strengthen colleges, universities, non-profit research organizations and foundations; encour-

age development of social science capabilities and manpower in all parts of the country.

Further, an important aspect of the proposed Foundation would be its availability as a contracting agency for the operating departments of the federal government to use to secure unclassified scholarly reserach in the social and behavioral science fields, here and in foreign countries.

The bill carries an authorization of $20 million, an arbitrary figure, chosen as a figure to be discussed in hearings.

In his speech September 29, 1966, on the occasion of the 50th Anniversary of the Brookings Institution, speaking of the ideas fostered by the academic and research community in this country, President Johnson stated that " . . . without the tide of new proposals that periodically sweeps into this city, the climate of our government would be arid, indeed". I agree.

Therefore, Mr. President, so that we may increase our understanding of man, his behavior, his institutions, and his relationships with other men, I introduce this bill to establish a National Foundation for the Social Sciences.

FROM THE DESK OF SENATOR FRED R. HARRIS, OKLAHOMA

FEBRUARY 6, 1967.

Senator Fred R. Harris, chairman of the Senate Subcommittee on Government Research, joined by 18 Senate co-sponsors, today introduced a bill creating a National Foundation for the Social Sciences, and announced that his subcommittee will open hearings on the proposal Tuesday.

Senator Harris said government officials will testify at hearings scheduled Feb. 7, 8 and 16, with prominent social scientists and representatives of private organizations appearing at later hearings. The hearings this week will start at 10 a.m. in Room 1318 of the New Senate Office Building.

Testifying Tuesday will be Secretary of Labor W. Willard Wirtz; Dr. Leland J. Haworth, director of the National Science Foundation; Dr. Robert A. Levine, assistant director of the Office of Economic Opportunity, and Archibald S. Alexander, assistant director of the U.S. Arms Control and Disarmament Agency.

In reintroducing a bill which he had previously put before the 89th Congress, Sentaor Harris said governmental agencies spend about $250 million a year for research and development in the social science field, compared to $6.5 billion for research and development in natural sciences.

"It is obvious that we are much more willing to spend our nation's tax dollars on learning about space, atomic bombs and weapons development, than we are in learning about man and his behavior, or, for that matter, the health problems which beset our nation (approximately $800 million)," Harris said.

"I use this example only for illustrative purposes, and not at all to deprecate our national support for science and technology which is extremely important and necessarily costly." However, Harris added, the nation also needs to know much more about man himself and his social problems.

"Certainly, given the problems which we face as a nation—problems of race relations, of life in the ghettoes, of overcrowding in our cities, of juvenile delinquency, of poverty, of problems in our educational systems and the myriad social, psychological, economic and political problems of modern life—we can ill afford to ignore these areas," Harris said. "The social sciences hold out great promise—but for now it is just a promise."

Harris' bill would create a National Foundation for the Social Sciences, similar to the National Science Foundation, to encourage and support research in the social and behavioral sciences.

The foundation would underwrite, fund and support academic research in the fields of political science, economics, psychology, sociology, anthropology, history, law social statistics, demography, geography, linguistics, international relations and other social sciences.

Harris said the foundation would have a 24-member Board of Trustees, plus a director and staff. Included in the bill is a $20 million authorization for operation of the foundation.

Co-sponsoring the bill are Senators Mike Mansfield, Joseph Tydings, A. S. Mike Monroney, Eugene McCarthy, Ernest Gruening, Thomas H. Kuchel, Edward M. Kennedy, Robert F. Kennedy, Edmund S. Muskie, Mark O. Hatfield,

Philip A. Hart, J. W. Fulbright, Ralph Yarborough, Gale W. McGee, Walter F. Mondale, Birch Bayh, Daniel K. Inouye and Gaylord Nelson.

Senator HARRIS. We welcome our first witness, the Secretary of Labor, Mr. Willard Wirtz. Mr. Secretary we will be pleased to hear from you at this time.

TESTIMONY OF HON. W. WILLARD WIRTZ, SECRETARY OF LABOR, ACCOMPANIED BY HOWARD ROSEN, DIRECTOR, OFFICE OF MANPOWER RESEARCH, MANPOWER ADMINISTRATION; AND ARTHUR M. ROSS, COMMISSIONER OF LABOR STATISTICS, DEPARTMENT OF LABOR

Secretary WIRTZ. Thank you, Mr. Chairman. There are with me Mr. Arthur Ross, Commissioner of Labor Statistics in the Department of Labor, and Mr. Howard Rosen, who is the Director of our Office of Manpower Research. This office is a unit in the Office of Manpower Policy Evaluation and Research and part of our Manpower Administration.

These two gentlemen head up our two most active and effective research units in the Department of Labor.

Mr. Chairman, I have a statement which I have filed with the members of the committee and which, if it suits your convenience, I will summarize only briefly with the request that it be entered in the record as the full prepared statement.

Senator HARRIS. Very well. Without objection the entire statement of Secretary Wirtz will be included in the record and you may excerpt from it as you please.

Secretary WIRTZ. Mr. Chairman, yesterday in your statement to the Senate you said two things which I could well take as my starting text. Your first was a reference to the President's statement recently, that without the tide of new proposals that periodically sweeps into this city, the climate of our Government would be arid indeed.

You said that you agreed and I do most strongly.

And then in the course of your statement you said, too, that all attitudes die grudgingly. I think that those two points are the points of departure in the consideration here this morning.

I assume that this particular discussion, this set of hearings, may or may not be very closely attended as far as the immediate future is concerned. There is not much question in my mind that at some point later somebody is going to look back and say that this is where a seed started to grow because I think that what we are talking about here this morning, whether in terms of the specific proposal or in terms of that proposal only as an illustration of a broader problem, involves a matter of as large magnitude as there is before the society today.

I have tried to suggest what seems to be the point before the committee by reference to another classic and now very tired statement of H. G. Wells. You will remember that he said: "Human history becomes more and more a race between education and catastrophe." My guess is that the text is still good; but the time has changed the emphasis very much. I am not sure any longer frankly, and I say it at the risk of being misunderstood, which side education is on and it seems to me

that it is rather the possibility that catastrophe may develop as a consequence of the disparate outcome in the race between two kinds of education: one in the physical sciences and the other in the social sciences. I do not believe there is exaggeration in suggesting the larger danger, that one of those, the advance in the physical science, may get so far out in front of the advance of the social sciences that we will have to consider the possibility of catastrophe as a consequence.

Now, on the particular matter before you, Mr. Chairman, members of the committee, the consideration of S. 836, the proposal for a National Foundation for the Social Sciences, I am obligated to say to you that my acquaintance with the detail of the structure of the Government organization, the approach to this problem, is so insufficient and imcomplete that I cannot competently testify about that. I am not familiar with the detail of all that is being done. I hope that I can be helpful in that connection by giving you with Mr. Ross' and Mr. Rosen's help the clearest possible picture of the kind of research we are now doing in the Department of Labor and our fairest evaluation of its limitations and that I have tried to do. But when it comes to the detail of the proposal, I am quite away now in terms of years from the profession of the social sciences and I am not sufficiently acquainted with the detail to go into it.

However, I have come here particularly because I should like to emphasize and express just as strongly as I can the view that the present development of research in the social sciences falls so far short of both its potential and of the imperative necessity for its infinitely larger development that I think our problem is actually one of whether there are forms for expression of the present form of the problem or even a recognition of it. And I have tried to grope for an understanding of something that, as I say, is so far beyond what we are presently doing that I am not even sure about the tools with which I am working.

I want to make it quite clear that this is not meant as, in any way, a criticism of the present scholarship in this field or of the present administration of it. I say to you in all candor and complete sincerity, that my respect for the scholarship in this field and for its application in the offices in the Department of Labor is complete and unqualified, but I believe, Mr. Chairman and members of the committee, there is a very different limiting factor and we might as well face it squarely. For I believe that that limiting factor is a very real doubt in democracy's mind as to whether it really wants any more expert advice as far as the social sciences are concerned, for this is peculiarly an area in which every single one of us thinks that he is an expert and that if he is not enough of an expert, he would rather play it by hunch than to try to find out what somebody else's expertness might imply.

I do not believe it is much exaggeration to say that the present attitude toward the social sciences is just about the same as the prevailing attitude toward the physical sciences at that point in time in which people looked and saw that the sun comes up in the morning and goes down at night and said let us not bother any more about it.

Now, that mistake was so pervasive that it still characterizes our whole discussion; and yet when we stop to think about it, there could not be a fuller illustration of how wrong we were at that point. We

got over that as far as the physical sciences are concerned and we moved some place several centuries ago, but particularly in the last 50 years, to a point at which instead of feeding the scientists hemlock or one thing or other, we suddenly elevated them to such a pedestal that we are perfectly willing to recognize that they know a lot more about this, their area, than we ourselves can possibly know. We have almost given up trying to keep up with them.

So that when they invent a new satellite, a communications satellite, which involves consequences of infinite importance to the whole human race, certainly to this democracy, we turn our franchise over to a corporation and just forget about the whole thing.

Now, we cannot do that as far as the social scientists are concerned. You may have remarked on, and noticed some discussion of, this general matter by Professor Boulding of the University of Michigan, who always seems to me to identify what is just a little ahead of us faster than almost anyone else. I noted his saying on this same point: "There seems to be a fundamental disposition in mankind to limit agenda, often quite arbitrarily, perhaps because of our fears of information overload. We all tend to retreat into the cozy, closed spaces of limited agendas and responsibilities, into tribalism, nationalism, and religious and political sectarianism and dogmatism."

What it comes down to in my own judgment, Mr. Chairman and members of the committee, it is about this. If the conclusion of the committee of the Congress and of the country is that we are pretty well satisfied with the present state of knowledge in the social sciences, I expect it is a mistake to embark on any new program of one sort or another. Probably what it would do would simply be to dilute the available manpower that we have for operational research right now.

If, on the other hand, we decided that the time is here in which we had better face up to the same fundamentals in the social sciences that we do in the physical sciences, then we have to do something new and different.

I am going to set out, I have set out in this statement the kind of research carried on in the Department of Labor which I think is characteristic of the research in a good many of the other departments. We call some of it basic. As a matter of fact, both what we call basic and what we call mission oriented takes its direction almost entirely from our immediate statutory responsibilities. If that is all that is to be done, I expect we can do it about as well in the present forms as in any other. If we are really ready to march out into a new area, then there is something additional that ought to be done.

I have tried to suggest on pages 3 and 4 of my testimony just a few casual, superficial, I expect unimaginative, illustrations of the kind of thing I am talking about. I spent a good deal of my time, we do in the Department of Labor, talking about the fact that technology is taking over many persons' jobs, thousands a day. We spent a year or two arguing about whether that meant there would be more jobs or fewer jobs.

Well, we should not have wasted any time at all. It means more jobs, no question about that. But the question of what technology is doing to the whole concept of work which used to be such an important part of people's lives that it became their names—Carpenter and

Mason, and so on and so forth—we have not even looked into at all and what the effect on the whole point of life is going to be when you move people from benches to push buttons; we are not looking into it at all.

Now, maybe we are afraid of it because I expect if we look into it we are going to come up with some shocks. If we are afraid of it, then let us go ahead the way we are now. If we are not, then we need a whole new approach.

I think similarly about this whole concept of empłoyment. We pride ourselves on being an individual-oriented society. Our whole concept of employment today has to do with whether the individual is meeting the system's needs rather than whether the system is meeting the individual's needs. I do not know whether we are ready to go into that other question. If we are, we had better do it on a different basis.

I suppose the point is most specific as far as the use of the last part of people's lives is concerned. Right now the doctors are going ahead and extending life's effective span by weeks and months and years now and on the social sciences side we are fumbling around with some business about retiring earlier on what I suppose is a completely false assumption, that that is something to be gained and to be gained quickly.

Now, if we are ready to look at that, then we had better take a new tack on this whole social science business. I get intrigued with Marshall McLuhan's talk about the media being the message because of the technology that is developed. I do not known what he means. I am not at all sure he knows what he means, and yet there is obviously enough here to make any responsible social scientist very much concerned about what the technology of communication is doing to the democratic process.

Well, you could go on like that quite a way and there is probably not much point in it because I profess no expertness in the matter but I think, Mr. Chairman and members of the committee, that it is probably true that democracy's ultimate testing is going to come in connection with a determination of whether or how long democracy works as the majority, more and more the members of the majority, know less and less about the things that we have to decide and whether the art of communication, the art of education, can keep up with the art of advancing technology.

If we are ready to look at those things, then it seems to me we have to find a new approach to social science research and if we are not, my testimony to you would be that the present situation is not so very bad.

Then, from that, Mr. Chairman and members of the committee, I have proceeded in this statement to a quite detailed discussion in response to the six questions or five of them in your letter of January 12. That material is set out here. I rather think that it satisfies the record enough to the point where my further development of it here could not be of much help to you.

It says in general this, that a good deal of our research in the Department of Labor is mission oriented or applied research. It comes almost entirely from the responsibilities that you have given us.

This is particularly true with respect to the manpower program that we have followed very closely the statutory responsibility, but it is also true there that in this office, which Mr. Rosen heads up, we have done the kind of research which has led three times now to amendments of the Manpower Development and Training Act because, as they have looked into particular problems, illustratively the problem of the nontraining of people in correctional institutions, we have been able to identify things which we have brought back to Congress as the basis for amendments to that legislation.

That has happened repeatedly, extraordinarily, and I suppose that goes beyond just mission-oriented research.

It is equally true that in the Bureau of Labor Statistics there are increasingly attempts, with the result I suppose incremental in nature usually, attempts to go beyond the completely conventional thinking and to start asking questions and to start prying into the available information about prices and wages. Most recently the Bureau's research in the area of productivity carries us out in front of the current thinking about it, and is a basis for advancing that thinking. I am sure that if it had not been for the careful statistical analysis which has been made in the Bureau of Labor Statistics in each of those three areas, our Nation would not be advanced as much as we are today. So I do not mean to minimize the importance of any of it.

I say to you, in answer to your questions, roughly these things. There is an extensive research program in the Department of Labor. As far as the magnitude of it is concerned, you asked a question in terms of 5 years and the figure is approximately $29 million over the last 5 years. It is now at the rate of $8 million a year moving up slowly, as much as anything else because of the shortage of people in this particular field. Most of it is applied rather than basic.

It is divided about, well, roughly 50–50, roughly half and half, between research which is done within the Department and that which we contract out to institutions. We contracted out almost entirely, that is, to the extent of some 85 percent—a great deal of it is contracted out to academic institutions, almost all of it. We have made a very special effort to try to extend that contracting out across the country and to smaller institutions, educational institutions, as well as to larger institutions. That has been a deliberate effort.

You inquired as to our satisfaction with it and our satisfaction is reasonable to good. We feel that it has worked out comparatively well. Our capabilities are such that we have to limit ourselves to those things that we are surest about, as far as their relevance and as far as their results are concerned. There is not much risk research in what we are doing. So it is easy to say that most of it has worked out comparatively well.

Then in conclusion, Mr. Chairman, members of the committee, in answer to your last two questions, I have returned to a candid recognition of the fact that I just do not know enough about the structure in this field to answer in conclusive terms the questions of whether this is the best approach, the one reflected in this bill or not. It requires a more thorough understanding of the present availabilities than I have but I really think it depends on whether we are ready to take our intellectual and our moral responsibilities seriously in this area yet or not.

Thank you.

Senator HARRIS. Thank you, Mr. Secretary. One of the real joys of this subcommittee is the opportunity to come in contact with the people who have something meaningful and innovative to say. I think your statement is an exceptionally good statement and I think that several of the things you say in it will make our job easier as we consider this question of whether we need a separate agency to give more attention and support to the social sciences.

On the first page of your statement you say:

> I should like to express the view that present social science research falls so far short of its potential and of the imperative necessity for its infinitely larger development that there are scarcely forms adequate for expression or comprehension.

I certainly agree with that.

Then, I believe, the burden of your testimony is whether or not we are willing to be innovative in the social sciences and strike out in new directions, and upon that question depends whether or not in large measure a new agency is needed.

I like what you say on page 4 and I think it is very well said. In the next to the last paragraph you say:

> The basic question of how, perhaps how long, democracy works when more and more of the majority know less and less about the issues they have to decide remains unstudied.

And I think that certainly is true. I find it in my own official status as a Member of the Senate of the United States. Many of these issues are so difficult to understand, or perhaps to put it another way, it is difficult to understand that we have so many of these new problems that it sometimes seems impossible for us to attack the problems. I think it is hard for us to realize that problems of urbanization and of population growth and the things that go with those problems present questions that nobody has ever had to answer before.

I suppose that has always been true in the past but it seems to be true now in an accelerated degree, and I think what you say about the need for new thinking is certainly well taken.

The last paragraph on page 4 and the first part of page 5, I think really sums up the question of whether there is reason for a National Foundation for the Social Sciences. You say:

> * * * to depend, in any event, on whether it is time to expect inquiry along lines at least as broad as these. If it is, such inquiry cannot be expected to come from the established departments or agencies of the government. If more conventional research is contemplated, the present structure probably permits it.

I think I would generally agree with that statement.

Then I would call attention, too, to the last paragraph on page 16 of your statement where you say, "The more we look into our human and social problems, the more we recognize need for innovative, disciplined scholars who can act as engineers in the social change our society needs."

Then the last paragraph of your prepared statement, "But I mean most seriously the respectful suggestion that this situation warrants the boldest possible course of action."

I certainly agree with those statements, and without objection there will also be placed in the record the appendixes to the prepared statement you have submitted.

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I do not believe that at this moment I have any questions. Senator Hansen, do you have any questions?

Senator HANSEN. I do not. I would like to observe that I am most impressed with your excellent statement, Mr. Secretary. I intend to read it all just as quickly as I have the opportunity.

Secretary WIRTZ. Thank you very much.

Senator HARRIS. Would you generally feel there is a shortage of social science manpower and if so, is that true just of the mission-oriented agencies or would you think that was fairly general in the field?

Secretary WIRTZ. I would commend to the committee Commissioner Ross' and Mr. Rosen's answer to that. Commissioner Ross has come very recently to his present post from the University of California with a very, very broad acquaintance as far as the academic community is concerned and Mr. Rosen has the experience here with the career service in the Government. I have impressions on those things but if you have the time, I would commend a brief statement from those two aspects as to the availability of manpower.

Senator HARRIS. Good. We would very much like to hear anything that either of you might have to say.

Mr. Ross. Senator, I think social science manpower is very short, particularly in certain fields of social science. There is great competition among universities for the relatively small number of highly trained and talented personnel, persons who are available. There is competition on the part of the Federal and State Government with the universities. Private industry in the last couple of decades has engaged more and more social scientists so that this is very definitely a sellers' market with a very definite shortage of good people in a great many fields of social science.

Senator HARRIS. You say in your statement, I believe, something about doctoral programs which have been funded by the Department. What kind of figure is that?

Secretary WIRTZ. Mr. Rosen, would you have that breakdown?

Mr. ROSEN. Yes.

Secretary WIRTZ. Go ahead.

Mr. ROSEN. We have given 42 grants to people writing doctoral dissertations in the manpower field. We have also given 45 grants—these are all small grants—to postdoctoral faculty members who are doing research in the manpower field and we have also given seven institutional grants on a long-term basis to seven universities in the country in order to meet the need and shortage that Dr. Ross referred to. We deliberately have instituted a new program to increase the number of researchers in the manpower field.

Secretary WIRTZ. I wish you would ask us if any of those seven are in Oklahoma.

Senator HARRIS. Are any of those in Oklahoma?

Mr. ROSEN. Oklahoma State University.

Senator HARRIS. You have very good taste.

Let me just say that I think the poverty program and so many other Federal programs indicate that we are still continuing to be very experimental by necessity. We know that there are places in the country where economic development has not kept pace with the

rest of the country. We really do not understand why that is so, I think, and we do not understand why people do not all move away from these areas. Rather, we speculate about it. We do not understand why some people use their resources, human and others and some do not. And it seems to me that that really is very basic. It is basic, for example, to the problem of AID. If we could somehow stimulate people, to motivate them to organize themselves, use what they have, the AID program would be a much better one. The same is true with the Peace Corps. The same is true in the poverty program. Our best example that we do not know much about community development and motivation, and so forth, is the American Indian, I think. We have been at the problem for a good many years. We have 22,000 employees, we have spent some $4.8 billion, and still Indians rank at the very lowest in health, in income, in high school dropouts, in almost any statistic.

And so it seems to me that while we are spending—this year we are asking to spend some $85 billion for defense and $5 billion plus in space and $2 billion plus in atomic energy—that we can do better than $250 million more or less spread among all of the agencies of the Government, to understand man and what makes him do the things he does. So what you have said in your statement is exactly what we are trying to do. I hope what you say is true, Mr. Secretary, that one day we will look back on this small and rather modest effort as a beginning toward a better understanding of man.

Secretary WIRTZ. I think we will.

Senator HARRIS. Thank you very much. Thanks for coming and thanks for waiting.

Secretary WIRTZ. Yes, sir.

(The prepared statement of the Secretary of Labor previously referred to follows:)

STATEMENT OF W. WILLARD WIRTZ, SECRETARY OF LABOR, BEFORE THE SUBCOMMITTEE ON GOVERNMENT RESEARCH

Mr. Chairman and Members of the Subcommittee, H. G. Wells classic, and now tired, apostrophe was that "Human history becomes more and more a race between education and catastrophe."

Time, however, has substantially changed the course of that race. A more relevant question today is whether education in the physical sciences is so far outstripping education in the social sciences that catastrophe becomes the possible consequence.

I realize that the practical form of the matter before the Committee is whether S. 3896 offers the best, or an appropriate, form of improving the conduct of social science research by the Government. I know too little of the relevant detail to express a worthwhile judgment about that, and can only present here, in that connection, the fullest possible picture of the experience in the Department of Labor which may have some bearing on the Committee's deliberations.

Before doing so, however, I should like to express the view that *present* social science research falls so far short of its potential and of the imperative necessity for its infinitely larger development that there are scarcely forms adequate for expression—or comprehension.

This is not meant as criticism of those currently engaged in this pursuit. The Department of Labor includes research units which perform their assigned—and permitted—functions with extraordinary competence; and the broader scholarship in this field is of a high order.

The limiting factor in this situation is of an entirely different order. It involves the very real doubt in democracy's mind (but not in that of its antagonists) whether it *wants* any expert advice about the science of human relation-

ships. For this is an area in which it is easy for all of us to count ourselves fully qualified practitioners; and we don't welcome the idea that there is much of anything important that we can't either figure out or play better by hunch.

It is only a little exaggeration to suggest that the present attitude toward social science—*real* social science— is at about the point the attitude toward the physical sciences was when people were insisting that everyone could see that the sun "comes up" in the morning and "goes down" at night.

Economist Kenneth E. Boulding puts it more responsibly. "There seems to be," he has written recently, "a fundamental disposition in mankind to limit agenda, often quite arbitrarily, perhaps because of our fears of information overload. . . . We all tend to retreat into the cozy, closed spaces of limited agendas and responsibilities, into tribalism, nationalism, and religious and political sectarianism and dogmatism."

I believe, Mr. Chairman and members of the Committee, that behind any question about whether there should be a National Foundation for Social Sciences is the question of whether there is reason to think that this basic attitude about social science itself is changing.

I think, frankly, that with respect to matters within the responsibility of the Department of Labor, our own present research facilities are organized to go about as far as most people have seemed to feel it is advisable for the "scientists" in this area to go. Indeed, if the anticipated parameters of social science research are to remain about the same as they are now, the wiser course is probably to continue to keep what is now considered "basic" research in this area tied pretty closely to the "applied' or "mission-oriented" research. They are actually not very different under present circumstances, both taking their lead from relatively immediate operational responsibilities.

Before, however, any such compromise with present circumstance is made, there ought at least be a clear inventorying of the identifiable areas in which we are today being propelled by *knowledge* of physical forces along courses whose social implications are totally unknown.

Advancing technology, for example, is now moving thousands of people a day from hand tools to machine tools, and from work benches to buttons and panels. We know virtually nothing of what this is doing to the meaning of work in the human life.

The whole prevailing, and traditional, concept of "employment" is in terms of what the economic system needs. We know almost nothing of how this squares wth various alternative possibilities of giving life its maximum satisfactions.

Medical science is extending life's effective span. We are blundering, at seeming cross purposes, toward earlier "retirement"—on the probably fallacious assumption that it is something to be preferred over work.

The science of communication technology, we are told, is "making the media the message"—and social science doesn't know what this means, or whether McLuhan does—but is vaguely disturbed.

The physiologists are apparently well along with experiments in the surgical transfer of information from one mind to another, while the educationists continue to grapple with the same "transfer of training" problems they have faced for decades.

The basic question of how, perhaps how long, democracy works when more and more of the majority know less and less about the issues they have to decide remains unstudied.

Perhaps such suggestions misconceive the area of "social science research." But I don't think so. The question of whether there is reason for a National Foundation for the Social Sciences seems to me to depend, in any event, on whether it is time to expect inquiry along lines at least as broad as these. If it is, such inquiry cannot be expected to come from the established departments or agencies of the Government. If more conventional research is contemplated, the present structure probably permits it.

II.

I turn to a report on the research activities and facilities of the Department of Labor, and to the specific questions in your letter, Mr. Chairman, of January 12.

1. *You inquire as to what use the Department has made of social science research in the past.—First,* in general terms.

Until six years ago, the Department's research activities were carried on largely by its own researchers in the Bureau of Labor Statistics, the Bureau of Employment Security, and other research arms of the Department, working in close cooperation with social scientists in the academic world, in other Government agencies, and in State and local Employment Service offices.

We now take for granted some of these social science data that have wrought significant changes in the Nation's approach to human problems:

The development of a means of counting unemployment, which started during the 1930's, has meant a great many changes in the Nation's handling of its human problems.

The development of price, and wage, and more recently of productivity data, has opened up new dimensions of knowledge concerning the causes of inflation and the ways it can be avoided.

Many of the vital programs of the last six years to help the poor, the uneducated, the minority worker, the young, the old and the jobless were based upon the cumulative research of social scientists.

Social science research has been an essential and effective tool for solving the manpower problems that are the special concern of the Department of Labor.

Department administrators are frequently faced with the problem of lack of current information and data which can be used for developing programs and policies. We are only beginning to get reliable information, for example, on the real nature and the causes of "hard-core unemployment." Because the problems involved are human problems, this kind of research is frequently best conducted in conjunction with operating activities actually underway.

As these research programs have evolved, especially in recent years, it has become increasingly evident that assistance was needed from all the social sciences if meaningful answers were to be secured about complex manpower problems. Extensive use has accordingly been made, in these research programs, of economists, psychologists, sociologists and other social scientists.

We have become increasingly aware that emphasis on mission-oriented research will not supply all the answers needed to solve difficult manpower problems. The need for better balance between applied and basic research has become more apparent.

As difficult as it is to separate basic and applied research in the physical sciences, it is infinitely more so in the social sciences. The complex human problem we face cannot be neatly compartmentalized into economics, political science, psychology, sociology and the other social science disciplines. As we move along toward an increased use of social science research, we concentrate more of our efforts on the totality and interrelatedness of economic and social problems rather than emphasizing particular social science disciplines.

More specifically, now, about the various research programs in the Department of Labor:

The Bureau of Labor Statistics conducts a comprehensive program of data collection and analysis rooted in over 80 years of development.

The Bureau draws upon a great variety of research knowledge in developing its programs. These include all phases of general statistical theory, mathematical statistics, and systems development; literature on price indexes, price theory, interrelationship of price movements; relationships among compensation, productivity, costs and prices; labor force growth and participation, causes of unemployment, theory and measurement of labor shortages, direct and indirect evidence of manpower demand, and many other fields of research.

Research on basic patterns of economic growth has produced an integrated series of output and employment estimates for future years.

The BLS has compiled standard budgets which have served as a guide to the adequacy of incomes in general and incomes required to maintain a decent standard of living for various types of sizes of families, in particular.

The Bureau pioneered in the analysis of the extent and characteristics of private welfare and pension plans. These studies, which have now extended over a period of almost 20 years, provide an indispensable fund of information on this important development in the protection of wage earners against various social hazards.

The Bureau's wage studies have provided analytical insight into the levels and structure of wages in the American economy.

Bureau studies of productivity have been used extensively in public policy formation and as a basis for the solution of practical problems in wage bargaining and in public administration.

In the international field, studies of international differences in labor costs have dealt with difficult conceptual and practical problems.

The Bureau's basic studies of the characteristics of the unemployed have enabled us to develop meaningful programs to help the jobless and identify those segments in our population requiring special attention.

The *Office of Manpower Policy, Evaluation and Research* carries on, through its Office of Manpower Research, an extensive social science research program. A good deal of this is "extra-mural."

Title I of the Manpower Development and Training Act of 1962 gave the Department the responsibility for arranging, through grants or contracts, for the conduct of research and investigations to further the objectives of his legislation.

This research program, administered by the Office of Manpower Research has been primarily mission-oriented rather than basic.

Among the research projects sponsored have been studies which developed information on how important segments of the American labor force acquired their skills, and on the employment problems of Negroes, young workers, older workers, women and other workers whose abilities have not been fully utilized.

Research results have been used to develop entirely new programs and modify existing programs. We are developing an effective continuing feedback relationship between research and operating programs.

Three of the first amendments to the MDTA stemmed from one of the earliest research studies, done under contract by the Norfolk Division of Virginia State College. The study dealt with the difficulties of getting disadvantaged workers to enroll in the early training program. The findings led to recommendations for the 1963 amendments to the MDTA which: (1) lowered from 19 to 17 the age at which out-of-school and out-of-work youth could receive training allowances; (2) extended training allowances by as much as 20 weeks for workers who need basic education in order to benefit from occupational training; and (3) increased the training allowances by as much as $10 per week.

Research connected with the "Restoration of Youth Through Training Project," conducted at Riker's Island in New York City, led to MDTA amendments authorizing experimental and demonstration bonding projects, and an experimental training program for persons in correctional institutions.

Another Office of Manpower Research study for the President's Task Force on Manpower Conservation led to a program for the rehabilitation of selective service rejectees.

Preliminary results of a study of the employment problems of retired military personnel, conducted by the Bureau of Social Science Research under an Office of Manpower Research contract, have resulted in a program which helps ease civilian skill shortages and benefits mature workers in the process.

The experimental and demonstration programs carried out by OMPER under the Manpower Act seek, through actual project operation, to develop new ideas and techniques to enable manpower programs to meet manpower problems more effectively.

Experimental and demonstration projects are conducted through public or private organizations, primarily community or social welfare organizations, indigenous organizations of the disadvantaged, and local or State public agencies. Some of these projects draw on university or private research capabilities as well, particularly for evaluation to design and measure the impact of specific operating techniques.

These projects, which seek to stimulate and guide change in institutions and programs concerned with manpower problems, draw extensively on personnel with behavioral science backgrounds, particularly psychologists, inter-group relations specialists, sociologists, political scientists and economists, as well as from the related fields of education, social work, and rehabilitation.

2. *You inquire: What types of unclassified social science research has your department supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories who has done this research for you?*

I have indicated in my answer to Question No. 1 the types of research carried on and supported by the Department of Labor.

None of our research is classified. We seek the widest possible dissemination of research which we conduct or support, retaining only control (for 90 days) over the timing of the release of findings of contract research.

Approximately 48 percent of the funds available to the Department for research in 1966 was obligated for the support of research conducted outside the Department of Labor, 52 percent for research conducted by Departmental staff.

Except for a minor amount of contract research supported by the Bureau of Labor Statistics, all external research supported by the Department since the passage of the Manpower Development and Training Act of 1962 has been administered by the Office of Manpower Policy, Evaluation, and Research.

Of the 94 grants (87 small grants and 7 institutional grants) issued since the inception of the grant program in 1965, 91 were issued to academic institutions and 3 were given to nonprofit research organizations. Thus, 97 percent of the funds granted went to academic institutions.

Of the 54 grants given to post-doctoral researchers since the program began in 1965, 23 went to persons in the field of economics, 15 in sociology, 5 in psychology and the balance in other social science fields.

Forty-two doctoral candidates have received grants under our program. About half of the recipients were in the field of economics, one-fifth in sociology and the remainder in a variety of other social science fields.

During the 1962–66 period, less than 5 percent of the contract funds went to profit organizations. The bulk of the nonprofit organizations were colleges and universities. About 92 percent of the funds supporting contracts initiated in 1966 went to nonprofit organizations.

More than half of the researchers conducting research projects under the contract program between July 1963 and 1966 were in the field of economics. About 30 percent were equally divided between the fields of sociology and psychology. The remainder came from such fields as education and statistics.

3. *You inquire concerning the Department's experience concerning the relevance of social science research funded to the Department's mission.*—The Department has followed a policy in its contractural research program of supporting, for the most part, mission-oriented research. With respect to unemployment, for example, we are supporting research to identify and analyze growth areas in the economy which are providing increasing employment, and also to examine why certain segments of the economy decline and to provide ideas as to how to meet the problem of regional and industrial declines.

Projects aimed at the supply side of employment are exploring the effectiveness of the institutions which train or supply workers for jobs needed by our economy; looking in depth at the education, training and skill of the employed; going into the slum areas of central cities to collect information about the education and skill needs of the hard-core unemployed; looking at employment standards to determine whether employers' hiring requirements are realistically related to the kinds of jobs they want performed.

Some funded research is exploring the problems of unemployment of different groups in our society: minority groups, older and young workers, and women. Other related research is directed to the job-seeking process.

In general, therefore, almost all of the research funded by the Department is directly related to its operating responsibilities.

4. *You inquire as to the magnitude of the Department's support of social science research in the last five years and as to plans for future support of social science research.*

In the past five years the Department of Labor's total obligations for intramural and extramural social science research amounted to about $29.0 million (See Table 1). Between 1962 and 1966, the obligations for social science research more than doubled, rising from $3.3 million to $8.0 million. In 1967, our estimated obligations will rise to $9.0 million.

The 1968 budget request for social science research is about $9.9 million, or a budget increase of approximately 9 percent over 1967 (See Table 2). The fields of research conducted by the individual bureaus and offices are described in Appendix I, attached.

Our plans for future years are moderate growth, with a serious limiting factor being the supply of qualified researchers in the manpower field.

Experience has demonstrated the difficulties of ad hoc contractual relations between an agency and a research organization. We accordingly started a new Manpower Research Institutional Grant Program with seven school institutions in 1965 in order to develop a longer-term relationship which would enable these schools to concentrate on broader manpower problems and also use their grant money to train young researchers in the manpower field. Our present plan is to continue the institutional grant program in fiscal 1967 and 1968 at the same level so that we can gain more experience for possible expansion.

We also started a small grant program in 1965 designed to increase the number of researchers and provide established scholars the opportunity to do innovational research and develop designs for research projects. A small grant panel awarded 42 grants to persons working on their doctorate degee in the manpower field and 45 grants to post-doctoral candidates. The upper limit for most of these grants is about $10,000. Our plans are not to expand this program for fiscal 1967 and 1968.

5. *You inquire about the effect which a National Social Science Foundation would have on the type and quality of social science research supported by Department, and on social sciences in general.*—I indicated earlier my incompetence to comment constructively on this proposal, and my feeling that its effect would depend on a determination of whether the circumstances permit going on down to social sciences tap-roots.

We are doing very little basic research in the Department of Labor, in fact virtually none of the kind of thing I have suggested as being most imperatively needed.

If a new Foundation were just to do more of the kind of thing that is now being done its principal effect on our programs would probably be to make our own research manpower problem more difficult. On the other hand, however, any support which would encourage superior graduate students to enter the social sciences so that the supply of first-rate scholars will be increased would be welcomed. The more we look into our human and social problems the more we recognize a need for innovative, disciplined scholars who can act as engineers in the social change our society needs.

The physical sciences have available specially trained persons who can translate research findings into practical application. These developmental engineers or scientists are technically trained persons who understand scientific disciplines and are able to apply research results. The social sciences do not have many trained persons capable of bridging the gap between research results and application. We need to expend as much effort in *using* knowledge as we do in conducting social science research.

6. *You ask for a specific commentary on S. 3896.*—I regret, as I have indicated above, that my knowledge of this area does not permit the net evaluation which compliance with this request would require.

But I mean most seriously the respectful suggestion that this situation warrants the boldest possible course of action.

Appendix 1. Department of Labor

Fields of research in individual bureaus and offices

The kinds of research performed in each of the bureaus and offices covered by Exhibit 132 are briefly indicated below:

The *Bureau of Apprenticeship and Training* conducts research on the training needs and training activities of the American economy, with particular emphasis on the type and characteristics of these needs, the manner in which they are being met, and the problems involved in organizing industrial training and motivating employees to improve existing skills. Such studies are used as a basis for developing programs and standards to improve industrial training.

Relatively new research programs in the Bureau of Apprenticeship and Training include a national survey of training in industry, originally planned for 1966–67 but postponed to 1967–68 due to priority work on cost-benefit analysis of the MDTA-OJT program. The latter research program, begun on an experimental basis in 1966 and continued into 1967, is being refined and improved and will continue as a regular part of the Bureau of Apprenticeship and Training research program.

The *Bureau of Employment Security* conducts research concerned with problems related to labor market information, manpower utilization, development and improvement of the public employment service system, evaluating or measuring the effectiveness of the Federal-State unemployment insurance program, and development of occupational and aptitude tests.

Research studies related to *improvement of labor market information* are designed to improve techniques for estimating employment and unemployment by State and area, to develop improved data on the occupational composition of labor demand and supply in individual areas, to provide improved statistics on job vacanices, and to provide improved knowledge of farm wage rates and migration patterns.

Studies related to *manpower utilization* include industry and area studies of the effects of automation on employment and unemployment, of the occupational adjustments made by displaced workers, of the problems underlying persistent unemployment, of the geographical, industrial and occupational mobility of workers, and of manpower training needs in individual areas.

Research to improve the public employment service program includes development and continuous updating of an occupational classification system, and development and evaluation of aptitude and proficiency tests.

Unemployment insurance research is designed to improve methods and techniques for measuring the incidence and costs of insured unemployment, for appraising the adequacy of benefits, for estimating the feasibility and cost of possible changes in the coverage provisions of State UI laws, and for appraising the economic and financial soundness of the provisions of State laws relating to contribution rates and reserve requirements.

The *Bureau of Labor Standards* conducts research aimed at reducing accidents. Its research includes analysis of accident reports and adaptation and compilation of substantiating data as a basis for practical application of accident-prevention programs; development of data regarding hazard-control measures in connection with mechanical and chemical processes in construction, manufacturing and other selected industries; and development of safety codes recognized as constituting national standards. Research on problems related to employment of youth, formerly performed by the Bureau, has been assigned elsewhere.

The *Bureau of Labor Statistics* conducts research in labor economics in many of the subject-matter areas covered by its extensive data collection programs, and in other fields related to the Department's operating programs and responsibilities. Most of the research is applied research, designed to provide the basis for development, improvement and evaluation of programs and services to labor industry: a limited amount of basic research is also performed to increase scientific knowledge of specific aspects of labor economics.

A major segment of the Bureau's research is concerned with *employment and manpower studies*, including broad analyses of the characteristics of employment and unemployment; a program of Occupational Outlook studies, results of which are published in the biennial Occupational Outlook Handbook and in a number of other pamphlets and brochures: analyses of the supply and demand for scientific and technical personnel; and development of projections of manpower requirements, employment and labor supply by industry and occupation. Research on *prices and cost of living*, another major area, involves continuous technical research and review of the methodology for producing indexes of consumer prices and wholesale prices; and basic research in the area of standard budgets. Research on *productivity and technological developments*, a third major area, includes studies of the nature, status and outlook of important technological changes, and their implications for trends in production, employment, productivity, occupational requirements and industrial relations. *Other research* includes studies of the impact of imports and exports upon employment in the United States; studies of various aspects of economic growth; research on wages, wage structure, and industrial relations; studies of the incidence and causes of work injuries; and continuing research designed to improve statistical methods and research methodology in the various data-collection programs of the BLS and of other bureaus.

The *Labor-Management Services Administration* conducts research and development programs (primarily the latter) to appraise the impact of the Labor-

Management Reporting and Disclosure Act and the Welfare and Pension Plan Disclosure Act, and prepares studies based on analysis of materials submitted under these acts by unions, employers and industrial relations consultants. Studies cover such subjects as trusteeships, local union structure and functions, union procedures in setting or changing dues and per capita fees, and other aspects of union structure and operation.

The *Office of Manpower Policy, Evaluation and Research* conducts or sponsors research designed to develop new knowledge or applications of existing knowledge which further the objectives of the Manpower Development and Training Act of 1962, as amended. These objectives include (a) the development and application of information and methods needed to deal with problems of unemployment and other malutilizations of manpower resources, (b) the accomplishment of technological progress while avoiding or minimizing individual hardship and unemployment, and (c) the raising of the skill levels of the Nation's work force in order to increase productivity and to provide the manpower resources needed for the advancing technology.

The research program is focused primarily on finding practical solutions to manpower problems, with emphasis on the development of early solutions to newly emerging as well as continuing and persisting problems. Through staff studies, contract research, grants in support of manpower research projects and doctoral dissertations, and manpower research institutional grants, the Office of Manpower Research, in OMPER, is undertaking research in many significant manpower fields. These include such areas as critical manpower shortages, special employment needs of individuals and methods of reaching out to them to meet their needs, techniques of manpower measurement, low income workers, the not-for-profit sector, labor force entry and early exit, current and projected manpower requirements and resources, manpower development through training and retraining, labor mobility, placement channels and their effectiveness, and manpower utilization generally. The benefits of the research are utilized to improve and make more efficient the operating programs of the Department of Labor, and to provide a nationwide source of information useful to educators, administrators, and other officials concerned with manpower problems. The research findings provide the basis for a broad program of publications and reports, including such major reports as the Annual Manpower Reports of the President and the Report of the Secretary of Labor.

The *Wage and Hour and Public Contracts Divisions* are responsible for a program of research to determine the economic effects of existing or proposed wage, hour and equal pay legislation, and to appraise the role of such legislation in relation to broad economic changes and social goals. Year-to-year changes in the scope and orientation of WHPC research are frequently determined by Congressional action, either in the form of new amendments the results of which require appraisal, or specific requests by the Congress for special studies on specific topics.

TABLE 1.—*Obligations for social science research, Department of Labor, actual fiscal year 1962–66, projected fiscal year 1967–68*

[In thousands of dollars]

	Total fiscal year 1962–66	Actual					Projected	
		Fiscal year 1962	Fiscal year 1963	Fiscal year 1964	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967	Fiscal year 1968
Total	28,980	3,274	5,266	6,353	6,104	7,983	9,033	9,888
Basic research	5,819	978	1,089	1,118	1,146	1,488	1,928	2,159
Applied research	23,161	2,296	4,177	5,235	4,958	6,495	7,105	7,729

Source: Actual, fiscal year 1962–65, compiled from "Federal Funds for Research, Development and Other Scientific Activities," Surveys of Science Resources Series, NSF 66–25, NSF 65–19, NSF 65–13, NSF 64–11. Actual, fiscal year 1966 and projected fiscal year 1967–68, computed from materials prepared for submission to NSF.

TABLE 2.—*Distribution of new obligational authority for social science research, by bureaus and type of activity: Department of Labor, fiscal 1968*

[In thousands of dollars]

Bureau or office	Total research	Basic research	Applied research
Total new obligational authority (amount) fiscal 1968	9,888	2,159	7,729
Apprenticeship and Training (BAT)	107		107
Employment Security (BES)	902	317	585
Labor Statistics (BLS)	3,018	1,627	1,391
Labor-Management Services Administration (LMSA)			
Office of Manpower Policy, Evaluation and Research (OMPER)	[1] 4,389	215	4,174
Wage and Hour and Public Contracts Divisions (WHPC)	1,472		1,472
Percentage distribution, 1968	100.0	100.0	100.0
Apprenticeship and Training (BAT)	1.1		1.4
Employment Security (BES)	9.1	14.7	7.6
Labor Statistics (BLS)	30.5	75.4	18.0
Labor-Management Services Administration (LMSA)			
Office of Manpower Policy, Evaluation and Research (OMPER)	44.4	10.0	54.0
Wage and Hour and Public Contracts Divisions (WHPC)	14.9		19.0

[1] $215,000 of $4.3 is to be used for basic research.

Source: Office of Policy Planning and Research, U.S. Department of Labor.
See Appendix I for Fields of Research in individual bureaus and offices.

Senator HARRIS. Is Dr. Robert Levine here? Will you come forward?

Now, we will hear from Dr. Robert A. Levine, Assistant Director for Research Plans, Programs and Evaluations, in the Office of Economic Opportunity.

TESTIMONY OF ROBERT A. LEVINE, ASSISTANT DIRECTOR FOR RESEARCH PLANS, PROGRAMS AND EVALUATIONS, IN THE OFFICE OF ECONOMIC OPPORTUNITY; ACCOMPANIED BY ROBINSON HOLLISTER, ACTING CHIEF, RESEARCH AND PLANS; AND JOSEPH H. HAGAN, SPECIAL ASSISTANT FOR CONGRESSIONAL RELATIONS

Senator HARRIS. I believe, Dr. Levine, you have some associates with you. We are glad to have them. Will you introduce them for the record.

Mr. LEVINE. Yes, Mr. Chairman. On my right is Mr. Robinson Hollister, the Acting Chief of the Research and Plans Division. On my left is Mr. Joseph Hagan, Special Assistant for Congressional Relations.

Senator HARRIS. Thank you, Dr. Levine. You may go ahead with your prepared statement, however you desire.

Mr. LEVINE. First, sir, I should like to express Mr. Shriver's regrets at being unable to be here. He has had a longstanding engagement with the Job Corps in Texas.

With your indulgence, I would like to read this brief statement and then be available to answer any questions you have.

Poverty is a social problem. A clear conceptual presentation of this problem, as well as the development of effective solutions, requires

extensive social science research. In fact poverty involves a complex of problems and, as a result, research on poverty has fostered an increased interaction and exchange among the various social science disciplines—economics, sociology, and psychology in particular. Since poverty happens to people, our work has required the forging of a closer link as well between certain of the biological sciences and the social sciences.

OEO has supported both basic and applied research on poverty to facilitate the establishment of an effective program to eliminate poverty. When OEO was established, very little systematic research had been done on poverty. We lacked not only the cures for poverty, but also any consensus on a definition of poverty. In light of this we have supported a broad spectrum of research projects to more clearly determine the relevant problems of poverty as well as their solutions. Some projects have concerned basic questions about the nature of poverty; others have been more closely related to proposed methods of attacking some aspect of poverty.

I will describe in very rough terms the level and type of research we have supported in recent years. In fiscal year 1966, we spent $64 million on research and demonstration; in fiscal year 1967, we are going to spend $41 million.

The preponderance of the funds for this has been drawn from authorization under section 207 of the Economic Opportunity Act entitled "Research and demonstration." It is in the nature of the innovative mission of the OEO that there should be an added dimension to the usual difficulty of separating out research activities from demonstration activities. I would interject a definition: demonstration activities are activities for which we grant money to do things with people who are part of our clientele. Research money is money granted to think about the same things. That is a somewhat arbitrary definition but it may help to clarify the distinction between the two activities. In programs as new and as radical as ours, however, it is even difficult to say exactly where research ends and program operation begins.

Out of the research and demonstration total expenditures for research alone were $17 million in fiscal year 1966, and $12 million in fiscal year 1967. This includes basic research and evaluation of our program. In a problem-oriented agency such as ours there is always the danger that insufficient funds will be allocated to basic research unrelated to any specific program classification. In our own allocation of funds we have sought to take some precautions against this weakness by creating the Institute for Research on Poverty at the University of Wisconsin. The Institute's efforts are directed mainly to basic research, carefully planned and executed, essentially long-range studies of poverty—which up to now have been practically nonexistent. The Institute is funded at the rate of a million dollars a year and has a small full-time staff, a staff of scholars visiting for a year or two and part of the time of faculty members from various parts of the university. It includes economists, lawyers, sociologists, social workers, researchers from the school of agriculture, and members of other disciplines. I believe that this Institute is the first of its kind set up or created by a Federal civilian agency.

The evaluation of our programs enables us to plan more effectively on the basis of our experience as well as on the basis of the data we obtain from our research projects. For example, our substantially expanded urban job program, being proposed by the President, is based upon an evaluation of our experience showing that we need to put forth far more effort to provide training and jobs for ghetto dwellers. Our proposal for a Headstart followthrough program is based upon our evaluation of the first school year's experience of Headstart children.

The demonstration component of our expenditure, $47 million, includes the funding of actual program activities either to allow us to study a program in action or to demonstrate to others its operation and/or effectiveness. The unit costs here are, of course, higher than for research because of program operating costs.

I have a table in the statement showing the various categories of these projects.

(The table referred to follows:)

Research and demonstration program

[Dollars in millions]

	Fiscal year 1966	Fiscal year 1967	Fiscal year 1968
Demonstration	$47	$28	$27
Education	6	4	4
Headstart	2	2	2
Manpower	8	4	4
Legal services	4	2	2
Health	9	2	3
Community service	6	5	4
Other	12	9	8
Research	12	10	10
Headstart	2	4	4
Other research	10	6	6
Evaluation	5	3	4
Total	64	41	41

Mr. LEVINE. Since we have not really attempted to make a systematic study of the question of the adequacy of resources devoted to social science and the structure of institutions involved, in discussing the question of the possible effects of a National Social Science Foundation, I will only be able to offer some observations drawn from my personal experience to date.

The one thing which strikes me most sharply is the limited availability of first-class social science research manpower. The Great Society is not going to rise spontaneously from a social legislative fiat. An adequate supply of intellectual manpower to clearly define problems and develop effective methods for accomplishing the tremendous social tasks is a key component in the realization of these goals.

A rapid increase in social science research funds alone will not guarantee an immediate rise in the amount of productive research done on our social science problems. A rise in such funds outstrip-

ping increases in social science manpower can create a classic case of a real resource bottleneck—the funds being applied to obtain a product the supply of which is limited by the absence of a key input. The result could be simply a rise in research salaries with little increase in research output in the short-run period. As a researcher, I am in favor of the rise in salaries; as someone who hires researchers, I am against it.

As Prof. Fritz Machlup has suggested (in "The Production and Distribution of Knowledge in the U.S."), it may well be that the rapid increase in physical sciences research funds in the 1950's created just such a real resource bottleneck phenomenon in those fields that is only now straightening itself out. The Federal Government in the Higher Education Act has recognized the need for more scientists in both the physical and social sciences and is devoting an increased amount of funds to this end. Here, then, is a point at which some national body can play a role in assuring that these and other resources are applied directly to increase the supply of high-quality social scientists where they are needed to keep pace with the increased demand for research.

A second general observation which arises from my experience is that the nature of Federal demands for social science research is such that the development of social scientific theory and methodology not directly related to program problems is likely to be insufficiently supported. This is in some ways a restatement of the longstanding arguments for basic, as opposed to applied research, but bears repetition with respect to the social sciences since, I think, being somewhat less exact than the natural sciences the damages due to deficiencies in basic theory and method are less immediately evident. I mentioned our attempt to avoid this pitfall by creating the Institute for Research on Poverty at the University of Wisconsin, but even this research necessarily remains tied to poverty problems per se, and does not really answer the more general social science support needs. Here again, a national body can seek to fill the general support gaps that inevitably arise when Federal agencies shape their fund allocations according to their problem priorities.

A third point that has become evident to me is that Federal agency support for social science research will have a natural tendency to concentrate in particular institutions or regions. It is not only the tendency but the responsibility of agencies to seek the best talent to work on their problems regardless of its location. This can lead to a cumulative polarization of institutions. The OEO commitment to the development of local community action—and the local assessment of needs, resources, and means which that implies—has given us a somewhat sharper awareness of the problems of weak social science institutions in certain areas. A national body can seek to create and maintain a balanced regional development of social science institutions.

The question of whether the national body to which I have referred need be a separate National Social Science Foundation seems to me another somewhat separate issue and one to which I have no clear-cut answer.

It seems to me there are several arguments in favor of having the functions of a national social science body performed within the National Science Foundation. First, with respect to the manpower problems I have mentioned, it is clear that to some degree, at certain levels, an increase in the supply of social scientists is obtained at the expense of the supply of natural scientists. When looked at from the viewpoint of the total needs for both types of research talent, a more balanced and rational development of the pool of talent can be achieved.

A social science body functioning within the National Science Foundation seems to me more likely to be sympathetic with the more general overview of manpower problems. Unproductive competitive bidding among disciplines might be avoided and attention focused on actions to increase the total pool of both kinds of talent. Second, as we have found in poverty research, there are increasing numbers of problem areas which require a combined natural science and social science input. Creation of a separate social science body might hinder the growth of these interdisciplinary developments.

In sum, I feel that there must be some effort made to avoid distortions in the balanced development of the social sciences caused by the rapid growth of federally supported research deriving from the Great Society programs. The National Science Foundation is already exhibiting a greater awareness of the need for such an effort. It would be tragic indeed if the prolongation of poverty in our society resulted from a poverty of imagination in developing a rational social science research policy.

Thank you, sir.

Senator HARRIS. Do either of your associates have any remarks to make at this time before we ask questions?

Mr. LEVINE. I do not believe so.

Senator HARRIS. Do you have any reason to believe, Dr. Levine, that the creation of a National Social Science Foundation would thereby automatically result in the National Science Foundation lessening its support for the social sciences, particularly in the interdisciplinary fields you mentioned?

Mr. LEVINE. I would imagine, Mr. Chairman, that if you——

Senator HARRIS. Not imagine. I am first asking you. You can imagine later but I am first asking you whether you have any reason to believe that that would be so.

Mr. LEVINE. Only theoretical reasons, conceptual reasons. I have no evidence on the matter.

Senator HARRIS. It is not that you just think they would be piqued, or something, and say, well, we are not going to do this any more, but that you think it might be logical that they would say we are not going to fund any more interdisciplinary efforts because there is a National Social Science Foundation?

Mr. LEVINE. I think it might look like that.

Senator HARRIS. Is this not rather a vague conjecture on your part that they would do so?

Mr. LEVINE. Yes, sir.

Senator HARRIS. Is is not, rather conceivable that if there is reason for interdisciplinary effort between the natural and social sciences, that those in command of such funds would continue to see those reasons and would go forward with that kind of effort?

Mr. LEVINE. I think that would be the greatest likelihood, Mr. Chairman.

Senator HARRIS. I would think so. Do you really think now—I do not know whether you prepared this statement or not—do you really think it is true as you stated on page 6, that given the kinds of grants for research and development of manpower, the National Social Science Foundation, giving grants in the social sciences, might result in a material lessening of the manpower in the physical or natural sciences?

Mr. LEVINE. Although I did in fact prepare this statement, I am now looking for the reference as you——

Senator HARRIS. At the bottom of page 6. You say:

> First, with respect to the manpower problems I have mentioned, it is clear that to some degree, at certain levels, an increase in the supply of social scientists is obtained at the expense of the supply of natural scientists. When looked at from the viewpoint of the total needs for both types of research talent, a more balanced and rational development of the pool of talent can be achieved.

Now, at the levels of Federal support currently available for the natural and physical sciences as compared to the social sciences, do you think $20 million for a new National Social Science Foundation is going to have much of an affect on reducing the talent available in the physical or natural sciences?

Mr. LEVINE. In the short run, given a certain supply of graduate students and this sort of thing, I think it would make $20 million worth of headway. Given the total size of the pool I think $20 million is not large in this direction nor undesirable.

Senator HARRIS. You do not mean to say if this country happens to spend $20 million more in research and scholarship in the social sciences, that that will mean $20 million less worth of research and manpower in the physical sciences?

Mr. LEVINE. Not that simple; no, sir.

Senator HARRIS. Not nearly that formulative.

Mr. LEVINE. No, sir.

Senator HARRIS. As a matter of fact, those pressures, primarily monetary pressures for additional research manpower in the physical and natural sciences would still be present, would they not?

Mr. LEVINE. Yes, sir.

Senator HARRIS. The Great Society programs which have accelerated especially since the 1960's have not seemed to cut down in funds available for the natural and physical sciences. As a matter of fact, they have gone up during the same period rather spectacularly because of other pressures, is that not so?

Mr. LEVINE. Yes, sir. I think both the commitment in recent years to research in general and also the fact that the increased needs for defense work have increased the need for defense research which is primarily physical.

Senator HARRIS. I cited the figures a while ago, that appear in this year's budget request, we have been asked for a $12 million supplemental appropriation for Vietnam, we have been asked for $73 billion for defense, $5 billion plus for space, $2 billion plus for the atomic energy program, and all of those programs carry within them money for research and development in addition to the National Science Foundation budget, the one for National Institutes of Health, the Veterans' Administration research program, and so forth. All of those agencies use research funds which are mostly for the support of the physical and natural sciences, is that not true?

Mr. LEVINE. Yes, sir. Let me make clear, Mr. Chairman, neither my position nor my Agency's position is in favor of decreasing or holding steady social science research in order to increase physical science research. I certainly did not mean that implication to be read into this.

Senator HARRIS. That is why I was particularly taken by your reasoning at the bottom of page 6. It seems to me to be fallacious to say that it is true, the social sciences are getting crumbs in comparison to the natural and physical sciences now, but we had better be careful because if we give them a few more crumbs, we may take away from the natural and physical sciences. That really does not seem an accurate statement to me.

Mr. LEVINE. No. I think it is a very partial statement I have made here. It is qualified by saying it is true at certain levels. The qualification may be more important than the statement.

Senator HARRIS. I agree with what you say on page 3. You say:

> The thing which strikes me most sharply is the limited availability of first-class science research manpower. The Great Society is not going to rise spontaneously from social legislative fiat.

I certainly agree with that, but it would seem to me that is an argument for additional social science support from whatever source it might come.

Also, I agree with your statement on page 5 in which you say:

> Here, then, is a point at which some national body can play a role in assuring that these and other resources are applied directly to increase the supply of high quality social scientists where they are needed to keep pace with the increased demands for research.

Furthermore you say in the next paragraph on page 5—that if support is too much tied to programs of mission-oriented agencies, you may not be getting the necessary basic research in the social sciences, and I would agree with that.

Then I would also agree with what you say at the bottom of page 5:

> Here, again, a national body can seek to fill the general support gaps that inevitably arise when Federal agencies shape their fund allocations according to their problem priorities.

I also note on page 6 you say that you have found areas of the country which are weak in social science institutions and that so long as the social sciences are tied exclusively to mission-oriented agencies—I believe that is what you are saying in that paragraph—this

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imbalance might well continue because you have to go after quality results in spending dollars for mission-oriented research.

Is that pretty much what you are saying there?

Mr. LEVINE. Yes. That is an accurate interpretation.

Senator HARRIS. Very well.

We also are very pleased to have with us the ranking minority member of this subcommittee and the ranking minority member of our parent committee, Senator Mundt. Senator Mundt, do you have any questions?

Senator MUNDT. Senator Hansen first.

Senator HARRIS. Senator Hansen?

Senator HANSEN. I do not have any questions. I want to say I am very much impressed with your observations. I know you were in the room sometime ago when the chairman of the committee addressed the Secretary of Labor and spoke about the need for motivation as being the prime factor in solving some of our problems—I mean I think you implied that, Mr. Chairman, and with that I am in complete accord. I do not think any of us, no matter which side of the fence politically we may find ourselves on, disagree with the objectives of the Great Society programs.

I do discern, however, a sharp difference of opinion as to the manner in which these objectives may best be reached.

Now, I feel that motivation certainly plays a very important role, let me say that I certainly will be giving this legislation careful study. I am concerned. And I sincerely believe that what we might do in order to better find out how to motivate people can indeed be the key to success in most of these programs. With that thought in mind I certainly think that this legislation deserves very careful scrutiny.

Senator HARRIS. Senator Mundt, any comments or questions?

Senator MUNDT. Yes. I have read the doctor's statement. I came in late and did not get to hear all of it. And perhaps you have amplified already on what you said in the first paragraph on page 7. There were several questions that struck me in that connection.

You mention unproductive competitive bidding among disciplines might be avoided. Would you expand on that statement a little?

Mr. LEVINE. Yes, sir. I discussed that a little in response to the chairman before. I think in the short run it is possible—and I do not mean this as any telling point against a National Social Science Foundation, let me emphasize—it is possible that two separate organizations with different lines of authority might be more likely to each encourage its own discipline and to in a sense bid against each other in going to various universities and other organizations and trying to encourage the one as against the other.

There needs to be some planning, I will not say authority, some planning structure at the top to try to do some allocation here.

Now, this planning structure could be at the head of the current National Science Foundation but since we are talking about no more than two separate organizations, it could also be easily done, I think, in council by two or a very few organizations. I simply do not know in my own mind which structure would be preferable.

Senator MUNDT. You rather fortified that argument by saying in your experience you have found in poverty regions that there are increasing numbers of problem areas which require a combined natural science and social science input. Earlier in the morning had you given us a little inventory of some of those particular kinds of problems in areas where this is happening?

Mr. LEVINE. No, sir. Should I?

I can mention two offhand which immediately come to my mind. One is the whole area of malnutrition, particularly child nutrition and prenatal nutrition, and poor performance by children in the preschool and early years of school based on physical factors. There is some evidence, increasing evidence, that this type of nutrition-school performance interaction is important. We are about to fund a fairly substantial project at Temple University with some medical scientists to study just this factor. That is one example.

Another example which comes to mind is in the whole housing area. In order to have better or just decent housing for the poor there is a considerable search for new housing construction technologies, part of it privately sponsored, part of it Government-sponsored primarily under the Department of Housing and Urban Development. I believe the President's budget for Housing and Urban Development asked for research money. I believe part of it is for that.

This is another example of the relationship between technology based on physical science, and social needs.

Senator MUNDT. So much for your experience. Now, you look ahead and you say you believe there are increasing areas in which this same kind of companionship is likely to become desirable. Can you give us a little look into the future as to what you had in mind there?

Mr. LEVINE. In fact, in speaking of the future, I was speaking primarily of this malnutrition question, the edge of which we have just begun to touch. I suspect that we may in the futue discover various other relationships between the physical environment and social factors, social performance.

For example, one thing which we have been thinking about without being able to get any hard handle on is the whole question of housing in poverty. What is the relationship of bad housing—the physical and psychological pressures created by bad housing on people's performance—on jobs and in the outside world? I do not have an answer to that. I think that research in this field as well as being social research, that some biological, possibly physical research might be relevant here. This sort of thing.

Senator MUNDT. Where do you go now for your social science expertise? The universities or private organizations?

Mr. LEVINE. For our outside research we go primarily to universities, also to some private organizations, both nonprofit and profit-making. The biggest single outside grant we have is the one which has set up the Institute for Research on Poverty at the University of Wisconsin. We found early in the game that within a government agency, and even contracting for the immediate needs of a government

agency, that our immediate policy needs a year or two ahead dominate what we have to do. We had to find a group of people to think in the longer run about this. The University of Wisconsin happened to have an excellent preexisting capability in this field, so that is where we went.

In addition we have gone to universities in many, many parts of the country. We have gone to nonprofit institutions. We have gone to profitmaking institutions, anywhere where the capability exists. We do not discriminate in this regard.

Senator MUNDT. I noticed in your presentation you alluded to this Institute for Research on Poverty at the University of Wisconsin. Will you give us a little background of the genesis of that Institute, when it was started, how it was started, who financed it, who supports it, et cetera, et cetera?

Mr. LEVINE. Yes, sir. I think there were three precipitating or causal factors. One was the fact that Mr. Shriver was very anxious to get research of this more basic nature done in the poverty area.

Two, my predecessor in my current job, Dr. Joseph Kershaw, and myself both have a background in the Rand Corp. in Santa Monica, Calif.

Senator MUNDT. Rand?

Mr. LEVINE. Rand. R-a-n-d. Yes, sir. It is a private nonprofit corporation which was initially set up by the Air Force, which had a relationship—very much like the one we are trying to create with the University of Wisconsin—where it worked in close cooperation with the Air Force but was independent, determining its own conclusions. This was of immense value to the Air Force and Defense Establishments and the military and foreign policies of the United States in general and we were looking for something of this nature in the poverty field.

The third factor was that the University of Wisconsin, while it does not have a monopoly, already had, before we set this up, a large number of social scientists, economists, and others, who had been doing fruitful work in poverty and poverty-related fields for a number of years. Prof. Robert Lampman, who is in a sense one of the academic fathers of—I do not want to say poverty, that does not come out right—one of the academic fathers of study in this field is at the University of Wisconsin. The current Director of the Institute, Dr. Harold Watts, other people whose names I can give, all men have been working at the University of Wisconsin in related fields.

The University of Wisconsin also has had related institutes with people doing the kind of work we wanted to have done so that Dr. Kershaw earlier discussed this with the people of the university, the chancellor and president of the university, the professors there, and so forth, and he came to the conclusion, we all came to the conclusion, that it would be very valuable to set up an institution of that nature there.

Senator MUNDT. The initiative was from the government to the university?

Mr. LEVINE. Yes, sir.

Senator MUNDT. You feel there is a need—if you have got the talent, you would be interested in expanding the operation. Is that about right?

Mr. LEVINE. That is right.

Senator MUNDT. Is it under contract, then? Department supported, totally supported by the Federal Government or how?

Mr. LEVINE. This institute is almost totally supported by the Federal Government, although it has some money from the university. I believe this is according to law, that there must be a contribution of this nature. I believe it does a little work outside of the work it does for OEO, but otherwise it is primarily supported by the Federal Government on a grant from the Office of Economic Opportunity rather than a contract.

Senator MUNDT. Long-term contract, short-term contract?

Mr. LEVINE. It is long term within the limits of the law or the limits of the rulings of the General Accounting Office, which I think, limits it to 2 years. The original grant states that we have the intention of funding it for a period up to 5 years but that is not a commitment on the part of the Government.

Senator MUNDT. What kind of a mission do you assign? You say here we have got poverty. What is the best approach? Do we start out with some predetermined notions? Do you say are these right or wrong? What kind of mission do you give? Did you have it set up? What did you ask them to do in your letter of understanding?

Mr. LEVINE. Well, the mission is a broad and general one, to do research on the problems in poverty, on evaluating the programs for poverty, just in that broad sense. I can submit both the grant document and also a recent document from the University of Wisconsin describing their mission in more detail. I can submit that for the record if you like, Mr. Chairman.

Senator MUNDT. I think it would be nice to have in the record. We can do it primarily because I think this is a good sound approach. Many other schools have contacted people in Government about their desire to do this or that or the other and I am just trying to find out how the formula works.

Senator HARRIS. Without objection, when that is received it will be made a part of the record.

(The following documents were subsequently received for the record:)

INTRODUCTION

The Institute is, at present, in the process of changing its mode of operation. The original concept was that of a research organization composed of a staff—full time and part time—which would carry out research into problems of poverty reduction with the flexibility and freedom afforded by a commitment to support the researcher rather than a particular pre-specified project. The "project" approach, in which individual projects of varying size and scope are selectively funded as essentially separate enterprises, was initially chosen as an interim compromise. This compromise was made necessary by the fact that staff recruiting could not, given the date of the grant, assemble even an approximately complete staff by September 1966—the beginning of the first academic year of the Institute's operation. We are now actively in the process of selecting senior research staff to join us in the summer and fall of 1967—i.e., for the beginning of

the next academic year. The projects currently supported will be phased out as they are completed—or continued where appropriate with the project investigator joining the Institute staff.

It is difficult, for this reason, to speak with a high degree of precision about the future research program of the Institute. The general lines of enquiry can be outlined, and these reflect the interests and plans of the current staff, as well as the areas of interest we have in mind in considering new staff candidates. It should be emphasized here that selection of staff is the primary means of guiding the content of the research program. The outline is intentionally broad, and we do not expect, therefore, that all the lines of enquiry specified below will necessarily be pursued. In short, the following may sound as if we are trying to find solutions to all the anti-poverty problems. It should not be inferred that we harbor that illusion * * *

The basic objective is to assemble staff and facilities for research aimed at improving the effectiveness and hence clarifying the relative priorities of efforts to eliminate poverty. We intend to match the available research resources with specific research needs so as to maximize the value of the product for policy purposes.

FUTURE RESEARCH PLANS

Within the limitations noted above, the following general lines of enquiry are expected to be prominent in the research of the Institute. In some instances, present staff are already engaged in working on aspects of these problems. It is our intention to recruit further staff in accordance with this overall, general program.

I. *Definitions and Concepts of Poverty.*

Our current definitions of poverty are deficient in several ways, some of which are attributable to absence of data and some to conceptual inadequacies. Further research and development of tools for measurement of poverty and changes in its magnitude can contribute substantially to the rationality of policy choices. For example, new sources of information, such as the Survey of Economic Opportunity, may make possible measures which encompass wealth as well as income. More complete information on income variability or persistence of low income can also be used to refine measures of poverty. Farm and rural areas also raise special problems of measurement.

A further set of questions arises from the possible uses to be made of any definition of poverty. We may well need several operational definitions—one for general planning and programming, another for local application when establishing need for specific components, and still another for qualifying individuals as eligible for participation in some program.

At the present time Watts is supervising efforts to explore the Iso-prop Index notion, Hansen and Weisrod are developing measures which incorporate wealth, Saupe and others are considering special problems related to farm and rural groups.

It is expected that this area of research will receive something like 10 percent of the total effort in the immediate future. Beyond 1967, as the definitional problem becomes progressively clarified, the level will probably fall to 5 percent or less.

II. *Transfers and income maintenance systems*

Research on the many aspects of tax and transfer mechanisms relevant to policy reform in this area will be a major part of the Institute's effort in the foreseeable future. It is an area in which the knowledge and viewpoint of several disciplines can fruitfully be brought to bear.

We need to understand more about the incentive effects—both financial and non-financial—of alternative systems. The question of incentives is not limited to motivation for work or labor force participation but extends into family organization and saving decisions. We must also learn much more about the relative importance of possible incentive effects as compared with other consequences. The combined efforts of economists, sociologists, social workers, and phychologists are needed to advance knowledge in this area.

With a better understanding of the secondary effects of changes in tax transfer mechanisms it will be possible to provide much more precise estimates of

the costs and benefits of alternative systems and their distribution to different income classes and other target categories.

Currently, Munts is evaluating existing income maintenance programs in terms of costs and benefits; Leuthold, working under Martin David, is comparing alternative proposed reforms using a simulation model: Lefcowitz and Watts are obtaining estimates of the potential effect of work incentives.

The research resources roughly earmarked for this area amount to 20-25 percent. While studies of particular aspects will begin and end, there will be a continuing effort along these lines as long as the policy issues are alive.

III. Investment in human capital

Another major area of research will be concerned with policies affecting the development and maintenance of human resources. The poverty attributable to *unnecessarily* limited earning capacity is perhaps doubly tragic, because the waste of a valuable resource diminishes total output at the same time as it impoverishes the individual and those dependent on him.

Research into the education and training systems falls under this heading. Focus here is on reasons and remedies for the failure of these systems to develop fully the resources in the lowest socioeconomic classes. Policy strategies must here be concerned with the balance of general vs. job-specific instruction, implications for migration, rural-urban differences in needs as well as technologies.

The quality of life—family functioning, physical and mental health, recreation—are other important determinants of our human resources. Further study of the anti-poverty pay-off of efforts to improve the quality of life of the poor will hopefully be undertaken.

Conlisk's study of the determinants of school progress, Haubrich's continuing work on the problems of teaching economically deprived children, Bradford's analysis of the JOBS program and Watts' efforts to measure the effect of the first summer Head Start program represent current activity in this area.

The Institute is tentatively allocating 20-25 percent of its effort to this area. It seems likely that public concern with such questions will be mainained well into the future.

IV. Effective demand for labor services of the poor

Under this heading fall the primarily economic problems associated with employment opportunities and real wage levels "enjoyed" by the poor, and the effects on these of general fiscal and monetary measures. The emphasis here is not on developing better models of GNP determination, but rather on providing the link between the level of general economic activity and its effect on the poverty population.

The structure of aggregate demand can be affected to some extent by public spending policy and further analysis is needed of the potential benefit to the poor of such measures. Public employment is a very direct way of affecting the structure of demand, but it is by no means the only one.

Conlisk's work on income distribution should be considered as an initial effort in this area. Further work to relate specific aspects of the income distribution to aggregate demand is planned in the future. Tucker's interest in regional studies, especially Appalachia, will also contribute.

Perhaps 10-15 percent of the Institute's research is expected to fall in this area.

V. Discriminatory practices

The incidence of poverty seems inseparably intertwined with patterns of discrimination. Discrimination infects particularly the markets for jobs, private training, education, housing; and limits access to justice and political representation. While of immense importance, discrimination by race is not the only kind. There is also age and sex discrimination in the labor market, and possibly in other areas. Poverty and ignorance themselves are also used as bases for discrimination.

These patterns are continually changing, and active policies can accelerate desirable changes. Policy formation, whether aimed at poverty reduction or specifically at discrimination, can benefit from more complete information about

the current prevalence of discrimination and its relation to low income and/or low effectiveness of income for improving the quality of life.

The Taeuber and Taeuber study of occupational segregation represents one present effort under this heading.

In the immediate future perhaps 15 percent of the total effort will be devoted to this problem area. Beyond 1968 the level may be reduced slightly, but a substantial effort will be maintained.

VI. Political and social integration

The objective of bringing the poor into the mainstream of society must incorporate non-economic aspects of life—and any consideration of policies to eliminate poverty must investigate the non-economic contribution of each alternative.

This problem area has two aspects, one deriving from the notion that genuine poverty reduction *must* involve the poor as participants in the guidance and design of programs—we must do things with the poor not to them. The other is that the dominant non-poor part of society must be committed, at least financially, to the anti-poverty effort in order to provide the resources.

Under this heading falls research into: the question of participation of the poor in various kinds of anti-poverty efforts, the bases of public support of anti-poverty efforts, and the alternative methods of participation by the poor in both conventional and non-conventional political activity.

Edelman's study of conditions of political arousal and quiescence of the poor and Lipsky's plans to explore the political causes and consequences of demonstrations, riots, strikes, etc., illustrate the beginning of our efforts in this area.

The effort expected to be allocated to research in this area amounts to 10–15 percent of the total.

VII. Administration of social legislation and criminal justice

A wide variety of public programs are either directed specifically toward the poor, or have an important impact on the poor along with the other segments of the population—Housing, Public Assistance, Public Health, Employment Services, etc. Even where the programs are basically sound, the organization, rules, and regulations of the agency attempting to implement the policy may make it difficult or impossible to achieve the desired outcome. In evaluating proposed programs in any of the areas outlined in II through VI above, the limits imposed by administrative feasibility need to be investigated. Careful surveys and analysis of current administrative practices are needed to identify more precisely the problem areas, to suggest improvements and to prevent repetition of at least the old mistakes.

An aspect of administration which is closely related to area V above is the problem of integrating professional personnel into programs designed for a population socially and economically separated from their accustomed clientele. The medical, legal, educational and social work practitioners are particularly important in this regard.

The police today perform a wide variety of tasks in poverty areas. In addition to the criminal law, they are responsible for the administration of much of the juvenile justice system, and they play a significant role in the adjustment of many types of domestic conflicts. The principal contact that the poor have with the government is through the police. The Institute is concerned with research on the relationship of the police with the poor.

At present Handler is studying the administration of the AFDC program. Some part of Munt's study of income maintenance programs will also fall into this area.

Around 10–15 percent of the Institute's effort will be devoted to studies in this area.

CLOSING REMARKS

The seven areas outlined above and the "weights" attached represent our best judgment about the future research activity of the Institute. As noted earlier, each area will not be uniformly saturated, and certainly not exhausted. The more specific points of emphasis will depend on the interests of the staff as it is completed. It is felt that the Institute, as conceived and as it is developing, can make valuable contributions to the information base for policy decisions on the basis of work in each of these areas.

OFFICE OF ECONOMIC OPPORTUNITY — COMMUNITY ACTION PROGRAM
STATEWIDE C.A.P. GRANT

GRANT NO. WISC-CAP-66-9618

1. NAME AND ADDRESS OF GRANTEE
The University of Wisconsin
Office of the Chancellor
Madison Campus, Bascom Hall
Madison, Wisconsin 63706

2. GRANT AUTHORITY
- ☐ SECTION 204 - 205
  - ☐ PROGRAM DEVELOPMENT
  - ☐ CONDUCT AND ADMINISTRATION
- ☐ SECTION 206
  - ☐ TECHNICAL ASSISTANCE
  - ☐ TRAINING
- ☒ SECTION 207
  - ☐ DEMONSTRATION
  - ☒ RESEARCH
  - ☐ TRAINING
- ☐ SECTION 209(B) (STATE TECHNICAL ASSISTANCE)
- ☐ SECTION 311 (MIGRANTS)

3. NAME AND TITLE OF PROJECT DIRECTOR
Professor Robert Lampman

4. TYPE OF GRANT ACTION
☒ INITIAL ☐ SUPPLEMENTAL (

5. EFFECTIVE DATE OF GRANT ACTION
Date of OEO approval (See below)

6. TERMINATION DATE OF GRANT

DETAIL OF GRANT ACTION

	PREVIOUSLY APPROVED ON THIS GRANT	APPROVED THIS GRANT ACTION	TOTAL APPROVED ON THIS GRANT TO DATE
7. APPROVED COST FOR TOTAL PROGRAM	-0-	1,719,184	1,719,184
8. NON-FEDERAL SHARE	-0-	70,000	70,000
9. CAP GRANT (Federal Funds)	-0-	1,649,184	1,649,184
10. FEDERAL SHARE OF PROGRAM COST MAY NOT EXCEED		96 %	

LETTER OF CREDIT

LETTER OF CREDIT NO.	AMOUNT OF CREDIT PREVIOUSLY ESTABLISHED FOR THIS GRANT	ADDITIONAL CREDIT TO BE ESTABLISHED BY THIS ACTION	TOTAL AMOUNT OF CREDIT AVAILABLE FOR THIS GRANT
NO. 11- 66-1192 -50001	$	$ 1,649,184	$ 1,649,184.00

STATEMENT OF OEO APPROVAL

The program proposed by the grantee is approved as noted above and in the attachments to this statement, including the general Conditions Governing Grants. This approval is subject to the grantee's acceptance of all modifications or conditions contained in the attachments.

APPROVED BY: SIGNATURE
Sargent Shriver

TITLE
Director of Office of Economic Opportunity

DATE
MAR 23 1966

GRANTEE ACCEPTANCE OF GRANT

I accept the grant and the conditions of its approval.

ACCEPTED BY: SIGNATURE OF AUTHORIZED OFFICIAL
George F. Everson

TITLE
George F. Everson, Director of Contracts—Fiscal Administration

DATE
APR 14 1966

CAP FORM 14 MAY 65 GSA DC 65-18242

Office of Economic Opportunity
APPROVED BUDGET FOR COMMUNITY ACTION PROGRAM

PAGE 1 OF 1 PAGES

NAME OF GRANTEE	COMPONENT TITLE	
The University of Wisconsin Office of the Chancellor Madison Campus, Bascom Hall Madison, Wisconsin 53706	Research	
	COMPONENT NUMBER	GRANT NUMBER WISC-CAP-66-9618
	GRANT PERIOD Effective date to-	21 9 Months

COST CATEGORY	REQUESTED AMOUNT	APPROVED AMOUNT
1. PERSONNEL	$ 666,358	$ 666,358
2. CONSULTANTS AND CONTRACT SERVICES	239,000	239,000
3. TRAVEL	104,500	104,500
4. SPACE COSTS AND RENTALS	-0-	-0-
5. CONSUMABLE SUPPLIES	5,803	5,803
6. RENTAL, LEASE, OR PURCHASE OF EQUIPMENT	37,893	37,893
7. OTHER COSTS	595,630	595,630
TOTAL COST OF COMPONENT	$ 1,719,184	$ 1,719,184
NON-FEDERAL SHARE	$ 70,000	$ 70,000
FEDERAL GRANT UNDER TITLE II-A	$ 1,649,184	$ 1,649,184

A. EXPLANATION OF CHANGES IN BUDGET:

(Continue on reverse.)

B. CHANGES IN WORK PROGRAM:

(Continue on reverse.)

C. CONFORMITY WITH APPROVED BUDGET: *Project funds shall be spent only in accordance with the budget of the approved community action program, and any changes in the budget must be submitted to OEO in writing and must be approved in advance of the proposed expenditures; changes within the budget for any component project, however, may be made without OEO approval so long as the amount spent for any cost category does not exceed the amount shown in the approved budget by more than 10 percent or $500, whichever is larger.*

CAP FORM 25 FEB 65

GSA DC 65-12318

SPECIAL CONDITIONS

A. Purpose and objectives

The purpose of this grant is to establish at the Madison, Wisconsin campus of the grantee an Institute for social welfare studies (hereafter the "Institute") to conduct research and studies in the nature, causes, and cures of poverty.

In deciding what kinds of problems are to be researched, the Institute will consult frequently with the Office of Economic Opportunity (hereafter "OEO") and will give particular attention to the aims of the Federal anti-poverty program. Based on its research, the Institute will recommend new ways and changes in emphasis of existing programs and techniques to attack poverty.

Examples of the kinds and areas of research which the Institute will con-

duct under this grant are: preferred income maintenance techniques for those in poverty who are not in the labor market; the relationship between poor housing and low income; the relationship between health and low income; techniques for identifying problem youth; preferred techniques for welfare payments; the relationship between income level and disintegration of the family; minority groups and the labor market.

An important responsibility of the Institute under this grant will be to give intensive thought to the kinds of questions about poverty and its cures to which OEO will want answers one or more years in the future and to begin research in those areas. Another responsibility will be to provide critiques and recommendations concerning research and other work done by OEO.

In pursuit of these purposes and objectives, and subject to the conditions of this grant, the Institute shall bring together a staff and facilities of the highest calibre in order to carry out its objectives and shall attract and give freedom for research and study to the most imaginative and creative talents that can be brought to bear on the problems of poverty. The Institute may also enter into contracts and consultant agreements, conduct conferences and seminars, and make other arrangements to enlist services, facilities, and other resources available outside of the Institute.

B. *The Director, Assistant Director and staff of the Institute*

The principal officer of the Institute shall be a Director (hereafter "the Institute Director") who shall be responsible for the activities of the Institute including recruitment, selection, and assignment of staff. Final responsibility for carrying out the purposes and objectives of the grant and for the obligation and expenditure of grant funds pursuant to the grant shall reside in the Institute Director.

An Assistant Director of the Institute shall assist the Institute Director and shall act in his stead during his absence or disability or during any vacancy in the position of Institute Director unless an Acting Institute Director is appointed with the approval of the Grant Officer.

The Grant Officer shall concur in the selection of persons to fill the positions of Institute Director (including any Acting Institute Director) and the Assistant Director.

The staff of the Institute shall consist of (1) Senior Research Staff who may hold appointments in the teaching departments of the grantee and may be on part or full-time leave to the Institute; (2) Visiting Research Staff drawn from outside the faculty of the grantee and normally consisting of full-time professionals in relevant disciplines or fields of endeavor; (3) Graduate and Post Doctoral Fellows; (4) Consultants, Conferees, and others who can make contributions to the work of the Institute for limited purposes and periods of time; and (5) Support Staff, including secretaries, clerical assistants, programmers, project and research assistants, and other support personnel as necessary.

Additionally, OEO may nominate its own or other Federal personnel for short-term residencies at the Institute.

C. *The Grant Officer: communications between the parties*

The official representative of OEO in connection with this grant shall be the current Assistant Director of OEO for Research, Program, Plans and Evaluation hereafter referred to as "the Grant Officer"). He shall be empowered to exercise all powers vested in OEO or the Director of OEO under these grant conditions and under all relevant provisions of Federal law. The Grant Officer may, from time to time, designate other OEO officials as his representatives for purposes of this grant, in which event he shall notify the Institute Director of the designation and of any subsequent modification or revocation.

All official notices, and communications between the parties concerning, or pursuant to, the conditions of this grant shall be between the Grant Officer for OEO and the Institute Director for the grantee, unless other means are agreed to by the parties.

D. *Advisory Committee*

An Advisory Committee consisting of not less than 5 nor more than 15 members shall be established by the Institute to review, evaluate, and comment on the work of the Institute and to make recommendations regarding the future work and needs of the Institute. The Committee shall have a continuing concern with the quality of the Institute's staff and facilities and its work.

The Institute Director shall be the chairman and the Grant Officer shall be an *ex officio* member of the Advisory Committee. Other members shall be chosen for such terms and in such manner as the Institute Director in consultation with the Grant Officer shall decide. Members of the Committee shall be persons who have achieved excellence in fields of concern or disciplines relating to the work of the Institute.

The Advisory Committee shall meet at least once every 12 months at Madison, Wisconsin. Other meetings may be called at such times and places as the Committee shall determine or as the Grant Officer or Institute Director shall request. The Grant Officer and the Institute Director may designate members of the Institute and OEO staffs to attend meetings. In connection with their attendance at meetings, members of the Committee shall be entitled to receive their travel expenses and consultant fees not to exceed the top rate currently offered by the Institute.

Copies of all reports and recommendations made to the Institute by the Advisory Committee shall be furnished simultaneously to the Grant Officer.

E. Amount of grant; expenditures

The amount of this grant shall be $———. Subject to the conditions of this grant, expenditures of grant funds shall be made in accordance with the approved budget appended to the Statement of Grant, except that the Grantee is authorized to exceed the amount shown in the budget for any object category or time period by 10%, without prior approval of the Grant Officer.

F. Period of grant; renewals

The period of this grant shall be 21 months from the effective date of the grant. However, subject to the existence of necessary legal authority and further subject to this Special Condition F, it is the intent of OEO to renew this original grant including the indemnification provisions of Special Condition G, from time to time and in such a manner that the total grant period as extended by renewals shall be not less than five years and so that for a period of four years from the effective date of this grant the unexpired period of the grant shall never be less than one year.

In furtherance of this intent, not later than 7 months after the effective date of this grant, and thereafter at intervals which are not less than 14 months before the current expiration date of the grant, the grantee shall submit to OEO the best available statement of its past expenditures and obligations, together with a proposed budget for renewal of the grant for a period of not less than one year nor more than two years. A full explanation and justification shall accompany the proposed budget. Not later than 30 days thereafter or 13 months before the current grant expiration date, whichever is later, OEO shall advise the grantee whether, and on what terms, it proposes to renew the grant.

The foregoing provisions shall not be construed to authorize the grantee to anticipate obligations which would otherwise be incurred beyond the current expiration date of the grant, nor shall it be construed to obligate Federal funds for any period beyond the current grant expiration date, except as provided in Special Condition G.

G. Indemnification for certain tenure obligations

In the event that this initial 21-month grant is not renewed, OEO agrees to add to any unexpended balance of the grant funds an amount sufficient to indemnify the grantee for its net out-of-pocket costs to meet any tenure obligations which the grantee has previously assumed, as to specific persons on the Institute's Senior Staff, for the 12-month period following the grant expiration. In no event shall the amount of indemnification exceed $216,000. In computing the amount of indemnification there shall be deducted a *pro rata* amount equal to the proportion of research and teaching services which the grantee receives from any such person during the 12-month period, the proportion to be computed on the basis of full-time teaching and research loads for comparable faculty members. There shall be deducted a further amount equal to any funds which the grantee receives from outside sources to meet the tenure obligations in question.

This indemnification provision shall not be applicable in the event that the grant is terminated by OEO for cause.

H. Salaries and fringe benefits

Senior Staff and other professional salaries and fringe benefits for Institute personnel will be set by the Institute Director after consultation with the head of the appropriate University of Wisconsin department or division. Such salaries and benefits shall be in accord with University salary and fringe benefits policy and in line with salaries and benefits for comparable faculty members and employees in other branches of the University, except that visiting staff on leave from other institutions and agencies may be paid and receive fringe benefits at rates which take into account the salaries and benefits their home institutions and agencies, plus the actual costs of their temporary relocation. Consultant fees shall be in accordance with University of Wisconsin policy.

I. Teaching by Institute personnel

With the approval of the Institute Director, Institute personnel may teach, provided their salary and related costs are paid pro rata by the relevant University department, the proportion to be computed on the basis of accepted full-time teaching loads for comparable regular members of the University's faculty and teaching staffs. The Grant Officer shall be advised quarterly of all such teaching duties of an Institute staff member which appear likely to limit materially his ability to contribute to the work of the Institute.

J. Indirect costs

Indirect costs shall initially be computed at a provisional rate of 44.53% of salaries and wages, subject to periodic audit and adjustment based on actual experience and in accordance with Bureau of the Budget Circular A–21.

K. Reports and other documents to be furnished by the grantee to OEO

In addition to such reports as may be required under the general conditions and such other reports as may be specifically required, on reasonable notice, by the Grant Officer, the grantee shall furnish to OEO 5 copies of each of the following reports and other documents:

1. Annual tables showing the classifications or grades, salaries, and fringe benefits of faculty members and staff of the University of Wisconsin departments which are most relevant and most nearly comparable to the disciplines and fields of concern of Institute Senior Staff members. The first such report shall be submitted within 30 days. The second and subsequent reports shall be submitted at least once a year and may be submitted on a fiscal year basis. OEO shall treat all such information as confidential.

2. Quarterly tables and reports, showing the current and projected levels of expenditures of grant funds, staff recruitment, and purchases of supplies, materials, and equipment by the Institute. The projections shall be for a minimum of two years, and shall contain the grantee's best estimate of the total cost to complete the current grain period. The first such report shall be submitted not later than June 30, 1966 and subsequent reports shall be submitted at not greater than 3-month intervals.

3. Semi-annual reports showing the current classification, compensation, and major work projects or assignments of professional Institute staff members, including a brief description of each project or study in progress and its estimated completion date, plus a brief description of the nature, cost, and estimated completion date of any major work being done for the Institute by others (including other departments or divisions of the University of Wisconsin) under contract or other arrangement. The first such report shall be submitted not later than Sepetmber 30, 1966 subsequent reports shall be submitted at not greater than 6-month intervals thereafter:

4. Copies of all staff reports (including interim or progress reports), studies, articles, books, and other papers relating to or resulting from the work of the Institute staff or from work done for the Institute by others (including other departments or divisions of the University of Wisconsin) under contract or other arrangement.

L. Copyright and reproduction rights

It is the policy of the parties to promote the broadest possible distribution and use of materials and data produced under this grant. Accordingly, the following provisions are adopted, subject to the right of the Grant Officer to waive or modify paragraphs (2) and (3) in specific situations.

1. The copyright for any materials prepared by the Institute or members of its staff with the use of grant funds shall be held either by the Regents of the University of Wisconsin on behalf of the Institute or by the relevant staff members, as the Institute Director shall decide.

2. The United States Government is hereby granted a royalty free, world-wide irrevocable, non-exclusive license to reproduce, translate, publish, use, distribute and dispose of all such materials and to authorize others to do so.

3. Any license or other contract or arrangement authorizing a third person to publish, reproduce, translate or otherwise use or dispose of copyrighted or copyrightable materials produced with the use of grant funds shall reserve to the Institute and the United States Government the rights specified under (2), above, and shall contain other appropriate provisions to insure the broadest possible distribution of the materials in question.

All members of the Institute staff shall be advised of the foregoing provisions and the substance of those provisions shall be included in any contract made by the Intitute pursuant to this grant.

M. Other support and other work

It is the intent of the parties that the Institute shall secure the earliest and broadest possible additional support consistent with carrying out the purposes and objectives set forth in Special Condition A. However, prior to accepting any substantial contribution or assistance from sources other than OEO, and prior to entering into any other arrangement for the performance of work which is not within the purposes and objectives of this grant, the Institute Director shall consult with the Grant Officer, solely for the purpose of insuring that such arrangements do not impair the ability of the Institute to carry out those purposes and objectives.

N. Contracts and other arrangements

1. No grant funds shall be obligated or expended for any of the following purposes without the prior written approval of the Grant Officer:

(a) Payment for or support of any ongoing activity or institution which was commenced prior to the effective date of this grant, if the obligation it to be assumed by the grantee within 90 days after the effective date of this grant; or

(b) Establishment and support of any institution, organization, venture, publication, or other activity which is under the general supervision and control of persons other than the Institute; or

(c) Any contract or other arrangement with a person, firm, corporation, organization, or agency outside of the University of Wisconsin:

(1) which is for a sum exceeding $50,000; or

(2) which delegates the primary responsibility for a major study or project to be carried out under this grant; or

(3) which is on a cost-reimbursement or cost-plus-a-fixed-fee basis.

2. The grantee shall not enter into any contract or other arrangement which is on a cost-plus-percentage-of-cost basis.

O. Disallowance of expenditures and obligations

If, at any time prior to final audit and settlement, the Grant Officer has reason to believe that a proposed or actual expenditure of grant funds is contrary to the conditions of the grant or of other applicable legal authority, he shall notify the grantee in writing of his intention to disallow the amount in question and of the reasons therefor. Within 30 days thereafter the grantee may respond in writing and may request an informal oral hearing before the Grant Officer or his designated representative prior to final determination of the matter. If the Grant Officer shall make a final determination of disallowance, the grantee shall refrain from making any proposed expenditures or obligations for the disallowed item(s) and within 30 days thereafter the grantee shall refund to OEO an amount equal to the sums already expended for the disallowed item(s).

This Condition O shall be in addition to, rather than in lieu of, the other remedies provided in these grant conditions.

P. Data and information; exchanges

The Institute shall have the right to copies of all data and working papers resulting from work which it supports.

In order to achieve the maximum benefits from this grant, OEO and the grantee shall maintain close and continual liaison regarding their respective needs for

data and information which may be in the procession of the other party and, whenever possible, shall make available all such data and information available to one another for reproduction and other uses.

R. Government-furnished property

In the event the Institute Director believes that a need for materials, supplies, or equipment can be economically and satisfactorily filled by the use of United States Government property, he shall so advise the Grant Officer, specifying the kinds and amount of items, and the dates when they are needed. The Grant Officer shall then determine and advise the Institute Director whether the Government will furnish the property in question. All use of Government-furnished property in question. All use of Government-furnished property shall be subject to the terms of paragraphs (b)–(k) of OEO (FF) 1964, General Provision 26, a copy of which is attached and incorporated by reference as part of these grant conditions.[1]

GOVERNMENT PROPERTY—OEO (FF) 1964

(b) Title to all property furnished by the Government shall remain in the Government. Title to all property purchased by the Contractor, for the cost of which the Contractor is entitled to be reimbursed as a direct item of cost under this contract, shall pass to and vest in the Government upon delivery of such property by the vendor. Title to other property, the cost of which is reimbursable to the Contractor under the contract, shall pass to and vest in the Government upon (i) issuance for use of such property in the performance of this contract, or (ii) commencement of processing or use of such property in the performance of this contract, or (iii) reimbursement of the cost thereof by the Government, in whole or in the percentage prevailing by reason of the clause of the contract entitled "Allowable Cost, Fixed Fee and Payment," whichever first occurs. All Government-furnished Property, together with all property acquired by the Contractor title to which vests in the Government under this paragraph, are subject to the provisions of this clause and are hereinafter collectively referred to as "Government Property."

(c) Title to the Government Property shall not be affected by the incorporation or attachment thereof to any property not owned by the Government, nor shall such Government Property, or any part thereof, be or become a fixture or lose its identity as personality by reason of affixation to any realty. The Contractor shall comply with the provisions of the "Manual for Control of Government Property in Possession of Contractors" (Appendix) B, Armed Services Procurement Regulation, as in effect on the date of the contract, which Manual is hereby incorporated by reference and made a part of this contract.

(d) The Government Property provided or furnished pursuant to the terms of this contract shall, unless otherwise provided herein, be used only for the performance of this contract.

(e) The Contractor shall maintain and administer in accordance with sound industrial practice, a program, for the maintenance, repair, protection and preservation of Government Property so as to assure its full availability and usefulness for the performance of this contract. The Contractor shall take all reasonable steps to comply with all appropriate directions or instructions which the Contracting Officer may prescribe as reasonably necessary for the protection of Government Property.

(f) (1) The Contractor shall not be liable for any loss of or damage to the Government Property, or for expenses incidental to such loss or damage, except that the Contractor shall be responsible for any such loss or damage (including expenses incidental thereto)—

(i) which results from willful misconduct or lack of good faith on the part of any one of the Contractor's directors or officers, or on the part of any of his managers, superintendents, or other equivalent representatives, who has supervision or direction of—

(A) all or substantially all of the Contractor's business or

(B) all or substantially all of the Contractor's operations at any one plant or separate location in which this contract is being performed, or

[1] In applying General Provision 26, the terms "Grantee" and "Grant Officer" shall be substituted for "Contractor" and "Contracting Officer".

(C) a separate and complete major industrial operation in connection with the performance of this contract;

(ii) which results from a failure on the part of the Contractor, due to the willful misconduct or lack of good faith on the part of any of his directors, officers, or other representatives mentioned in subparagraph (i) above,

(A) to maintain and administer, in accordance with sound industrial practice, the program for maintenance, repair, protection and preservation of Government Property as required by paragraph (e) hereof, or

(B) to take all reasonable steps to comply with any appropriate written directions of the Contracting Officer under paragraph (e) hereof;

(iii) for which the Contractor is otherwise responsible under the express terms of the clause or clauses designated in the Schedule;

(iv) which results from a risk which is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but only to the extent of such insurance or reimbursement;

provided that, if more than one of the above exceptions shall be applicable in any case, the Contractor's liability under any one exception shall not be limited by any other exception. This clause shall not be construed as relieving a subcontractor from liability for loss or destruction of or damage to Government Property in his possession or control, except to the extent that the subcontract, with the prior approval of the Contracting Officer, may provide for the relief of the subcontractor from such liability. In the absence of such approval, the subcontract shall contain appropriate provisions requiring the return of all Government Property in as good condition as when received, except for reasonable wear and tear or for the utilization of the property in accordance with the provisions of the prime contract.

(2) The Contractor shall not be reimbursed for, and shall not include as an item of overhead, the cost of insurance, or any provisions for a reserve, covering the risk of loss of or damage to the Government Property, except to the extent that the Government may have required the Contractor to carry such insurance under any other provision of this contract.

(3) Upon the happening of loss or destruction of or damage to the Government Property, the Contractor shall notify the Contracting Officer thereof, and shall communicate with the Loss and Salvage Organization, if any, now or hereafter designated by the Contracting Officer, and with the assistance of the Loss and Salvage Organization so designated (unless the Contracting Officer has designated that no such organization be employed), shall take all reasonable steps to protect the Government property from further damage, separate the damaged and undamaged Government property, put all the Government property in the best possible order, and furnish to the Contracting Officer a statement of—

(i) the lost, destroyed and damaged Government Property,

(ii) the time and origin of the loss, destruction or damage,

(iii) all known interests in commingled property of which the Government Property is a part, and

(iv) the insurance, if any, covering any part of or interest in such commingled property.

The Contractor shall make repairs and renovations of the damaged Government Property or take such other action, as the Contracting Officer directs.

(4) In the event the Contractor is indemnified, reimbursed, or otherwise compensated for any loss or destruction of or damage to the Government Property, he shall use the proceeds to repair, renovate or replace the Government Property involved, or shall credit such proceeds against the cost of the work covered by the contract, or shall otherwise reimburse the Government, as directed by the Contracting Officer. The Contractor shall do nothing to prejudice the Government's right to recover against third parties for any such loss, destruction or damage and, upon the request of the Contracting Officer, shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery. In addition, where the subcontractor has not been relieved from liability for any loss or destruction of or damage to Government Property, the Contractor shall enforce the liability of the subcontractor for such loss or destruction of or damage to the Government Property for the benefit of the Government.

(g) The Government shall at all reasonable times have access to the premises where any of the Government Property is located.

(h) The Government Property shall remain in the possession of the Contractor for such period of time as is required for the performance of this contract unless the Contracting Officer determines that the interests of the Government require removal of such property.

OFFICE OF ECONOMIC OPPORTUNITY,
Washington, D.C., December 1964.

CONDITIONS GOVERNING GRANTS UNDER SECTION 207 OF THE ECONOMIC OPPORTUNITY ACT OF 1964

In addition to any special conditions accompanying the Statement of Grant Award, the grant is subject to the conditions listed below. Many of them do not represent invariable policies of the Office of Economic Opportunity, and exceptions should be requested in cases in which compliance with one or more of these conditions would cause unnecessary difficulties in carrying out the approved community action program. A waiver of any condition must be in writing and must be signed by an authorized representative of OEO. Any such waiver must be explicit; no waiver may be inferred from the fact that the grant is responsive to an application which may have contained material inconsistent with one or more of these conditions.

1. *Definition.*—As used in these conditions, the term "project funds" refers to all amounts spent by or under the direction of the grantee for the approved program, whether such amounts are derived from Federal or non-Federal sources.

2. *Applicability of conditions.*—These conditions will be applicable both to the grantee and to any agency or organization which, pursuant to an agreement with the grantee, undertakes responsibility for any part of the approved program.

3. *Use of grant funds.*—Grant funds shall be expended only for the purposes and activities of the approved progam. Expenses which are attributable only in part to this program shall be prorated on a reasonable and consistent basis to determine the amount chargeable to the activities supported by this grant.

4. *Amount of grant.*—The amount of the Federal grant shall not exceed the smaller of (1) the dollar amount shown in the Statement of Grant Award, (2) the Federal proportion of all projects costs which is shown in the Statement of Grant Award, or (3) the amount of cash expenditures made by the grantee for project purposes. For this purpose, the amount of cash expenditures shall include only expenses which are chargeable to the budget of the grantee agency (or, with respect to programs delegated to other agencies, of the delegate agency). It does not include the salaries of employees who are paid by other agencies unless the other agency is reimbursed by the grantee or delegate agency, and does not include the use of space in public buildings unless the grantee or delegate agency is required to make reimbursement for the use of the space. The proportion of project costs which is to be paid or contributed from non-Federal sources must be maintained at all times during the grant period, so that Federal funds will at no time have been used to pay for a larger percentage of costs than the maximum Federal proportion shown in the Statement of Grant Award.

5. *Conformity with budget.*—Project funds shall be spent only in accordance with the budget of the approved program, and any changes in the budget must be submitted to OEO in writing and must be approved in advance of the proposed expenditures; changes may be made without OEO approval, however, so long as the amount spent for any object category does not exceed the amount shown in the grant application by more than 10 percent or $500, whichever is larger.

6. *Travel expenses.*—If the grantee is a public agency, expenses charged for travel shall not exceed those allowable under the customary practice in the government of which the agency is a part. If the grantee is a private agency, expenses charged for travel shall not exceed those which would be allowed under the rules of the United States Government governing official travel by its employees.

7. *Expenses disallowed.*—No project funds shall be expended for

(a) the purchase of real property;

(b) the purchase of personal property at prices exceeding $500 per item;

(c) the cost of meals for employees or officials of the grantee agency, except when on travel status; or

(d) costs incurred before the effective date of the grant.

8. *Suspension and termination.*—The Director of OEO may suspend or terminate this grant in whole or in part for cause. Cause shall include the following: (1) ineffective or improper use of Federal funds; (2) failure by the grantee to comply with either these conditions or the approved program; or (3) submittal by the grantee to OEO of reports which are incorrect or incomplete in any material respect. No suspension or termination shall affect any amount obligated by the grantee prior to receiving notice of the suspension or termination. Funds shall not be treated as obligated for this purpose by virtue of the grantee's commitment to a delegate agency.

9. *Nonfederal share.*—Expenditures or contributions used to match this grant shall not be derived from other Federal sources and shall not consist of services, property, or funds which are used to match grants awarded by other Federal agencies. The services of volunteers may not be counted as part of the non-Federal contribution. Other services or property shall be counted at their fair value. In the case of property having a useful life extending beyond the grant period, rental value shall be used unless the property is acquired for cash with project funds. In the latter case, the cost of the property will be charged as a project cost in the year of acquisition, and the property will not be counted as part of the non-Federal contribution in subsequent years.

10. *Obligation of grant funds.*—Grant funds may not be obligated prior to the effective date or subsequent to the termination date of the grant. Obligations outstanding as of the termination date may be liquidated (paid out) after the end of the grant period. Such obligations shall involve only specific commitments for which a need existed in the grant period and which are supported by approved contracts, purchase orders or requisitions, invoices or bills, or other evidence of liability consistent with the grantee's purchasing procedures, and for which the goods or services must have been received or rendered within the grant period. All obligations incurred in a given grant period shall be liquidated within 3 calendar months after the termination date of that grant period.

11. *Unobligated funds.*—Funds remaining unobligated at the end of a grant period cannot be transferred to another grant. The amount of the free or unobligated balance remaining at the termination date of the grant period shall be returned to OEO when the final financial report for the grant period is submitted. If savings occur in the liquidation of obligations outstanding at the end of the grant period, these become part of the unobligated balance.

12. *Interest earned on federal funds.*—All interest earned on Federal grant funds shall be reported on the financial report for the grant period and shall be returned by check payable to the U.S. Treasury.

13. *Payments.*—By law, payments to a grantee may be made in advance or by way of reimbursement. Generally, however, payments will be made through commercial banks under a letter of credit established with a Federal Reserve Bank. This procedure permits the grantee to draw funds as required. Detailed instructions will be furnished at the time a grant is made.

14. *REPORTS AND INSPECTIONS.*—The grantee shall make financial, program progress, and other reports as requested by the Director of OEO, and will arrange for on-site inspections by OEO representatives at the request of the Director.

15. *RECORDS AND ACCOUNTS.*—The grantee shall maintain such records and accounts, including property, personnel, and financial records, as are deemed necessary by the Director of OEO to assure a proper accounting for all project funds, both Federal and non-Federal shares. These records will be made available for audit purposes to OEO or the Comptroller General of the United States or any authorized representative, and will be retained for three years after the expiration of this grant, unless permission to destroy them is granted by the Director of OEO. If this is an initial grant to a private organization, the grantee will furnish the Director of OEO prior to the receipt of any Federal funds, an opinion of a Certified Public Accountant indicating that the grantee has an accounting system which is adequate for the purposes of this grant.

16. *ACCOUNTING FOR PROPERTY.*—Upon completion of the project, the grantee will make a report to OEO itemizing all nonconsumable property purchased with project funds. OEO will at that time determine the disposition to be made of such property.

17. *PUBLICATION AND PUBLICITY.*—The grantee may publish results of the approved program without prior review by OEO, provided that such publica-

tions acknowledge that the program is supported by funds granted by OEO pursuant to the provisions of the Economic Opportunity Act of 1964, and that five copies of each such publication are furnished to OEO.

18. *COPYRIGHTS.*—Any book or other copyrightable material arising out of or developed in the course of work aided by the grant shall be promptly and fully reported to the Dirtctor of OEO for determination as to whether copyright of such book or material shall be sought or allowed and how the rights in the book or material, including rights under a copyright issued thereon, shall be disposed of and administered in order to protect the public interest.

19. *PATENTS.*—Any discovery or invention arising out of or developed in the course of work aided by the grant shall be promptly and fully reported to the Director of OEO for determination as to whether patent protection on such invention or discovery shall be sought and how the rights in the invention or discovery, including rights under any patent issued thereon, shall be disposed of and administered, in order to protect the public interest.

20. *Labor standards.*—All laborers and mechanics employed by contractors or subcontractors in the construction, alteration or repair, including painting and decoating of projects, buildings and works which are federally assisted under this grant shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a–276a–5).

21. *Covenant against contingent fees.*—The grantee warrants that no person or selling agency or other organization has been employed or retained to solicit or secure this grant upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee. For breach or violation of this warrant the Government shall have the right to annul this grant without liability or, in its discretion, to deduct from the award, or othewise recover, the full amount of such commission, percentage, brokerage or contingent fee.

22. *Discrimination prohibited.*—No person in the United States shall, on the ground of race, creed, color or national origin, be excluded from participation in, be denied the proceeds of, or be subject to discrimination under the program supported by this grant. The grantee will comply with the requirements concerning nondiscrimination and compliance information set forth in regulations promulgated or to be promulgated by OEO pursuant to the Civil Rights Act of 1964, and will furnish the Director of OEO with such assurances as may be required by those regulations to be included in applications for grant funds. In the event that the grantee signs any contract which would be covered by Executive Order 10925 (March 6, 1961) or Executive Order 11114 (June 22, 1963), the grantee shall include the equal employment opportunity clause specified in section 301 of Executive Order 10925, as amended.

23. *Discrimination in employment prohibited.*—In all hiring or employment made possible by or resulting from this grant, each employer (1) will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin, and (2) will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

24. *Delegation.*—The grantee shall not delegate to or contract with any other agency for the performance of any function which is a part of the approved community action program, unless (1) the intention to make such a delegation or has otherwise been approved by the Office of Economic Opportunity, and or enter into such a contract has been set forth in the application for this grant (2) the agreement contains all of the provisions found in the approved third-party contract form issued by OEO.

25. *Additional conditions.*—This grant shall be subject to such additional conditions as may be established by law, by executive order, by regulation or by other policy announced by the Director of OEO at any time, provided the grantee is given actual notice of such additional conditions. In addition, the grantee agrees to provide such additional information as may be required when the application forms and instructions of OEO are in final form. Additional conditions applicable to the particular grant may be imposed as a result of OEO review of any such new information.

CHANGES AND EXPLANATIONS RELATING TO STANDARD §207 GRANT CONDITIONS

The appended general "Conditions Governing Grants Under §207 of the Economic Opportunity Act" are made applicable to this grant, with the following changes and explanations, (numbered according to those conditions):

General: The terms "program" and "project" as used in Condition 1 and elsewhere in the General Conditions shall mean activities of the Institute which are supported by the grant funds and are intended to carry out the purposes and objectives of the grant as set forth in Special Condition A.

Every power reserved to or vested in the Director of OEO under the standard conditions shall be exercisable by the Grant Officer or his designated representative.

4. The last sentence of Condition 4 is deleted.

5. Condition 5 is amended to provide that budget changes may be made without OEO approval so long as the amount spent for any object category does not exceed the amount shown in the relevant category of the approved budget by 10%.

6. Notwithstanding Condition 6, all reasonable and proper expenses actually incurred in connection with travel shall be allowable. The grantee shall be responsible for insuring that travel arrangements and expenses under this grant are reasonable, proper, and in line with those normally incurred by its staff members and employees in connection with other activities of the grantee.

7. Item (b) in Condition 7 shall not apply to this grant. However, see Special Condition N.

8. Condition 8 shall read as follows:

"8. The Director of OEO may suspend or terminate this grant in whole or in part for cause. Cause shall include the following:

(a) Improper use of Federal funds;

(b) Failure of the grantee to comply with the grant conditions or with any order or requirement (including reporting requirements and requirements imposed as a result of any audit made pursuant to Condition 15) made by OEO pursuant to the grant conditions;

(c) Such ineffective use of the grant funds as to frustrate or clearly endanger the achievement of the grant objectives and purposes;

(d) Expenditures and obligation of grant funds at such a rate as to endanger the grantee's ability to maintain operations at substantially the expected level for the duration of the grant period; or

(e) Suspension or termination of any other outstanding OEO grant or grant renewal previously made in accordance with Special Condition F.

11. The provisions of General Condition 11 relating to post-termination date obligations and to liquidation of obligations shall not apply to any grant or grant period which has previously been renewed or extended by OEO in accordance with Special Condition F, nor shall they apply to any indemnification obligations of OEO pursuant to Special Condition G.

18. Condition 18 shall not apply to this grant. Instead, Special Condition L shall be applicable.

20. The last sentence of Condition 22 is changed to read: "In the event that the grantee signs any contract which would be covered by Executive Order 11246 (Sept. 24, 1965), the grantee shall include the equal employment opportunity provisions specified in §202 of that order or the comparable provisions specified in any subsequent order or authority superseding Executive Order 11246".

24. Condition 24 shall not apply to this grant. However, see Special Condition N.

MARCH 14, 1966.

To: Mr. Sargent Shriver.
From: Joseph A. Kershaw.
Subject: Highlights of a Research Grant to the University of Wisconsin for an Institute for Research on Poverty.

1. Purpose

The purpose of the Institute is to conduct research in the nature, causes, and cures of poverty. This is expected to be an interdisciplinary effort ranging broadly over the economics, sociology, and psychology of population groups in the United States characterized by low income, family disintegration, poor

housing, etc. The Institute should decide what kinds of problems with policy implications are to be researched. It will keep in mind the aims of the War on Poverty and make recommendations based on research for new ways to attack poverty or changes in emphasis of existing techniques.

An important responsibility of the Institute under this grant will be to give intensive thought to the kinds of questions about poverty and its cures to which OEO will want answers one or more years in the future and to begin research in those areas. Another important responsibility will be to provide critiques and recommendations concerning research and other work done by OEO.

In pursuit of these purposes and objectives, and subject to the conditions of the grant, the Institute will bring together a staff and facilities of the highest caliber in order to carry out its objectives and will attract and give freedom for research and study to the most imaginative and creative talents that can be brought to bear on the problems of poverty. The Institute may also enter into contracts and consultant agreements, conduct conferences and seminars, and make other arrnagements to enlist services, facilities, and other resources available outside of the Institute.

2. Applicant

The University of Wisconsin.

3. Institute director

Professor Robert Lampman.

4. Amount

$1,649,184 for 21 months and $1,000,000 each year thereafter.

5. Budget breakdown

Personnel	$666,358
Consultants and contract services	239,000
Travel	104,500
Space costs and rentals	0
Consumable supplies	5,803
Rental, lease, or purchase of equipment	37,893
Other costs	595,630
Total request	1,649,184
Non-Federal share	70,000
Total cost	1,719,184

Mr. LEVINE. I do have a copy of part of it here. I can read some of the topic headings if the committee would like.

Research in definitions and concepts of poverty. Research in income transfers and income maintenance systems. Research in investment in human capital. Research in the factors of effective demands for the labor services of the poor. Research in discriminatory practices. Research in political and social integration. Research in administration of social legislation and criminal justice.

Those are the main headings under which work is currently being done.

Senator MUNDT. Did those topic headings come from the Government to the university?

Mr. LEVINE. No, sir. This is a document from the university to the Government.

Senator MUNDT. This is what the university said?

Mr. LEVINE. Beg pardon?

Senator MUNDT. This is what the university said it would like to do; is that right?

Mr. LEVINE. This was sent after the funding. You see, part of the object here, Senator, was to within broad limits, get the university

with all the capability of the university in a field to structure a research program in connection with our problems. It was done closely with us but the initiative came from the university, from the academic members. I should say that some of the academic people had been associates, consultants in one way or another with OEO and they were familiar with our policy program. We did not want to tie them to our policy program.

Senator MUNDT. They have some kind of a contract?

Mr. LEVINE. Grant, yes, sir.

Senator MUNDT. And in that contract, do they make an annual or written report of some kind to you at the end of 2 years, or what?

Mr. LEVINE. They make quarterly reports but the regular scheduled reports are not their research output to us. The research output comes in as it is created. We have a number in hand now. The institute has been in being only for a fairly short time. We have in hand now, I think, four reprints of work done by people at the institute which were printed in professional journals, et cetera. We have a report of the conference sponsored in part by the Institute on Communications and Poverty Research. We have a technical paper on factors determining school enrollments.

Senator MUNDT. There used to be an old-fashioned notion abroad in the land that absence of thrift was conducive to poverty. I was listening as you gave the idea of the study to see if there was anything in there about that old-fashioned notion, whether this was something which we should try to inculcate to schools perhaps as a battle against poverty or whether we should just accept poverty as being inevitable and study what we can do to make the role of the poverty ridden happier?

Mr. LEVINE. Well, talking in terms of research here, Senator, the university has at least one project going which I can recall offhand in the spending habits of the poor and, of course, spending is the other end of thrift.

Senator MUNDT. They do have that?

Mr. LEVINE. Yes, sir. A couple of home economists, I believe, are doing such a study in Milwaukee.

Senator MUNDT. Looking at it as an old social science teacher and one who has watched this develop a long time, it seems to me inevitably there is a relationship there. Just how you correct it, governmentalwise, I do not know, but at least I think it is something which we could explore. The academic world has a responsibility in that connection, especially at the high school and graduate school level, it seems to me, to help people develop habits of thrift or spending which are less likely to end them up at the end of the road in the poverty camp.

There are things which you can induce in the human being quite apart from those that happen in society generally, that will enable him to survive in our economic system. We all know of cases in the same communities where one family with the identical income with another family gets along and sends the kids to college and the other one is really suffering from the pangs of poverty. I think there should be some pretty careful explanation as to why, all things being equal, except something about the habits of the people of the family, one succeeds and the other fails.

Mr. LEVINE. I think you are quite right, Senator. In addition to the research field I should mention in our operating programs of OEO there are various consumer education programs with objectives like that very much in mind. How do you spend wisely and thriftily? These are in the demonstration field. They partake of research aspect as well as an operating aspect trying both to learn how the poor should spend and save and to teach them how to. We also have various projects along the lines of credit unions which are thrift institutions.

Senator MUNDT. That is all, Mr. Chairman. Thank you.

Senator HARRIS. I have just one or two other points I would like to raise here. First, in regard to this word "interdisciplinary." We held a conference late last year out in Oklahoma entitled, "Research in the Service of Man: Biomedical Knowledge, Development and Use." We had a good number of the outstanding minds in the field of medical research from all over the country present there. Dr. Rene duBois, I remember, who had just won the Arches of Science Award, directed a large part of his paper to dealing with social attitudes and social behavior as it relates to health problems.

It seems to me that one thing that is true is that you could improve the health of the country rapidly if you could just disseminate existing information and knowledge and make present information and knowledge and facilities more available to a greater number of people, and if you could motivate them to use existing facilities and knowledge. That, I think, was one of the important conclusions reached at that conference and the problem is a rather obvious one. But it seems to me that while—well, I might go further and say I think one of the problems of the Public Health Service and the Indian Public Health Service is the lack of recognition on their part, and I think they are improving in their outlook, that what they are dealing with as much as anything else, is attitudes, if not more than with medical problems. I think the American Indian is the only segment of our society which has its own health service, the Indian Public Health Service. It was transferred some years ago from the Bureau of Indian Affairs to the Department of Health, Education, and Welfare, and I think that was a good transfer.

Here the American Indian is with his own health unit which no other group has and yet as the Senate Interior Committe said recently, the American Indian is at the very bottom of the ladder in all the health statistics.

That ought to bring us up short and help us to recognize that what we are dealing with is attitudes as much as anything—in some respects attitudes of non-Indians toward Indians and Indians toward non-Indians.

One of the problems is that those in the natural and physical sciences do not realize as much as they ought to that much of what they are dealing with has great effect on social science problems. That is the first thing I wanted to point up.

No. 2 is the lack of visibility on the part of the social sciences.

And No. 3 is the lack of manpower in the social sciences.

So, would it not be just as reasonable a conclusion as the one you made on page 7? You say your conclusion is that the creation of a

separate social science body might hinder the growth of these interdisciplinary developments.

Now, is it not just as reasonable a conclusion to say that if we had a separate National Social Science Foundation, which would give more visibility to the social sciences, perhaps it would bring about a greater recognition of the need for interdisciplinary efforts on the part of the natural and physical scientists and produce more on the one hand and social sciences, on the other manpower in the social sciences, that it might rather, stimulate greater interdisciplinary development than stifle it.

Mr. LEVINE. I would agree with you, Senator. I would emphasize not merely for the effect of agreeing with you, the word "might" here. I did not intend this statement to take a stand against the Social Science Foundation. And I am just not skilled, clever or deep enough in the field to in my own mind formulate the "mights" on one side against the "mights" on the other side and weigh the two.

Senator HARRIS. The other point I want to make—this is my personal opinion. Sargent Shriver is an extraordinarily concerned and dedicated American whose efforts on the part of his government and its citizens is certainly entitled to the commendation of all America.

On page 3 of your statement you say:

> A rapid increase in social science research funds alone will not guarantee an immediate rise in the amount of productive research done on our social science problems. A rise in such funds outstripping increases in social science manpower can create a classic case of a real resource bottleneck—the funds being applied to obtain a product supply of which is limited by the absence of a key input.

It seems to me that that is a description of the basic problem of the war on poverty that we have—that funds presently outstrip manpower to do the kind of job necessary.

Now, a program of this type can survive one or the other of two shortages; that is, a shortage of exact knowledge of what needs to be done or a shortage of well-motivated, dedicated personnel. But it really has difficulty if both shortages exist. And it seems to me that that is our problem with the poverty program. We are necessarily in a field which requires experimentation and innovation. In other words, we do not know exactly how to go about eliminating poverty in the country.

It also seems to me, from my own experience, that there is a definite shortage of exactly the right kind of people to carry out that kind of experimental, innovative program. That then, would mean if we cannot identify, very soon, the right kind of people, and the world is woefully short on good, dedicated, well-motivated people to carry out these programs, we ought at least put some more emphasis on trying to find out how to do these things; that is, get closer to being able to give specific instructions to the personnel we employ. And that, it seems to me, is a very real argument to be made for more visibility and scholarship and research in the social sciences.

If we cannot find all the right people we want, let us be able at least to give them a little more specific insight in to what it is we expect them to do.

Do you have any comments on that?

Mr. LEVINE. Yes, Mr. Chairman. Three comments, the first of which is, that I generally agree with you, and then two specific comments on additional partial ways out of this box you mention. One is to make better use of existing resources and design programs to take account of the fact that existing resources are short, and this program design I should add, is a function of research and analysis also.

I can give you one example of what we have done recently. As you know, from the President's budget request, we are asking for a substantial increase in manpower and training programs to train the poor for work in private enterprise. There are many, many resources in the Labor Department and what we are doing is working with the Department of Labor using their expertise to set up and operate the programs through our facilities at the local level.

That is one example of economy of the short resources.

The other example is that in addition to the factor you mentioned, the need for more knowledge, there is a need for more training. We are now carrying on an awful lot of training to work in or with these programs. I can mention two I just happened to look up which are in the State of Oklahoma, one of which is the Oklahoma State Health Department, Oklahoma City, is training home health aids, poor people, to work as subprofessionals, to assist doctors and nurses in the health field.

The other one in Oklahoma is a multipurpose training center for poverty personnel at the University at Norman and we are doing these things all over the country, trying to have the supply of personnel catch up with the demands.

I do not mean this is competitive to research. I mean it is complementary.

Senator HARRIS. I agree with that. Lastly let me ask you if it is not true that increases in topnotch manpower in the physical sciences didn't actually follow increases in availability of funds and visibility for science, particularly during and following World War II?

Mr. LEVINE. Yes, sir. I think it is true.

Senator HARRIS. Any other questions? Any other statements on the part of you or your associates, Dr. Levine?

Mr. LEVINE. I do not think so.

Senator HARRIS. If not, thank you very much for coming and for your testimony and your responses to questions.

Before lunch we will hear from one other witness, Mr. Archibald S. Alexander, Assistant Director, U.S. Arms Control and Disarmament Agency. Mr. Alexander.

TESTIMONY OF ARCHIBALD S. ALEXANDER, ASSISTANT DIRECTOR, U.S. ARMS CONTROL AND DISARMAMENT AGENCY

Senator HARRIS. If you have any associates with you, they may come forward to the table with you.

Mr. ALEXANDER. You have received my prepared statement and unless you wish me to, I would not read it. If you wish me to, I will.

Senator HARRIS. Will you be able to brief it or to make the salient points in it?

Mr. ALEXANDER. Yes, sir.

Senator HARRIS. That would be satisfactory.

Senator MUNDT. Mr. Chairman, I would like to inquire of Mr. Alexander, so I can identify the agency, who is the Director?

Mr. ALEXANDER. Mr. William C. Foster.

Senator MUNDT. I know Mr. Foster and I thought that was it, but I was not sure. This is what we usually call the Disarmament Agency.

Senator HARRIS. Very well. Without objection the complete statement of Mr. Alexander will be inserted in the record at the conclusion of your remarks. Mr. Alexander, you may proceed, then, to excerpt from it as you see fit.

Mr. ALEXANDER. Right, sir. First, I might say to Senator Mundt that Mr. Foster has seen and approves of this statement.

Senator MUNDT. I was not challenging that. I was just trying to identify the agency.

Mr. ALEXANDER. Since I knew you knew him, I thought that would mean something to you, that he has seen it.

I first describe how we coordinate the external contract research in social sciences which we do, not only coordination internally but with all the other interested agencies in the Government and also we get advice from external authorities when we are planning a piece of research. That goes for economic research, for behavioral science research, and the others, particularly those in the foreign affairs field.

Then I describe to you the social science advisory board which we have under the chairmanship of Dean Griswold of the Harvard Law School, and I heard you using the word "interdisciplinary." That is what this committee is, as you see, Mr. Chairman.

And then I describe the research which we have done and answer your six specific questions.

I would only like to say one thing about the amount of research contracted for externally in the last 5 years, that much of it, though I have given you the full contract figures in the aggregate, many of the contracts are only partly involved in social science as distinct from natural science or military hardware or such things.

I have given you some examples of studies which have been made for us and which have been put to fairly tangible use, even though they are social sciences and not natural science studies. And then I have told you whether we find that this has been useful to our mission and the answer is in large part, yes. Of course, you realize that this is chiefly mission-oriented research and not the basic type of research which I think you had in mind for the foundation in the bill that you entered.

Then, with respect to the foundation which your bill proposes, we have said that we believe it is a possible means of accomplishing the purposes which you list in your act. We entirely concur with the purposes of the bill. There are probably or possibly other methods of trying to see that there is more basic social science research but we certainly think this is an entirely possible way of doing it.

I think perhaps, sir, that is an adequate summary and that you might have questions.

Senator HARRIS. I note you say on page 11, at the bottom of the page, in your statement:

We do expect that increased support for social science research would have a generally helpful influence in the United States and elsewhere. Perhaps the establishment of a National Social Science Foundation would serve to increase such support. Enlargement of the field of knowledge by funding of increased research, particularly basic research, in due course is felt both in improving the quality and quantity of research done in the field and in enhancing the prestige that goes with working in it. These things should improve the probability of our being able to get done the research which the Arms Control and Disarmament Agency may need.

I think that is a good point. In addition to improving the quality and quantity of research, you list possible results of the establishment of a National Social Science Foundation enhancing the prestige that goes with working in it, and that is one of the things I have been talking about when I have used the phrase "visibility for the social sciences."

I am looking through your prepared statement which I did see last night. I note you say in paragraph 3 on page 13: "We therefore, strongly support the purposes of S. 3896"—which is now S. 836 of this session, unchanged from S. 3896 of the past session.

The statement says:

We therefore, strongly support the purposes of S. 3896, and believe it offers one possible way of accomplishing them.

Let me say that I appreciate your presentation here, Mr. Alexander, and your statement. I do not have any questions at this moment.

Senator Mundt?

Senator MUNDT. I notice on page 11 of your statement that the money you spend on research is constantly decreasing, both percentagewise and in terms of dollars, and as a member of the Appropriations Committee, I applaud that, but I ask you to explain how come.

Mr. ALEXANDER. Yes. Well, I think the reason is that when the Agency was first founded, the appropriations were smaller than they are now and the personnel was a little slow in gathering together. The immediate needs for research in the early days of the Agency, 1961 and 1962, were predominantly in the natural science field and it was only beginning about 1963 that this changed. I think that there are bound to be fluctuations up and down of the percentages, depending upon what the needs are. If one should have a disarmament agreement or a cease-fire in Vietnam, the reductions in defense spending would put increased emphasis, for example, on economic research.

Senator MUNDT. Is part of your assignment as you envision it in the Arms Control and Disarmament Agency to come up with suggestions as to what changes we would have to make in our economic structures in this country if, happily, all the world suddenly said, yes, we disarm?

Mr. ALEXANDER. Yes, sir. The law which you enacted does specifically give us the research and the policy proposed with respect to the economic and social consequences of disarmament and the reallocation of national resources. So that we have a fairly comprehensive program of research into what the effect would be if there were such.

Senator MUNDT. Are you the sole agency of Government that is studying the economic repercussions of disarmament?

Mr. ALEXANDER. No, sir. I am glad to say we are not the only one. The best way I can explain the situation as between us and the other

agencies to you is this, that many of the same things would happen in a reduction in defense spending such as from a cease fire in Vietnam that was not due to a disarmament agreement. So we have not the direct responsibility for the consequences of the Vietnam cease fire—the Labor Department, Defense Department, Commerce, Council of Economic Advisers—but they and we recognize that the nature of the problem would be very similar whether the reduction were due to a Vietnam cease fire or to a arms control agreement, and therefore, we study these things together and the coordination of the research in advance of making the contract is for the purpose of seeing, first, that we do not duplicate, we and the other agencies, and second, that if there are alternations in the proposed research terms of reference which would help some of the other agencies, then we make those alternations.

Senator MUNDT. Do you study just the potential consequences or have you come up with a plan as to what to do to meet the situation should it happily arise?

Mr. ALEXANDER. We do not have an overall plan now primarily because the contingencies when they occur could be so very different. What we have is a variety.

Senator MUNDT. You are right in your broad statement about a permanent cease fire in Vietnam or a total disarmament or a substantial disarmament agreement enforcible between the Communist world and the free world. The consequences would be about the same on our economy.

Mr. ALEXANDER. They would be very similar.

Senator MUNDT. I wondered whether you had come up with a plan—you have been at it 3 years—about what the Government or industry should do or what should be done to work on serious economic consequences.

Mr. ALEXANDER. We do not have one overall plan. We have studied the industrial aspects of it in some of the defense dependent industries, the employees aspect with labor mobility studies, community aspects of it with some regional impact studies, and also we have worked with the Department of Defense to improve our ability to tell where a change in a defense spending program will be felt, what communities, what companies and what types of employees.

Now, sir, the President in the Economic Report to the Congress 10 days ago directed Mr. Gardner Ackley to prepare a specific overall contingency plan for the possibility of a Vietnam cease-fire. I believe we will be working on that and some of this research which I have cited today will contribute to that plan.

Senator MUNDT. Who selects the members of the Agency's Social Science Advisory Board? Mr. Foster?

Mr. ALEXANDER. Yes, sir.

Senator MUNDT. I wondered if there was any particular reason why our whole agricultural economy is not represented on that kind of board because it seems to me that the repercussions of the desirable eventuality of disarmament or the end of the war in Vietnam must have its impact on what we would call rural America. The small towns and the cities are well represented. Dean Griswold of Harvard is the Chairman; then we come to Cornell University, which

is—I suppose Cornell of New York State; Stanford, which represents the west coast, the big metropolitan communities of Los Angeles and San Francisco; and then we have Columbia where I have a degree—that is New York State again, New York City; and finally Vanderbilt and Chicago and back to Columbia. But I look in vain for anybody who is involved in this study who might have lived in a small community or rural America and I wondered who is responsible for that blind spot in the planning?

Mr. ALEXANDER. Sir, may I give you an answer in two parts, please. First of all, this is a Social Science Advisory Board and I do not believe at the time we were thinking of the discipline that we really thought of the science of agricultural as so much a social science as a natural science.

The second part of my answer——

Senator MUNDT. The problems which are created by an impoverished agricultural economy are very definitely social problems; people moving from the farms as they are steadily now, even in peacetime. Certainly in peacetime this would be accentuated. Your smaller community struggling for little industries; struggling for dispersal of Government contracts. A few of them have them. I suspect they are the last ones to get them and the first ones to lose them in times of peace. It just seems to me that there is an imbalance which is quite conspicuous in a nationally supported advisory board which overlooks, shall we say, a third of America?

Mr. ALEXANDER. Sir, I shall tell Mr. Foster your feelings on that. I would also say that we tried to get a reasonable geographical balance in the membership from the west coast, the middle west, to the east, and for us easterners, Cornell is the primary agricultural institution in that part of the country.

Senator MUNDT. I am glad you said for you easterners because you have overlooked Ames, Iowa, and you have overlooked Brookings, S. Dak., and you have overlooked the farm belt in general. The real agricultural institutions are in the farm belt and they know what a farmer is. They can visit a farm from which the farm produce comes. It is about, 2,500 miles from Chicago to Stanford and in between there is a no man's land. There is nobody speaking up in the void for that great vast area of the country. Am I right? I am not blaming you but I am blaming somebody because it is wrong. And so if you will convey to our mutual friend, Mr. Foster, this oversight I would appreciate it because I have an uneasy feeling that if we had before us the roster of the Board planning the economic repercussions, we would find the same imbalance that we find here.

I do not know, but I assume your agencies must have as advisers and planners people dealing with the economic repercussions of peace here. We are talking here about social science and we have got the names of those on the Social Science Advisory Board. But surely your Agency is also studying and bringing in the greatest expertise that you can find on the economic repercussions, and I shudder to think of the geographic home base of the people on that Board, because I think you would find the same imbalance.

Mr. ALEXANDER. Sir, I acknowledge the problem that you raise. I would say this, that on the agricultural part of our economy we have

affected liaison with the Department of Agriculture and I have been to brief them and heard some of their briefings so that they would understand what we are worrying about in case of reductions in defense spending so as to be sure that they recognize that there would be changes in the economy which would affect and require action no doubt to help the agricultural part.

Senator MUNDT. Do you have, as a matter of fact, in the Agency an Economic Consequences Advisory Board or Economic Advisory Board or do you do all your own planning in terms of economics?

Mr. ALEXANDER. No, sir. We have only the one Social Science Advisory Board.

Senator MUNDT. Only one social science. I am talking now about economics, not as a social science but as a practical reality, shall we say a production consequence. I would just have to think, Mr. Alexander, that in your planning for peace and in your planning for disarmament surely you must give some thought to what happens to the economy and I would think that you would need outside consultants there just as you need them in social science, or am I wrong? Do you have within your own personnel sufficient expertise and enough people so that you feel that you can do all of that planning as a board or an agency and do not need any outside source?

Mr. ALEXANDER. Sir, I might mention that one of the two regional impact studies which we had made was done of the State of New Mexico, which is at least partly agricultural although it is mining and industrial also.

Senator MUNDT. This is very encouraging especially if it was done by New Mexicans. But if it was done by economists in Harvard, I am not sure it is the answer.

Mr. ALEXANDER. Sir, I think some of the economists at Harvard came there from some place else and I would think that they were—in fact, I think they steal a lot of them from other people. But I think the economists at Harvard do try to consider—they would be wrong if they did not—the various segments that go to make up our economy.

Senator MUNDT. Would you really believe now that an economist from Harvard would be a better man to determine the economic consequences of complete disarmament in New Mexico than an economist from the University of New Mexico?

Mr. ALEXANDER. No, sir. I think that perhaps the economics professor at Harvard may have come from New Mexico or the Dakotas or New Jersey.

Senator MUNDT. I would have a little more confidence in an economist who liked the State well enough to stay there instead of somebody who removed himself to Harvard. It is not your problem but I just want to get this in the record, because it is wrong and our committee in part has a responsibility of rectifying that kind of imbalance. So I do not want to sit here and not make some comments to you even though you are as innocent as Gabriel's angel, but I want you to give this back to your director because we will be talking to him about this in a more realistic atmosphere when you come before the Appropriations Committee and being forewarned is forearmed.

Mr. ALEXANDER. Sir, would it be permitted to remind you, though, that some of the very best professors elsewhere in the country have also come by origin from the East. I think there is a very good cross-fertilization in the academic world, now. I am sorry. I hope this will not——

Senator MUNDT. You would not like to make a good friendly wager as to the way the percentages run in this transmigration of intellectual capacity, would you?

Mr. ALEXANDER. I think I will not volunteer anything more.

Senator HARRIS. Senator Hansen?

Senator HANSEN. I have no questions.

Senator HARRIS. I want to thank you, Mr. Alexander, for your testimony. I would like to comment that I think on page 12 and page 13 of your testimony you have summed up one of the basic problems of modern society, very well. You say:

> I think it is generally recognized that the advances made by modern man in the natural sciences have outstripped has capability to cope with the consequences of these advances.

Then you point out on page 13 that—

> mission-oriented agencies have to give priority to their operational needs.

And you then say in the second paragraph on page 13:

> Nevertheless, basic research is necessary in order to open up new fields of knowledge which will, of course, themselves contribute to application of new knowledge to the specific problems faced by governments and people.

Finally you say this might be approached either through a national foundation for the social sciences or through greater funding of social science research in the National Science Foundation, and you wind up by saying in the last sentence of your statement:

> Our agency has no clear preference, and therefore, would have no objection to the enactment of S. 3896.
> Which I again point out in this session is S. 836.

Mr. ALEXANDER. I apologize.

Senator HARRIS. Well, you did not know when this statement was drawn because we only reintroduced it yesterday.

Thank you very much for your testimony and for your presentation.

Mr. ALEXANDER. Yes, sir.

(Mr. Alexander's prepared statement follows:)

STATEMENT BY ARCHIBALD S. ALEXANDER, ASSISTANT DIRECTOR, U.S. ARMS CONTROL AND DISARMAMENT AGENCY, BEFORE THE SUBCOMMITTEE ON GOVERNMENT RESEARCH

Mr. Chairman, my name is Archibald S. Alexander and I am an Assistant Director of the United States Arms Control and Disarmament Agency. I am head of the Economics Bureau, one of the four functional bureaus of the Agency. This bureau has responsibility for research and other aspects of economics and the other social sciences, insofar as arms control and disarmament are concerned.

I am therefore grateful for the opportunity to appear before your Subcommittee in connection with your Bill, S. 3896, proposing the creation of a National Foundation for the Social Sciences.

Section 31 of the Act creating our Agency, which became law in September 1961, deals with the authority of the Agency's Director to conduct research. The portions of this section which deal primarily with the social sciences are paragraph (c) concerning "the analysis of national budgets, levels of industrial production, and economic indicators to determine the amounts spent by various

countries for armaments;", paragraph (h) "the economic and political consequences of arms control and disarmament, including the problems of readjustment arising in industry and the reallocation of national resources;" and paragraph (1) "the scientific, economic, political, legal, social, psychological, military, and technological factors related to the prevention of war with a view to a better understanding of how the basic structure of a lasting peace may be established;". Some of the other paragraphs of Section 31 also involve the social sciences in part—for example paragraph (i) "the arms control and disarmament implications of foreign and national security policies of the United States with a view to a better understanding of the significance of such policies for the achievement of arms control and disarmament;".

Before turning to the specific questions you asked about S. 3896 in your letter inviting me to testify, I should like to describe the means used to plan and to coordinate outside the Agency the research we carry out in the field of the social sciences.

All contract research funded by our Agency must be approved by the Director, or in his absence by the Deputy Director. Before going to the Director for his action, each item of proposed contract research must go before the Agency's Research Council, composed of the heads of the operating bureaus and offices, plus a senior officer of the Agency, who is not the head of an operating bureau or office, as Chairman. The proposals are circulated beforehand and fully discussed when reached on the Research Council agenda, in order to prevent unnecessary duplication and to insure that the research is of maximum utility to all parts of the Agency.

In addition, no research is approved until comments have been received from all other government agencies which might be thought to have some interest or expertise in the subject matter, and of any outsiders who might have useful judgments on it. Moreover, foreign area social science research—and much of our Agency's social science research is in this category—must receive the approval of the State Department's Research Council, in order to insure that its conduct will not endanger the foreign relations of the United States. There is also a Foreign Area Research Coordination Group, the Chairman of which is a State Department officer, which serves a general coordinating function. I believe you will be hearing later on from a State Department official concerning this body.

Another forum is used for external coordination of domestic economic impact research. Plans for such research are submitted to the Committee on the Economic Impact of Defense and Disarmament, for coordination with the other members of the committee. This committee, the Chairman of which is Dr. Gardner Ackley, Chairman of the Council of Economic Advisers, was formally created by the President in December 1963. It has senior representatives from the Office of Emergency Planning, the Departments of Defense, Labor and Commerce, the Bureau of the Budget, Office of Science and Technology, the Small Business Administration, the General Services Administration, the Atomic Energy Commission, the National Aeronautics and Space Administration and the U.S. Arms Control and Disarmament Agency. Specific research proposals are also coordinated with this committee.

I should like also to mention our Agency's Social Science Advisory Board, set up by the Director, Mr. Foster, in accordance with Section 41(f) of the Arms Control and Disarmament Act. This Board was set up about three years ago and has now met six times. In addition, its members are consulted in between Board meetings, individually or in subcommittees. The Chairman of this Board is Dean Erwin Griswold of the Harvard Law School. The other members, and their academic disciplines, are as follows:

Professor Abran Bergson, Harvard University Russian Research Center (Foreign Economics).
Professor Urie Bronfenbrenner, Cornell University (Psychology).
Professor Gordon Craig, Stanford University (History).
Professor W. Phillips Davison, Columbia University (International Communication).
Chancellor Alexander Heard, Vanderbilt University (Political Science).
Mrs. Alice Langley Hsieh, The Rand Corporation (China).
Professor Morris Janowitz, University of Chicago (Sociology).
Professor Philip Mosely, Columbia University (Political Science).

The purpose of this advisory board is to give advice on our overall social science research program and on specific projects. It is free to suggest subjects and inquire into and discuss policies with special reference to their social science aspects. In addition, it serves as a channel from the social sciences, as represented in the American academic world, to our Agency, and for communication from our Agency to these disciplines. We have found it extremely useful.

The following are answers to the specific questions you asked in your letter to me, Mr. Chairman:

(1) "What use has your department made of social science research in the past?"

Examples of the use to which the results of our research contracts have been put are—

(*a*) Studies of the electronics and ship-building industries have analyzed these two defense-dependent industries, showing in detail the kind and extent of their dependence, and have made suggestions for adjustments that would be required in order to meet reduced defense spending. These studies have been disseminated within the industries as well as within the government. They provide information which should be useful in determining policies and programs which would be required in the event of a reduction of defense spending due to disarmament, or for that matter to other circumstances such as a diminution or cessation of hostilities in Viet-Nam.

(*b*) Labor mobility studies have analyzed what happened to the employees whose employment was terminated upon cancellation or reduction of defense contracts, in Seattle, in Denver and on Long Island. Information regarding the precise experience of these employees is essential to preparation of policies and programs for dealing with the problems workers in defense industries would face in case of reduction in defense spending.

(*c*) The Bureau of the Census study of the Soviet fiscal system has been used in preparation for responding to proposals which have been made, by the USSR and other countries, for the control and reduction of arms by means of reductions in military expenditures. Proposals of this kind have been made at the U.N. and at the Eighteen Nation Disarmament Committee at Geneva.

(*d*) The study by Columbia University on the legal aspects of verification in the U.S. has provided much information needed in determining the constitutional, legal and other limitations on inspection by an international disarmament organization or other organizations which might be charged with verification of arms control and disarmament agreements in foreign countries and in the U.S.

(*e*) The study by Massachusetts Institute of Technology of problems arising in connection with possible regional arms control and disarmament arrangements, with particular reference to Latin America, Africa and the Middle East, has been of particular use in connection with the suggestions for regional arrangements to limit the proliferation of sophisticated conventional weapons which are likely to be discussed at the forthcoming Latin American Summit Conference.

(2) "What types of unclassified social science research has your department supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories, who has done this research for you?

Our Agency has supported unclassified social science research in the broad categories of political science, including foreign relations, economics, behavioral science, history and law. Very little of the contract research in these fields has been classified. Relatively little work properly termed research has been done in-house, both because of the restricted number of personnel of the Agency, only a portion of whom can devote their time to research as distinct from operations, and because much of the research is sufficiently specialized so that it would be unlikely that one could employ appropriate specialists. By broad categories, this social science research has been done for us by universities, non-profit organizations, business concerns, a few individuals, and other government agencies (on a reimbursable basis).

(3) "What has been the experience of your department concerning the relevance of social science research which you've funded to the mission of your agency?"

Our Agency has had good results from most of the social science research funded by it, and has found it relevant to our mission.

(4) "What has been the magnitude of your support of social science research in the last five years? What are your plans for future support of social science research?"

Defining the words "social sciences" broadly, as we believe your Bill does, we find that, since our Agency was created, it has obligated the following amounts for social science research:

Fiscal years 1962–1964 inclusive (29 percent of contract research obligations)	$2,380,978.00
Fiscal year 1965 (30 percent of contract research obligations)	1,593,936.56
Fiscal year 1966 (27 percent of contract research obligations)	1,544,176.00
Total obligations, fiscal year 1962–66	5,519,090.56

I should like to stress that the above figures represent the total costs of all contracts which involved an appreciable amount of social science research; but in many instances only a part of the content involved social science research.

In general our Agency plans to devote a substantial portion of its resources to social science research, although there are of course fluctuations in the requirements, with periods of urgent need for "hardware," natural science types of research.

(5) "What effect would you expect a National Social Science Foundation to have on the type and quality of the social science research you support; on the social sciences in general?"

We would expect that increased support for social science research would have a generally helpful influence in the United States and elsewhere. Perhaps the establishment of a National Social Science Foundation would serve to increase such support. Enlargement of a field of knowledge by funding of increased research, particularly basic research, in due course is felt both in improving the quality and quantity of research done in the field and in enhancing the prestige that goes with working in it. These things should improve the probability of our being able to get done the research which ACDA may need.

(6) "A specific commentary on S. 3896."

In commenting on S. 3896, I would begin with the opinion that it is most desirable and in the national interest that there be greater encouragement and financial support of research in the social sciences. This subject is well covered in Section 2 of the Bill, which declares the purpose of the Congress. I think it is generally recognized that the advances made by modern men in the natural sciences have outstripped his capability to cope with the consequences of these advances. The world has not yet found out how to tame the many genii which the natural scientists have created, and which seem to have a natural tendency to escape from their bottles, with the ability, if uncontrolled, to destroy us, after impoverishing us. One would look to the social sciences to explore and propose how man shall master these genii, in order to help those in the Legislative and Executive Branches of the government to achieve this end.

It is, however, primarily the kind of research which is called mission-oriented which government agencies are expected to support with funds collected from the taxpayers. Priority is generally assigned to research which supports the most urgent operational needs. Nevertheless, basic research is necessary in order to open up new fields of knowledge, which will, of course, themselves contribute to application of new knowledge to the specific problems faced by governments and people.

We therefore strongly support the purposes of S. 3896, and believe it offers one possible way of accomplishing them.

There would appear to be at least two methods for achieving those purposes. The first would be the creation of a National Foundation for the Social Sciences as an independent agency of the government. The other method would be further to strengthen the funding of the social science research program of the National Science Foundation, in order to provide greater resources for the social sciences. Our Agency has no clear preference, and therefore would have no objection to the enactment of S. 3896.

Senator HARRIS. That will conclude our morning's hearings. Dr. Leland J. Haworth, Director of the National Science Foundation, will appear at 1:15. He will be our only witness this afternoon. Would there be objection to hearing him at 1:15?

Senator MUNDT. No objection. But Senator Hansen and I both have to attend a luncheon that will not be completed until 2.

Senator HARRIS. Would you desire that we change our arrangements?

Senator MUNDT. No.

Senator HARRIS. Very well. We will then recess until 1:15 this afternoon.

(Whereupon, at 12 noon, the hearing was recessed to reconvene at 1:15 p.m., this day.)

AFTERNOON SESSION

Senator HARRIS. The subcommittee will be in order and we will hear from Dr. Haworth.

TESTIMONY OF DR. LELAND J. HAWORTH, DIRECTOR, NATIONAL SCIENCE FOUNDATION, ACCOMPANIED BY DR. JOHN T. WILSON, DEPUTY DIRECTOR; DR. RANDAL M. ROBERTSON, ASSOCIATE DIRECTOR (RESEARCH); DR. HOWARD H. HINES, DIVISION DIRECTOR, SOCIAL SCIENCES; AND MRS. BERTHA W. RUBINSTEIN, SPECIAL ASSISTANT, DIVISION OF SOCIAL SCIENCES

Senator HARRIS. Dr. Haworth, we are very pleased you are present. I believe you have a prepared statement with some attachments.

Dr. HAWORTH. That is correct. Mr. Chairman, if I might, I would like to have some of the staff sit with me.

Senator HARRIS. Fine. We would appreciate it very much. You may have them come forward and present them.

Dr. HAWORTH. This is Dr. Robertson who is the Associate Director for Research of the Foundation. This is Dr. Hines, who is head of the Social Science Division; Mrs. Rubinstein, who is special Assistant to Dr. Hines; and Dr. Wilson, who is the Deputy Director of the Foundation.

Senator HARRIS. All right. You may either present your prepared statement in full, or if you want to excerpt from it——

Dr. HAWORTH. I think I will do a bit of both, if I may, if that won't be too confusing.

Senator HARRIS. That is all right. And to the degree that the full statement is not read, without objection, it will be made a part of the record at the conclusion of your remarks.

Dr. HAWORTH. Thank you.

First, Mr. Chairman, I would like to say I am very happy to come and testify on this subject. I consider it a very important subject. And I think that you and your committee are doing a very valuable service to call the attention to the Congress, the executive branch, and indeed, the country, to the importance of the social sciences.

If I might be personal for a moment, I might say that this is an area that I have long had a great personal interest in. My father was an historian and political scientist. I sort of grew up in that atmosphere.

After I had my Ph. D. in physics he told me that he was sort of sorry that I had not gone into the social sciences, but he thought the natural sciences—remember, this was the early 1930's—had run ahead

of the social sciences and our ability to use natural sciences. I think perhaps this was clairvoyant. I think it is quite important now in many respects, and I think that the solution of many of the most crucial problems that the country faces, in fact, the world faces, are going to depend very, very substantially on the social sciences and on their integration with the natural sciences and engineering.

So, I think that this is a very fine thing that is happening.

First, with respect to my testimony, I would like—although there is nothing new about it, but just for background—to discuss for a minute or two, my own feelings about the role of the Federal Government in science and technology. If I may, I will use the word "science" as a generic term to cover mathematics, the natural sciences, engineering and the social sciences, just to save time.

I think the role of the Government really serves three purposes. One, to provide an underlying background of knowledge and understanding in all of these areas; as a matter of fact, I think that is what science, however defined, is, knowledge and understanding.

Secondly, to support research and development to meet the needs of the Government itself in defense, in space, in those things that the Government does on its own behalf, or on behalf of the people.

And thirdly, to develop knowledge, information, techniques, know-how, and so forth, for public use.

I think the way the Government is generally organized, follows naturally. We have a number of so-called mission-oriented agencies that have particular responsibilities in health, in agriculture, in resources, and in atomic energy, defense, and so forth. These agencies are responsible for reaching or helping to reach national goals, and all of these agencies, or most of these agencies, at least, in this day and age have a need to use the knowledge and understanding that derives from science in the narrower sense of the word "science."

In this process, then, they not only use science, but they have developed science as it relates to their own missions, and I think this is quite appropriate. I believe that all the agencies that I named, and many others, need to do research and development in order to be able to effectively discharge their mission.

They also need to do, however, some fairly basic research in order to help provide a backlog of knowledge for the future, in order—by virtue of having a knowledgeable staff—to keep themselves familiar with advances in science in all these fields, to keep themselves in touch with the scientific community at large and importantly to keep that scientific community in touch with the problems of these agencies. And this sketch, a very, very crude sketch, that follows page 2 is an attempt to diagram the dependence of these agencies on science in a way that is perhaps naive but might be helpful.

I have already said that underlying all of the useful purposes to which science is put, must be the fundamental knowledge and understanding that derives from the more basic kind of research across the whole spectrum of the natural sciences, engineering and social sciences, and even the humanities. And naturally the research supported by the mission-oriented agencies will not necessarily fill out the whole fabric of underlying research and will not necessarily provide the sort of unity that should be provided.

For that reason the National Science Foundation was created by the Congress in 1950 and given the responsibility for doing what it could to be sure that this underlying fabric is comprehensive, does not have gaps in it, should have unity within it, and so forth.

More recently, extending that concept, the Congress also created the National Foundation for the Arts and Humanities—of which one half, the National Endowment for the Humanities is particularly pertinent here—that gives a wider underpinning. As a matter of fact, that Foundation, plus the National Science Foundation, covers more or less the entire spectrum underlying the sorts of things that we are talking about.

Now, this philosophy—or mode of operation that has developed into a philosophy—will underline much of what I say today. I won't keep referring to it, but that kind of thinking has a lot to do with what I will say.

In my testimony relating to the social sciences in particular, and especially the role of the National Science Foundation in the social sciences, I will divide my presentation into two parts. First, just a bit of the history of the Foundation in this field and a bit about the present program, the extent of it, the size of it, and so forth.

Secondly, some of the things we have been thinking about for a considerable length of time with respect to what we would like to do in extension of the program, in the social sciences. This will have two facets, the sorts of things that we can do under our present authority, as well as the sorts of extensions that we think might be appropriate should the Congress decide to broaden the Foundation's authority in accordance with the bill introduced in the House last year and passed by the House, which is now H.R. 459. It was also introduced in the Senate by Senator Hill but was not acted upon there; in fact, it didn't reach the stage of hearings.

That bill, if passed would have two or three effects on the possible role of the National Science Foundation. One in particular would be an important extension of authority, namely, that the Foundation would be authorized to support applied research, as well as its present authorization to support basic research. This would be limited to academic and nonprofit institutions, unless there was a decision by the President that we should also support applied research in industry for some purpose of national importance.

Secondly, it would extend our authority with respect to activities abroad by virtue of a subsection that would enable us to do things at the request of the Secretary of State. It goes somewhat beyond what we can do now by permitting us to take considerations of international cooperation to account.

And thirdly, although this is not an extension of authority, it nevertheless would be a very important statement of the intent on the part of Congress, namely, to include the social sciences explicitly in our enabling legislation which is not now the case. Support of the social sciences is presently authorized, but under the rubric of "other sciences."

In 1950 it was not clear to the Congress or to others how far the Foundation ought to go in the social sciences and it was left up to the Foundation to decide.

That, then, is a brief outline of what I plan to say.

Let me turn, then, to the section—headed by Roman numeral I on page 5. As I said, the Foundation was left by the act to determine for itself how fast and how far it should go in the social sciences. The legislative history is clear that it was expected to do so. It was very clear that the Congress felt there should be studies to see what sort of program might be useful, and so forth. So the Foundation got at that pretty early and had a study back in 1953. (Although the act was passed in 1950, the Foundation wasn't really active until, as I understand it, the latter part of 1951.) In 1953 there was a study. By 1954 there was a program. At first it was a program which was confined to the support of research which—the phrase was "converged" with the natural sciences, that is were closely related to them, such as psychology and things of that sort. Thus the original support was given by the divisions specified in the act for the natural sciences.

Pretty soon, though, the program grew and extended and by 1956—it had been extended to the point where it was an autonomous program of its own, and by 1960 there was a division of the social sciences on a par with the division of the biological and medical sciences and the then existing division of the mathematical, physical and engineering sciences.

I might say that there was a separate division of the social sciences before there was a separate division of engineering, or before there was a separate division of environmental sciences, the latter being just about a year old now.

The division's program, of course, was initially very small. It has grown. Indeed in the last 6 or 7 years it has grown more rapidly than the Foundation's program as a whole. And, as a matter of fact, from 1960 to 1967 the research support by the division has grown more than sixfold. It is now growing at a rate of about 15 or 20 percent per year. Averaged over the last few years the program has had an average growth of about between 15 and 20 percent per year. The Foundation's total support of social science research is a bit more than $20 million for the current year, of which not quite $15 million is funded by the social sciences division and the rest is scattered through other parts of the Foundation, including certain parts of the so-called institutional programs where academic institutions are given variegated block support, as distinguished from the project support that characterizes the research divisions, such as the division of social sciences.

We have requested an increase of almost 25 percent for 1968 in the support to be given by the social sciences division. I can't spell out the rest of the fiscal year 1968 request that clearly, because the bloc support funds form, as I said, a composite and variegated support, and one cannot predict in advance how they will be distributed among the disciplines.

There has also been support for other than research activities. There has been a certain amount of support from our so-called graduate research facilities, which is primarily a bricks and mortar type activity where, on a matching basis, we assist universities in building buildings for their graduate programs.

There is a specialized facilities program in which some funds are assigned to the social sciences division for specialized facilities of a more specialized nature.

Then, finally there is support, of about 11 million this year, for social science education—including fellowships, teacher training and retraining, curriculum development, undergraduate research participation and things of that sort which are characteristic of the support of all our science education programs. This has been growing along with the rest, of course.

Then, I should point out that, of course, there is an interrelationship between the research support and graduate education because graduate students are deeply involved in both and because the facilities who participate are made more current and knowledgeable in their fields by participating themselves.

Now, this growth that I have been referring to is shown in exhibit A. I judge that when you said the prepared testimony will be introduced in the record, you were including the attachments.

Senator HARRIS. Yes. Without objection the attachments to the statement will also be included in the record.

Dr. HAWORTH. Thank you.

Senator HARRIS. Dr. Haworth, that is a quorum call. We are expecting a vote in the Senate not later than 1:45. I am going to have to recess, with your indulgence, momentarily to make the quorum call and vote, and then, if you can wait, I will come back following the roll call. We should be able to finish before another roll call is due.

Dr. HAWORTH. I understand.

Senator HARRIS. We will recess probably until 10 minutes to 2.

(Whereupon the committee was recessed to reconvene at 10 until 2 o'clock p.m. the same day.)

AFTER RECESS

Senator HARRIS. The subcommittee will be in order and resume. I'm sorry, Dr. Haworth, that your testimony was interrupted by the Senate rollcall. We should be able to finish up, I hope, before another one intervenes. I think we have a little time now, so you may proceed from where you were.

Dr. HAWORTH. Thank you, Mr. Chairman.

I was talking about our present program, calling attention to, as you recall, some of the things that we do, some of the exhibits that lay this out.

I might point out that exhibit B gives a similar sort of breakdown for all the Federal agencies which is here to put our own activities in context.

We provide, of course, a substantial part of the fraction (about 20 percent of the total for basic research but in terms of the total support for social sciences by all agencies of Government, we are something like 7 percent.

Table C shows a statistical breakdown of the grants we have given over the years. It shows the various organizational structures under which the support was administered, culminating, as I remarked earlier, in about fiscal 1957, calendar 1956, in the organization of an autonomous unit. It shows something about what fraction of the total requests we have been able to fund and things of that nature.

The second table under exhibit C breaks down the activities of the social science division among various disciplines of the social sciences,

although for reasons of definition, and so forth, these are never very clear cut, and not all the social sciences that actually receive support are individually listed here.

Exhibit D is a listing of our advisers from outside the Government. Exhibit E is a list we thought you might find interesting, of the individual grants that the social sciences division gave during fiscal year 1966 from which—although the titles, of course, are very brief and not necessarily completely descriptive—you can get some idea of the type of research that has been supported.

Now, the Foundation's social science program, as well as our total program of course, are circumscribed by the terms of the National Science Foundation Act which, at present, confines us to basic research and to science. I am not quite sure what the sciences are as distinguished from other things, but I think it is fair to say that the Foundation intreprets this very broadly, but to some extent, to a considerable extent perhaps, of course, does focus primarily on those social sciences that are approached from the same viewpoint as the other sciences are approached, as distinguished from what one might call the more humanistic approach to the social sciences which, of course, is now covered by the National Endowment for the Humanities.

We make very liberal use of advisers. We have an advisory committee for the social sciences which is advisory to the Director of the Foundation for all aspects of the social sciences, not merely to the Division of Social Sciences, as we unfortunately said in this script. And by that I mean that, while it focuses on the social science division and the research program supported by that division, it does have cognizance in a less direct way over other activities, including our educational programs in the social sciences. There is an Advisory Committee for Education and they both look at education programs in the social sciences.

Then there are panels in the various disciplines. The Advisory Committee has a broad policy advisory function. The panels in the various disciplines advise us with respect to more specific matters, including looking at the proposals to help us in the process of evaluating them to decide what ones we can actually support. And then beyond that we make liberal use of individual consultants who are asked to evaluate proposals.

This is again characteristic of the entire program of the Foundation; from the beginning we have made this sort of advice a very prominent part of our total evaluation process.

I think with that I can close my discussion of the present program. I haven't said, and I should have, that it goes clear across the spectrum of the social sciences. It has gradually increased its coverage. Initially not all disciplines were covered, but I think it is fair to say that they all are now and that proposals in any branch of the social sciences are welcome. Of course, we recognize that the social sciences themselves cover a very broad spectrum of activity. They are all welcome and all kinds of methods for carrying out research are open to the people who propose this research.

I should say that in common with all the Foundation's programs, the initiative for deciding on what an individual is going to do re-

search on, really comes from him. We don't go out and tap people on the shoulder and say, "We would like you to do this kind of a project or that kind of a project," but we use our influence in terms of emphasis and things of that sort more in a general way than in picking out projects and seeking individual performers to carry them out.

I would like to turn now to the sort of program that we visualize for the future. This is a fairly broad program that is included here. It is something that we have given a lot of thought to in the last year or two and we were stimulated to further thought by the considerations that you and your committee have been giving to the social sciences for a great many months and have perhaps to some extent, crystallized a little more in recent times.

We believe that we should, in the first place, continue to support the social sciences very substantially through the present project research grant method in which individual scientists or small groups, who apply through their academic or other institutions, are supported for specific pieces of research. We believe that that method, not only in the social sciences, but in the other sciences as well, has contributed very greatly to the progress that has resulted from the support by the Federal Government of the entire scientific and engineering community in the years since the war. And we believe we should continue this. But we think we would—should broaden out and do other things as well.

In the first place—and I would like to go a bit beyond the original testimony here and express what is, perhaps, a personal opinion—I believe that there is a very great need for broader action in many areas. Not only from a scientific standpoint but very importantly from the standpoint of helping society to solve its problems, there should be brought together groups of scientists from many disciplines, including the social sciences, the natural sciences, and I think very importantly, engineering.

I think that with respect to a great many of the problems of society, which term I prefer to social problems, the technology is much better in hand than our methodology of how to use the technology. This includes both problems where there are chances for better advancement than we have been able to make and some of the areas in which we are retrograding, such as air and water pollution, and many things of that sort. And in many of these the basic physics or chemistry or whatever it may be, and the engineering knowledge exist, although perhaps not developed completely, but we in society are not using the knowledge properly or not using it adequately. It seems to me that an integration of the knowledge gained from the social sciences—an understanding of man and what he thinks and what he is about, what he wants to do, and so forth, how he is likely to react to given situations—must be integrated with the knowledge of the harder sciences, the physical and biological sciences and engineering, in making use of the underlying technology.

And so an important part of our future thinking is to try to bring this about or help to bring it about. Perhaps we can't be anything more than a catalyst, but we should try to encourage and help develop this more interdisciplinary type of thinking.

Turning back now more specifically to the social sciences, there are several methods of attack that we would like to embark on, or in most

cases, augment. The first of these is that we believe that there need to be some additional centers for advanced specialized research for attacking some of these multidisciplinary problems, centers for such things as the study of urban ecology, regional planning, economic analysis, things of that sort. This does not mean necessarily that one sets up a new institution, although in some instances this might be called for, but rather that the resources of the university or several academic institutions be brought together from a broad range viewpoint and have a more integrated attack on some of the problems.

There is now only one national center for the social sciences in the full sweep of that term, and that is the Center for Advanced Studies in Behavioral Sciences at Stanford. I might say, that the Director of that Center, Dr. Ralph Tyler, is a member of the National Science Board and at the moment is its Vice Chairman.

This Center has well illustrated the usefulness of the sort of thing I am talking about. Not only is its own staff effective, but it brings in people from the academic community on a rotating, visiting basis and it is used very intensively by the academic community as an appropriate place where they can do things in cooperation with their colleagues, that they would find it more difficult to do in their own individual institutions.

There has been a suggestion that there might be such a center in Washington because of the peculiar opportunities in Washington with all the information, the people, and so forth, that are centered here. I think that is something that is food for thought in the Government and in the scientific community.

We need to improve the capabilities, capabilities of survey centers connected with such things as public opinion analysis, statistical analysis, sampling things, and so on, where there ought to be substantial centers of accumulation of data bearing on all of these kinds of problems.

As a matter of fact, data archives of a broader sweep than now exist are badly needed for all the areas of the social sciences. They are, in a sense, the big tools of the social scientist, analogous to the accelerators, telescopes, and so on, of the physical scientist. And there is just no question but what the social scientists do not have at their disposal, or at least their ready disposal, enough data that they can use in studying their various problems.

Now, the potential value of such data has been greatly enhanced, of course, by the development of the digital computer. It affords a method of storing, processing, and analyzing very large accumulations of data, accumulations that one couldn't dream of really analyzing in all their various cuts before the advent of this technique. It makes it possible to combine in one data storehouse, so to speak, accumulations of many kinds of data that can then be sampled and analyzed, and so forth, in a hurry to find out very many things that would otherwise have been quite obscure.

All these things, of course, would take money, but they certainly must be done and the people who use them must be given the support, either through the centers or through individual grants, to permit appropriate use of them.

The same thing is true of the study of the social sciences in the underdeveloped world. And here again we believe that there needs to

be some pulling together, some additional regional centers for the study of these problems. There should be centers in this country that serve as the bases for the studies abroad. They could have subcenters in the geographic areas that they are interested in. One of the important things I think, that the base—the home center—should do is bring people there before they go abroad to carry out research, in order to help get them familiar with the total picture of the country that they plan to work in.

An anthropologist may know something about the anthropology of country x or region y, but may know very little about the political structure, and conversely, a political scientist may know a great deal about the political structure, but not so much about the people and individuals and groups; we believe that centers of this sort could help in the process of getting people trained so that they can be more effective when they do go abroad.

The other side of that coin is that one of the very great needs, especially in the underdeveloped or developing countries, is indigenous people who are trained in the social sciences, with whom our own people should work when they go abroad. One of the activities of the centers—again, I am not implying that they shouldn't be at universities—would be to help train those indigenous people so that then when they go back they could then work in their own institutions and work closely with these what I call "subcenters" which we would help support—we, the United States—would help support abroad.

In a quite difference type of activity, there should be increased support for the study of the methodology of research in the social sciences. It is analogous to the development of instrumentation in the natural sciences, I suppose. The methodology of using computers in effective ways for the purposes that I spoke of a few minutes ago, would be an important part of this activity.

Now, all of these things we can do within our present authority. We could extend them somewhat, increase our effectiveness somewhat, if our authority were broadened, as I mentioned earlier, and a few examples of that are given on pages 24, 25 and 26 of my prepared statement.

We are very interested in this. The staff of the Foundation, and the management of the Foundation—in the sense of the directorship, and so forth—are very interested in trying to go as far as we can to help in these problems.

I should hasten to say that I don't view this from a jurisdictional standpoint in any sense. I think I am honest in saying that I don't believe in that sort of thing; as I remarked the other day, that isn't why I am here. I think that the role of the Foundation should be to help in every way that it can and to welcome help by other agencies as well.

Then, finally, I come to a position on the bill that you introduced, Senator Harris. First, I would like to say quite frankly that, although I am going to express a serious doubt about it, I recognize fully that it is a matter of opinion and judgment. It is one on which reasonable men can disagree and a difficult thing to prove, I guess, in either direction; I am merely going to state my opinions and those of the staff recognizing that there is considerable to be said for it.

There is no question but that a separate foundation for the social sciences would give the social sciences more visibility. I think that goes without saying. Just the fact that a foundation of that name existed, one dedicated to the social sciences, would certainly have that effect. It might prove to be a center of intellectual stimulus. It would certainly provide another source of general funding and whatever might be the net result in total funding, it would be funded from a different not necessarily better, standpoint than that from which other agencies do their funding.

On the other hand, we feel that there are serious difficulties or potential difficulties of which I believe the strongest, relates to the great need for increasing cohesion in the whole spectrum of disciplines that I have been talking about. I have never believed that there are two sharply divided cultures, as our good British friend, C. P. Snow, expressed it. I don't believe there is or should be any abrasiveness between the various areas of the humanities on the one side, and the sciences on the other, with the social sciences overlapping both. But I do believe that there has not been enough mutuality of interest; there has not been enough common viewpoint. Incidentally, this lack exists within the natural sciences and within the social sciences, as well as between the natural sciences and the social sciences, and the natural sciences and engineering. I believe that there has been too much specialization—not that many individuals must not specialize in order to make real progress—and I think that there has not been enough integration, not enough across-the-board scholarship and interest, and so on.

Starting, of course, a few hundred years ago when the intellectual activities as we know them now began, there really wasn't any distinction. There was a thing known as a natural philosophy which was really all science and it tended to splinter as time went on and there got to be rather narrow specialization, the fact that many scholars were interested only in their own fields. I believe we must pull them back together.

It is for this, among other reasons, that I believe it to be very important that the National Science Foundation be strongly engaged in the social sciences. We welcome, as I said earlier, the National Endowment for the Humanities. It is very fortunate for us that the Endowment is actually in the same building we are, making it easier for us to work together. We have lots in common. We are beginning to have more and more mutual interests. We expect to fund joint projects, and so on.

My principal concern about a separate foundation for the social sciences would be the possible splintering effect that it might have.

Secondly, and related, but not as profound, if the other is profound, is the question of the effectiveness of Government operations themselves and I question whether a separate agency is good from this standpoint. It certainly would have some drawbacks and I guess what I am questioning is whether the advantages would be enough to make up for these drawbacks.

Now, I hasten to add that I am not saying this would be one more agency in the social sciences in the sense of all the agencies that are now engaged in the social sciences, because as I said very early in my

presentation, I believe it is quite proper that agencies that have jobs to do should be engaged in the social sciences and the natural sciences, and not just in reading about them and using them, but being engaged enough to really have comprehensive knowledge of them.

In addition to the older agencies, such as the Defense Department, Atomic Energy, and so on and so on, there are now, of course, the newer ones that were set up with the intent of attacking the problems of our society in concentrated, integrated ways.

I refer to such agencies as the Department of Health, Education, and Welfare, which is not so very new, of course, and the much newer Department of Housing and Urban Development and the Department of Transportation, both of which are to focus on very broad-ranging problems of crucial importance to the country. I believe that they should be very active not only in utilizing but also in helping develop knowledge and understanding, especially in the social sciences, because many of their problems are obviously very closely related to economics, to public attitudes, and so on and so on, as well as to some of the more technological aspects of the problems.

So, I am not in any sense saying that for them not to be engaged and strongly engaged would be right. They should be so engaged.

But I do question whether there should be a number of agencies engaged in development of the underlying knowledge and understanding that not only the mission-oriented Federal agencies, but public bodies, States municipalities, and private organizations need in order to help advance society and overcome some of the difficulties of society. It is in this sense of the underlying development of knowledge that I question the division between too many organizations.

I think it is difficult to know what effect another agency would have on the total financial support of the social sciences. There are a great many people, a great many organizations, involved in determining the final results of budgets and appropriations. It could be—and we have some experience of this in other areas—that the existence of another foundation might result in financial cutbacks within agencies or otherwise, resulting from a feeling that support of the social sciences was up to the new Foundation, and that those cutbacks might largely counteract the specific funds that this Foundation would have.

And I assume from the reading of the bill, Mr. Chairman, and from your introductory speeches on the floor of the Senate, both last year and this, that you are primarily thinking here of a foundation that would play pretty much the role, with variations, of course, that the National Science Foundation has played in its activities, rather than a problem-solving agency. Now, that may be——

Senator HARRIS. That is correct.

Dr. HAWORTH (continuing). An erroneous impression on my part, but I am making my remarks under that assumption.

Senator HARRIS. Actually it would mainly be involved in supporting basic research and only secondarily applied research.

Dr. HAWORTH. I understand.

Senator HARRIS. It would provide an opportunity for mission-oriented agencies, to transfer funds to get some research done for

them although, of course, that would not be its prime responsibility.

Dr. HAWORTH. I understand.

Then there is the question, which is clearly one of the intents of the bill, of having the new agency support research abroad on behalf of the military agencies or perhaps the Department of State and the intelligence agencies and so forth. I clearly can't prove the point, but I am doubtful as to the impact of this. I am thinking now of the transfer of funds. What I would be afraid of would be that this would result in the Foundation that you propose being thought of as in part, at least, a cover agency, that this would tend, not in actuality, but in the eyes of the critics abroad, to "contaminate" the new agency—and I put the word in quotes. I carefully say contaminate it in foreign eyes, in that I would be afraid that people abroad are not really aware of the subtleties of our funding of programs in this country. They are often not aware of the difference even between Federal and private funding. Because in many countries, of course, there isn't much private funding. And I would be afraid that this would result not only in unfriendly foreigners being dubious about the programs that this new Foundation would be carrying on in behalf of the security agencies, DOD and so on, but it might even extend to a dubiousness about the programs that the new Foundation was supporting in its own behalf.

As I say, I can't prove it and I could be wrong, but this is something that I would be afraid of.

So, in summary, Mr. Chairman, I think that everyone concerned in this area has the same objectives. I think we all recognize that more intensive, more broadly gaged, more adeptly done research in the social sciences is very strongly called for by all hands, and I repeat my first remark, that I think you and your committee are doing a great service in calling this to public attention. The only question is how. Here I come out with a different answer than you have come out with, but as I say, it is a matter of opinion, and judgment, and I am sure that the hearings that you are having now and others that you plan to have will help to shed a great deal of light on this question and that in the end the right thing will be done.

Thank you very much, Mr. Chairman.

Senator HARRIS. Thank you, Dr. Haworth. Let me say we appreciate very much and we are honored by the importance you have shown these hearings by your presence here, the time you have spent here today, the associates you have brought with you, and the very thoughtful statement into which obviously a good deal of thought and study and time have gone.

Dr. HAWORTH. Thank you.

Senator HARRIS. I appreciate the statement on page 28 of your prepared remarks where you say in the second paragraph:

> On the one hand there is no doubt that a separate foundation for the social sciences would offer another institutional "home" for social science research. It might provide a locus of intellectual stimulus in Washington. It would certainly provide another source of Federal funding for social science research. And it might possibly offer certain intangible benefits by giving it independent administrative status on a level equal with the arts, the humanities and the natural sciences.

I certainly agree with what you have said there, and I want to discuss what you say on the other hand in just a moment.

You also say on the bottom of page 26, and top of page 27, that funds for the social sciences are modest, that is, Federal funds are modest in relation to (1) the need, and (2) funds in other fields, and I certainly would agree.

At the top of page 28 you say that you would be less than candid if you didn't express grave reservations about the need for a separate social science foundation. Let me say that you would not only be less than candid, you would be very surprising to me if you hadn't offered some grave reservations.

The National Arts and Humanities Foundation was first seriously proposed in the Congress, I think back in about 1956 and eventually legislation was passed in 1965. Do you know whether the National Science Foundation was asked to testify or did testify on whether or not that foundation should be created?

Dr. HAWORTH. I can't speak to that before 1963, but so far as I know, we did not testify although I did with letters to Senator Pell and to Congressman Powell endorsing particularly the need for Federal support for the arts and humanities.

Senator HARRIS. Don't you think that the same arguments you have made here against the National Social Science Foundation could just as easily have been made by you and the National Science Foundation against the National Foundation of the Arts and Humanities?

Dr. HAWORTH. No, Mr. Chairman, because the National Foundation for the Arts and Humanities represents an extension of the Government's coverage, if I may use that word. The National Science Foundation was not, of course, authorized to, nor had it expressed, as far as I know, any inclination to extend itself over into the arts and humanities whereas I believe the present situation is different in that, with certain detailed reservations, not having to do with subject matter but with the question of applied research, I believe that the whole spectrum is now covered and I make that distinction.

Senator HARRIS. I want to come back to that in a minute. But Secretary Wirtz, the Secretary of Labor, testified this morning as follows:

> I should like to express the view that present social science research falls so far short of its potential and of the imperative necessity for its infinitely larger development that there scarcely are forms adequate for expression or comprehension.

I take it from your testimony that you would generally agree that there is greater support needed and greater research and manpower needed in the social science field.

Dr. HAWORTH. Yes, I certainly would

Senator HARRIS. Dr. Levine of the Office of Economic Opportunity testified this morning that—

> The thing which strikes me most sharply is the lack of availability of first-class social science research manpower. The Great Society is not going to rise spontaneously from a social legislative fiat. An adequate supply of intellectual manpower to clearly define problems and develop effective methods for accomplishing the tremendous social tasks is a key component in the realization of these goals.

Dr. HAWORTH. Yes, and I think implicit in what I said, and I mentioned perhaps a time or two, is that increased support of research in the universities, of course, will help to increase the manpower, not only to feed back into the universities, but to help meet the need for social scientists in all the sectors of society. I think that is a very important component of it. In addition——

Senator HARRIS. Mr. Alexander of the U.S. Arms Control and Disarmament Agency, testified this morning on the point which I think is covered in your statement on page 28, perhaps. He said in his statement—

We would expect that increased support for social science research would have a helpful influence in the United States and elsewhere.

And that is a point you have already made, I think.

He goes on to say—

Perhaps the establishment of a National Social Science Foundation would serve to increase such support. And enlargement of a field of knowledge by funding of increased research, particularly basic research in due course is felt both in improving the quality and quantity of research done in the field—

And this is the thing I am going to ask you about—

and in enhancing the prestige that goes with working in it.

You alluded, in that statement, I read, of yours a little while ago, that possibly there might be some advantage in visibility in the social science foundation.

Dr. HAWORTH. There is. This means the same thing.

Senator HARRIS. And you do think that there might be some argument for enhancing prestige as a result of the separate entity for the social sciences?

Dr. HAWORTH. Well, yes, but I am not sure. That is a statement on the positive side that we can't prove either.

Senator HARRIS. Now, you say that your first objection, which you raise on page 29, to the Social Science Foundation is, as I understand it, the possibility that interdisciplinary efforts might be hindered by a separate social science foundation. Yet, on page 25 of your statement you say:

"In addition, the National Endowment for the Humanities and the Foundation"—meaning the Science Foundation—"have agreed to establish cooperative arrangements for the joint support of projects straddling these spheres of responsibilities for the two agencies."

Now, why wouldn't you be able to do the same thing with the National Social Science Foundation that you say on page 25 of your statement you are now able to do with the National Foundation for the Arts and Humanities.

Dr. HAWORTH. Can I make a statement off the record, Mr. Chairman?

Senator Harris.

(Discussion off the record.)

Senator Harris. Back on the record. Nevertheless, you say you are able to cooperate on these subjects which are within both your jurisdictions, that is, the National Foundation and the National Arts and Humanities Foundation. Couldn't you at least cooperate as well on subjects which are on the borderline between a National Science

Foundation and a National Social Science Foundation? That wouldn't be an insurmountable problem, would it?

Dr. HAWORTH. Well, certainly there could be cooperation, Mr. Chairman. There is cooperation between ourselves and many agencies. I feel that there is again a difference in the following sense: it is not simply a sense of cooperating but it is also a question of having an integrated point of view, of having people in daily contact with each other who cover this range of points of view. Cooperation between agencies doesn't adequately cover that, and I believe that the social sciences are, in fact, I know that the social sciences are an integral part of science. The humanities overlap science but they are not the same integral part of science that social science is. And I think from my statement off the record you can infer what else I would say if I went off the record again.

Senator HARRIS. It seems to me that is a rather new view and it wouldn't be any more difficult, it seems to me, to apply the same kind of reasoning to the new agency.

Let us go on to your second point. Your second point was "proliferation." You say there isn't anything now that can't be done without—I believe you say on page 29—without creating any new authority or capability that is not included in those of the National Science Foundation and the National Endowment of Humanities. Why is it, then, that you need legislation to give you additional authority to go into the social sciences?

Dr. HAWORTH. Mr. Chairman, I don't find that, but——

Senator HARRIS. This is at the bottom of page 29 of your prepared statement. You say——

Dr. HAWORTH. Oh, yes.

Senator HARRIS (reading):

> Second, from the standpoint of efficient Government operations, another foundation with specialized purposes and functions would be a step in the direction of proliferating and fragmenting Government support of the fundamental research effort without creating any new authority or capability that is not included in those of the National Science Foundation.

Dr. HAWORTH. I believe that was supposed to say——

Senator HARRIS. Wouldn't it, in fact, create a new authority that you say is to be created under the bill which passed the House last year?

Dr. HAWORTH. I'm sorry. Mr. Chairman, you see, that sentence refers to fundamental research or basic research programs. Perhaps I should have used the word "basic."

Senator HARRIS. Well, first let me say, with the National Science Foundation as you said earlier, I believe, it was never contemplated that you would be involved in the social sciences and they were not specifically mentioned in the enabling legislation for the National Science Foundation, is that right?

Dr. HAWORTH. Well, it is not as simple as that. There was a long discussion in the Congress on this question and many of the Members there were doubtful, as I understand the legislative history. There were two doubts that were predominant. One was the question, in a sense, of how far it would be appropriate for the Foundation to go in this area, and the other, quite frankly, was a very strong component

of worry at that time—by many people, not all—with respect to the Government getting into the social sciences for fear, I suppose, of political repercussions and of the Government trying to control the people and things of that sort.

Senator HARRIS. I want to come back to that point because that is a very important one.

Dr. HAWORTH. And for that reason, as I understand it—of course, this was long before my time—as I understand it, the philosophy of the decision was that in the section of the act that authorizes and directs the National Science Foundation to do research in this and that science, it was finally decided to use the term other "sciences" and then the legislative history expressed the intent of the Congress that the Foundation should develop its programs in the social sciences in accordance with experience, and so forth, rather than that Congress should direct it just willy-nilly to go into the social sciences.

Now, that was, of course, 17 years ago—indeed, much of this legislative history went clear back to 1946. I believe the first bill was introduced—or at least the discussions started in 1946. In that 17, or more years there has, of course, been a tremendous change in public attitudes, in congressional attitudes, if I may say so, just as there has been a tremendous change, for example, in public and in Government attitudes toward the role of Government in education.

Back then people would have been scared to death of the Federal Government being involved in supporting education down to the local level, to the extent that it is now. And this change has taken place gradually.

If I might say so, I believe that the National Science Foundation has helped bring about both of these changes in attitudes. I think for example—and this I can take no personal credit for—I think that the fact that the National Science Foundation embarked way back in the early and middle fifties in the support of science education in order to promote the research capabilities of the country, in the name of science, if you will, helped very much to allay the fears that would have been expressed 20 years ago against the Government giving support to education.

Senator HARRIS. I think you are surely to be commended for what you have done in the social sciences and I do so commend you, and furthermore, for your recognition that we do need more effort in this field. I think as a result of these committee hearings whatever comes out, so far as organizational results, will certainly include more funds for and attention to the social sciences. We have already caused considerable discussion among the social science community itself. But a good portion of what you had to say about a National Social Science Foundation, and its potential efforts in the social sciences is prospective and it seemed to me, as I listened and read your testimony, tied to the legislative authority which is involved in the Daddario bill. That is what I am asking you.

Dr. HAWORTH. Well, a small part of it is but we can use more funds, and so forth, going a very long way with our present authority. The other would be optional, I would say.

Senator HARRIS. Wouldn't you say that Congress has arrived at the place where it must decide what to do about the social sciences and it

has to either give you more authority or set up another agency. Is that a fair statement of what you are saying?

Dr. HAWORTH. Well, I think something needs to be done.

Senator HARRIS. All right. Don't you think it is well that we not just look at one alternative—that is, putting more authority for the social sciences under the National Science Foundation, which really makes social science support a rather small part of its total budget—but also, at the same time, before we make any final decisions we ought to look at another alternative, which is to establish a totally separate agency?

Dr. HAWORTH. I believe it very much. I wouldn't be an experimental scientist if I didn't believe in looking at all the alternatives, Mr. Chairman.

Senator HARRIS. Now, No. 3, on page 30 of your testimony you say, if I understand it properly—let me just read the portion of what you said:

> There is some danger that many of the more basic research programs of mission-oriented agencies and the National Science Foundation, would be viewed as redundant with consequent cutbacks or limitations in funding.

I was just looking through your exhibit E which has been made a part of the record which lists the Division of Social Sciences grants from July 1965 through June 1966.

Dr. HAWORTH. Yes.

Senator HARRIS. I note in anthropology, I believe that those grants would total $3,911,130, part of which—a rather large part of which is in archeology. Do you have any breakdown as to what the total under the title of anthropology would be in archeology?

Dr. HAWORTH. I don't know whether——

Dr. HINES. Not exactly, sir. It is near half, I would think. We could get it as exact——

Senator HARRIS. This is around a $4 million total, so somewhere around $2 million of that would be in archeology.

Do you anticipate that that will increase over the fiscal year and also in 1968?

Dr. HINES. I think it will, sir; yes.

Senator HARRIS. I notice also in the back here under the title of "History and Philosophy of Sciences," I believe those grants total $1,013,920. This is our calculation. Do you anticipate that that will be up from that amount in 1967 and 1968?

Dr. HINES. It will sir, but we expect not very much in that case. That is a rather small field.

Senator HARRIS. It won't go down any, I don't suppose?

Dr. HINES. We hope it won't.

Senator HARRIS. I will tell you what my point is.

Let me first say I notice in your grants list that I was reading a while ago that you also have some grants in linguistics and communications. That is true, isn't it?

Dr. HINES. Yes, sir.

Senator HARRIS. Do you anticipate——

Dr. HINES. They are listed under a variety of subjects. Under anthropology, for example.

Senator HARRIS. There is also—there are some facilities and hardware tied in with computers, and so forth, having to do with communications, I believe.

Dr. HINES. That is right.

Senator HARRIS. You don't anticipate that they will go down in 1967 or 1968, do you?

Dr. HINES. No.

Senator HARRIS. Here is my point then; here you say in the third objection, Dr. Haworth:

> There is some danger that many of the more basic research programs of mission-oriented agencies and the National Science Foundation would be viewed as redundant with consequent cutbacks or limitations in funding.

I want to refer you to Public Law 89–209, passed on September 29, 1965, which is the bill creating the National Foundation on the Arts and Humanities, and in their definitions, they list language, both modern and classic, linguistics, history, archeology, and so forth.

Now, there that hasn't proven to be true, that creation of a national arts and humanities foundation has cut down your efforts. As a matter of fact, they seem to be going up in those very fields, despite the fact that there is already a separate foundation.

Dr. HAWORTH. Well, I think Dr. Hines and Mrs. Rubinstein should come into this more, but our support of history, of course, is confined to the history of science.

Dr. HINES. Pretty much.

Senator HARRIS. That is a rather good point, too, then, isn't it?

Dr. HAWORTH. In other words, it is predominantly our interest in science rather than——

Senator HARRIS. That was a value judgment to include that under the social sciences, rather than under science, natural and physical science, wasn't it?

Dr. HAWORTH. Yes; and this is a value judgment in part substantive, in part administrative.

Senator HARRIS. But the fact remains that your efforts in archeology, which is clearly also within the jurisdiction of the National Arts and Humanities Foundation, and is listed among their definitions—the fact that you are increasing support in that field and not diminishing it seems to be inconsistent with one of your objections to the National Social Science Foundation, isn't that so?

Dr. HAWORTH. Yes. Of course, in any one of these fields there hasn't been yet much financial impact of the endowment. That is, its total budget is so far small and——

Senator HARRIS. So it would probably be in relation to the degree that the Congress funded the new Foundation. Is that what you are saying?

Dr. HAWORTH. Yes. It would depend—and also on the attitudes in the Congress and the Bureau of the Budget, and so on, and in the agencies which primarily are users of science, the mission-oriented agencies.

Senator HARRIS. What is the total budget of the National Science Foundation?

Dr. HAWORTH. Its total appropriation this year was $480 million.

Senator HARRIS. Now, excluding the interdisciplinary fields, grants

in the interdisciplinary fields, and excluding the history of science, how much of that budget would you say is being expended in the social and behavioral science field?

Dr. HAWORTH. About—around 21 million.

Dr. HINES. That is for research.

Dr. HAWORTH. Well, I was going to go ahead and explain that the $480 million, of course, is nowhere nearly all for support research. As a matter of fact, just about half supports research in the sense of supporting research projects and otherwise specifically supporting research. About a quarter of it in support of science education. There is also the support of, as I mentioned, facilities. I was not including that.

Senator HARRIS. Your total budget——

Dr. HAWORTH. There are some national centers.

Senator HARRIS. I am trying to understand it. Your total budget is somewhere around $500 million.

Dr. HAWORTH. Yes, of which about half is for research.

Senator HARRIS. OK. But, take out the distinction about research. Just talk about your total budget, and take out, then, the facilities and the research grants and other grants that have to do with interdisciplinary fields, that is, fields that would involve both the natural and social sciences, and take out the history of science which we have had some discussion about just now, how much is being spent, and I am not talking about research, I am just talking about your total budget of $500 million, how much would you say is being spent on the social and behavioral sciences out of your budget?

Dr. HAWORTH. I am afraid any answer I give would be an approximation. I would like to submit a better answer for the record.

Senator HARRIS. All right. Without objection, we will make that a part of the record.

Dr. HAWORTH. It would be of the order of $40 million or $50 million, I suppose.

Senator HARRIS. I think that is a question we need to know. You have given us some very detailed figures here and now we need to know how much of your budget is going to the social and behavioral sciences alone, and so without objection when we receive that particular answer from you, we will put it in the record. But your answer seems to be that it is around one-tenth of your total budget.

Dr. HAWORTH. Yes, or a bit less, Mr. Chairman. But it may be a different percentage when you exclude the things you excluded.

(The following memorandum was subsequently received for the record:)

NATIONAL SCIENCE FOUNDATION MEMORANDUM FOR THE RECORD

About $40 million of the Foundation's budget goes to the support of the social and behavioral sciences. In addition to research support this figure includes elements of our educational, institutional, science information and facilities programs devoted to to the social and behavioral sciences, all of which provide support wholly or in part for the social and behavioral sciences.

If this figure appears somewhat low in relation to the total budget of the Foundation, it must be remembered that research in the natural and physical sciences frequently requires extremely costly instrumentation, equipment and facilities. In addition, the Foundation's actual budget for education and research is less than the $480 million appropriated after administrative expenses are deducted.

The proportion of the Foundation's budget devoted to the social and behavioral sciences should also be considered in relation to the size of the social science community. Of the 243,000 scientists listed in our 1966 National Register about 43,000—roughly 17%—are social and behavioral scientists. Thus, although the ratio of the Foundation's support for social and behavioral sciences in relation to its total budget for research and education is less than the proportion of social and behavioral scientists to scientists as a whole, the factors listed above go far toward explaining the difference.

Senator HARRIS. I understand that about excluding the things which I excluded, which I presume you are going to do anyway, because they were very closely allied to what you already are doing.

Dr. HAWORTH. There are components of the social sciences in those things, too, you see.

Senator HARRIS. I understand that, but I understand also those are the kinds of things you would continue to be interested in even with the establishment of a social science foundation.

Your fourth objection seemed to be that the National Social Science Foundation wouldn't be able to do much in the foreign area field and, in the first place, I call your attention to the fact that Mr. Tom Hughes, of the State Department, who is Director of the Bureau of Intelligence and Research, will be testifying here tomorrow and he will say, among other things:

On the other hand, a new foundation would give the social sciences a separate identity within the Government and a status more akin to that of the natural sciences. Where substantive interests will merge and techniques for conducting research in the social and natural sciences intersect, cooperative arrangements can be developed in the Federal Government as they are even now in the private sector.

In addition, a separate foundation would be more responsive to social science research which incorporates "normative," "humanistic," or "impressionistic" elements than could a foundation strongly oriented toward the more precise sciences. Perhaps the time has come for the social sciences to be willing and confident enough to run the risk of being appraised in terms of their own contribution to knowledge and to society.

I believe you said that you now do some things at the request of the State Department. You said that in your opening remarks.

Dr. HAWORTH. No, I brought—well, in a sense——

Senator HARRIS. I wrote that down.

Dr. HAWORTH. In a sense, we do, but my reference there was to a provision of the Daddario bill which would have an explicit authorization to that effect. There is in our present act, a reference to the fact that we are authorized to do things that go beyond our other authority at the request of the Secretary of Defense, and this would be extended to the Secretary of State.

Could I say, Mr. Chairman, that I——

Senator HARRIS. Let me interrupt you to say again that I am very sorry I will have to leave to vote. If you won't mind waiting, I will run over there and vote and come right back. We will recess for about 10 minutes.

(Whereupon, a short recess was taken.)

Senator HARRIS. The subcommittee will be resumed. I believe my announcement regarding the rollcall interrupted you.

Dr. HAWORTH. Yes. I was going to say one thing with respect to your comment on my fourth point, page 30, and I don't recall exactly what you said, but the way I understood it was that you interpreted

my written statement as having said that I don't believe a new foundation could do much in the area of foreign research. I didn't mean that. If this says that to you, then it is ineptly worded.

What I was trying to say was that I do not believe that it could do things that can't now be done by the various combinations of agencies.

Senator HARRIS. Now, do you intend to go into some foreign-area social research if the Daddario bill was passed? I am talking about the National Science Foundation.

Dr. HAWORTH. Well, we do now. On the order of $3 million of our social science support in fiscal year 1966 could be called foreign area research. That does not mean all of it is conducted abroad.

Senator HARRIS. Here is what I am trying to get at, and we are having difficulty doing it. Is there any need for the Daddario bill, in your judgment?

Dr. HAWORTH. Yes; we support it.

Senator HARRIS. Does it give you authority you don't have now?

Dr. HAWORTH. Yes.

Senator HARRIS. What?

Dr. HAWORTH. It would give us authority, as I have said, to do applied research. Now, we can do applied research in a few specific areas—weather modification, for example. It would give us broad authority to do applied research in all fields in academic institutions and nonprofit institutions, and it is primarily in the universities and primarily in engineering and the social sciences that I think that would be important.

Now, there are other aspects of the bill that are good, too, but as it relates to our discussion today that is the primary thing, plus the authorization to act in response to the Secretary of State, which would enable us to do things where we can extend a helping hand instead of helping ourselves. It would extend our authority in that sense.

Senator HARRIS. So we are, as we said earlier, at some crossroads in regard to the social sciences and what organization will be responsible for supporting them, is that true?

Dr. HAWORTH. Yes; although I don't think it is quite a question of a right-angle turn in the sense that a crossroads implies, but I think that it could be a definite asset for our authority to be broadened and this would be true, Mr. Chairman, in other areas, as well as social science. But I think even in the social sciences, even though there were a new foundation, it would still be well for us to have the broadened authority. I don't think these are mutually exclusive in any sense.

Senator HARRIS. Some new action by Congress with regard to the organizational structure, giving attention to the social sciences is needed. Is that a correct statement of what you are saying?

Dr. HAWORTH. Well, I think either a new organizational structure or increased authority——

Senator HARRIS. That is what I mean.

Dr. HAWORTH (continuing). Is what is needed.

Senator HARRIS. Some action by Congress in regard to what organization will have what power in regard to the social sciences is needed.

Dr. HAWORTH. Yes. But I should amplify that and say that I would apply that statement also as far as the National Science Foundation is concerned to the other sciences, as well as to the social sciences.

Senator HARRIS. Other than just funds?

Dr. HAWORTH. No. I mean the increased authority would be helpful in other sciences, as well as in the social sciences.

Senator HARRIS. Have you asked the Congress for additional authority in regard to the natural and physical sciences, aside from funds?

Dr. HAWORTH. The Daddario bill would give us authority across the board in applied sciences.

Senator HARRIS. I see. It applies to both the natural and social sciences?

Dr. HAWORTH. Yes.

Senator HARRIS. All right.

Now, back to your objection No. 4. Here we have a situation where foreign area research in the social and behavioral sciences is primarily supported by military agencies. Did you know that, or, rather would you agree with that statement?

Dr. HAWORTH. Well, that certainly is——

Sneator HARRIS. That was the findinig of our committee last year. Support primarily comes from the Defense Department. Is that any surprise to you?

Dr. HAWORTH. No.

Senator HARRIS. You know that?

Dr. HAWORTH. Yes.

Senator HARRIS. Do you know about the Camelot operation in Chile?

Dr. HAWORTH. Yes.

Senator HARRIS. And about Project Simpatico, as it was called, in Colombia about which I made a speech on the floor of the Senate.

Dr. HAWORTH. Yes.

Senator HARRIS. And about which we held considerable hearings last year.

Now, it seems to me—this is my own personal judgment—but I traveled throughout Latin America last year and the year before, and time after time I ran into the feeling, especially in the intellectual communities of those countries I visited, that the United States has a very militaristic image. I believe this results, in part from our history in connection with Latin America and in part because of things like Operation Camelot which was widely reported in the press. I heard the statement repeated very often among the intellectual communities of these Latin American countries that our foreign policy is very much influenced, if not made by, military and intelligence agencies of our Government. In my judgement this is not true. But that feeling nevertheless exists in rather important circles. That is, among the thinking people.

Now, as a practical matter, don't you think that the foreign policy goals of the U.S. Government would be much better furthered by the funding and administration of academic foreign area research in the social and behavioral sciences by a civilian agency, rather than by a military agency?

Dr. HAWORTH. Well, I am not really very qualified to comment in any detail on this.

Senator HARRIS. If you are not qualified to comment on that, doesn't that take away from your objection No. 4?

Dr. HAWORTH. I am talking about some of the details I'd like to give in answer to your question, Mr. Chairman. I think that there should be much more foreign area research conducted by civilian agencies. I have no question about that.

Senator HARRIS. Say that again. I'm sorry, I didn't understand.

Dr. HAWORTH. I say I think there should be much more foreign area research conducted or supported by civilian agencies. What I don't know is the extent to which there are needs for what have been called the military agencies to do so also. I don't know to what extent that need exists, and my point 4 is that to the extent that that exists, I do not believe that it can be done for them by another agency.

Senator HARRIS. That is a separate question we want to get into. Now, still on this same point, we are talking about unclassified research here because under the bill which this subcommittee now is considering, classified research could not be funded by or through the National Social Science Foundation.

Now, to the degree that we are talking about unclassified research, let us not talk about the source of funds right now, but let us talk about what research might be done and who would administer the research grants. Doesn't it seem preferable to you that social and behavorial science research of an unclassified nature, totally public—that is, the research itself, the methods of the research, and the results of the research—that such research could be done in foreign countries with support by a civilian agency, rather than a military agency?

Dr. HAWORTH. Yes.

Senator HARRIS. Good, now, if we could pick up that research money from the Defense Department and transfer it to the National Social Science Foundation, that would be far preferable, in my judgment, and I would hope that eventually would come about—what we are talking about in this bill is a halfway house, not necessarily the ideal result, but one where such research would come under the aegis of the Social Science Foundation using the appeal to the Congress for such research as now exists in the Defense Department.

Dr. HAWORTH. Yes, and there is where my question comes in, Mr. Chairman.

Senator HARRIS. Your question is as you have stated here, that is, wouldn't it still be contaminated? The answer I would think is "Yes," but to a much lesser degree than if it were being done by the Department of the Army, directly.

Dr. HAWORTH. Well, that is very likely true and—true that it would be less. But what I would be concerned with beyond that is that if a new foundation or the National Science Foundation, either, did such work through transfers of funds, the "contamination"—if I may use that word—the contamination in the eyes of some would extend to all of the work supported by the Agency. Again I say just as you said you believe that the view in Latin America about how our policy is effected is wrong, but it exists. And because of it, I would fear that not only would work done with the transferred funds, be viewed with suspicion, but that the work that it supported with their own funds would also be viewed with suspicion. That is the thesis of my point 4. It is as simple as that.

Senator HARRIS. But don't you recognize that it would be better than what we do now?

Dr. HAWORTH. That I don't know. It certainly wouldn't be worse. If anything, it would be better. But I agree with you thoroughly, that it would be much better if the funds were appropriated in the first place through the civilian agency.

Senator HARRIS. I agree, and that is the result which we hope for.

Now, take this kind of situation: The people in the Defense Department have said to me, "We are getting ready to ship some people to Timbuktu." I used that because that is the example they used to me. We don't want to send people into that situation cold. We want them to know something about the local mores and customs, and so forth. We haven't got time to wait around until somebody spontaneously decides to write a thesis about the mores and customs in Timbuktu, so we let a contract ourselves. If we had some contracting agency that could do that, we would really approve it. We are talking about something not the least bit connected with the military intelligence classification problem.

Doesn't that seem to be a rather uncontaminated area that the National Social Science Foundation might be able to handle, or the National Science Foundation, for that matter?

Dr. HAWORTH. Well, it is a matter of psychology. As to what the impact would be, I don't know. But my feeling is—and again I can't prove it—my feeling is that as soon as an Agency of that sort started doing this on any sizable scale, then it would be viewed with suspicion, and especially since, as I say, in other countries they don't really understand our funding methods, our interrelationships and so forth. I have been told that even scientists who are supported by the Ford Foundation are now suffering because of the attitudes toward them in other countries because of Camelot, for example.

Senator HARRIS. And that is why we must recognize this problem, and face up to it and say, even if we can't get the optimum, we had better get something better than what we now have. For example, I was given, on a confidential basis because the people didn't want their university to suffer, an exchange of letters between one of the most prestigious names in the field of political science in the United States representing one of the most prestigious universities in the United States and a foreign university which happened to be in a Latin American country where the American social scientists were invited out of the country. The Latin Americans said, "We would just as soon not have you down here doing any more social science research because we are convinced that your Government sponsors research in our country for the purpose of finding out how we can be better manipulated by your Government. And that it seems to me, is a very concrete example of what we are up against.

Dr. HAWORTH. Might I ask, Mr. Chairman, if this was military sponsored research that he was doing?

Senator HARRIS. In this instance it was not, but it is as a result of what we are talking about.

Dr. HAWORTH. Yes.

Senator HARRIS. It is as a result directly of what we are talking about and that is why it seems to me we have to make some changes

because we are closing up our sources in these countries for social science research.

Dr. HAWORTH. What I am afraid of, Mr. Chairman, is that what you are calling a halfway measure might be a one-tenth way measure or one-twentieth measure.

Senator HARRIS. What do you suggest is a full-way measure?

Dr. HAWORTH. I think there should be more research of this sort funded through direct appropriations to civilian agencies.

Senator HARRIS. So do I, so do I, and I think we will come to that, but we may have to go somewhere in between for a while.

Here is what really worries me most of all about your testimony. This is a country of about 198 million people. By the end of this year I think our population is going to be 200 million people. Many people think that by the year 2000, which is just 33 years away, much less time than you and I have lived, it is——

Dr. HAWORTH. About half in my case.

Senator HARRIS (continuing). It is going to be 340 million, and some population experts will say that will mean continuous cities up and down the east coast and continuous cities up and down the west coast and urban population on the west coast alone, will be 15 times the present population of Los Angeles, which is a sprawling metropolis with already very, very difficult questions to answer. We look at a society where more than half of our population is now under 25 years of age, people who probably are better prepared to cope with change than anybody else, and it is a good thing, because that is what they are going to have to live with, and when we think about these facts and others, rural to urban shifts, problems of urbanization, we discover very quickly that the central concept of our age is change.

Now, it seems to me it is true what Margaret Mead has said, that we have to learn to solve problems that nobody has thought of yet, and to do so we are going to have to be rather innovative and to do so we are going to have to be rather controversial, and that gets me back to something you said earlier.

We had testimony this morning of Secretary Wirtz which I think bears repeating. After delineating some of these questions that confront us these days, which deserve new, innovative, perhaps controversial treatment, he said:

> The question of whether there is a reason for a National Foundation for the Social Sciences seems to me to depend in any event on whether it is time to expect inquiry along lines at least as broad as these. If it is, such inquiry cannot be expected to come from the established departments or agencies of the Government. If more conventional research is contemplated, the present structure probably permits it.

Now, that is the question we are involved with here. The New York Times late last year had an editorial in opposition to the creation of a National Social Science Foundation. I never answered it because I never could figure out what it said. But here is what it generally said. It pointed out that a mathematics professor—you may have seen the editorial—who went to the Soviet Union with support from the National Science Foundation had, while there, made some

controversial comments on U.S. foreign policy, and the Times used that as a example. Without objection we will place in the record the New York Times editorial of October 18, 1966.

(The material referred to follows:)

SOCIAL SCIENCE FOUNDATION?

Prof. Stephen Smale of the University of California is both a brilliant mathematician and a vigorous opponent of United States policy in Vietnam. Last summer he used a grant from the National Science Foundation to attend a mathematical congress in Moscow. There he received much publicity for his attacks both on the American military action in Vietnam and on the Soviet intervention in Hungary.

As reported in a recent issue of Science, Dr. Smale's remarks on Vietnam resulted in heavy pressure on the National Science Foundation from Congressmen who were incensed that his trip to Moscow was financed by Government funds. The N.S.F. defended Dr. Smale's right to his views, but its officials fear—according to the magazine—that Congress will punish it when the next N.S.F. budget is considered.

The incident seems worthy of consideration by the Senators now advocating creation of a National Foundation for the Social Sciences to provide Federal money for that area of research. Could social scientists financed by the proposed foundation really work in freedom from fear of Congressional reaction to unpopular conclusions they might reach?

Suppose a foundation-financed study of United States-Cuban relations concluded that Castro was right. Suppose economists enjoying this largesse concluded that socialist economic planning was superior to free enterprise. Can anyone doubt that a Congressional explosion would follow?

Perhaps these fears are empty fantasies. Perhaps those charged with disbursing Federal grants for social science research would take care that the money would go only to "safe" and sober men who were sure not to come up with unsettling conclusions or heterodox ideas. But, then, would that be the kind of research worth supporting in the first place?

Senator HARRIS. Now, they said that the trouble he caused was a good reason—I think that sums it up very well—for not having a Social Science Foundation.

It seems to me it is a good reason for having a Social Science Foundation.

You have pointed up, that you haven't ventured into the social science field because back in the McCarthy days these things were rather suspect—the business of social and behavioral science research and inquiries, what makes people do what they do and act as they do and interact as they do with each other, and so forth.

Isn't there always going to be the fear on the part of those who have most at stake in the National Science Foundation, nine-tenths at stake, and some of them have expressed this to me, that if you get off into the dynamics of change, which is what this world had better commence to think about, change as it affects political and social institutions, the change of economics, how is it that we help to develop an underdeveloped nation? Revolution? Evolution?

Change, the dynamics of change as it relates to psychology and the effect it has on people and their thinking—the dynamics of change—if we are going to do some innovative thinking as Willard Wirtz says we must, and I agree we must, isn't that going to rather shake up some of the people who have nine-tenths at stake in the National Science Foundation and thereby perhaps engender some con-

troversy by those who now receive about nine-tenths of your budget? Why couldn't you avoid all that controversy if it was over in the National Social Science Foundation?

Dr. HAWORTH. Well, that is a point that has been made certainly. It is a point—well, in the first place, it doesn't scare me, I can tell you that.

And in the second place, I will make two additional points. One, the National Science Foundation has never been afraid as far as I know anything about it, of innovation or controversy as witness the fact that it did enter very early into the business of supporting education which was a controversial thing, too. It was in a different kind of way to be sure, but nevertheless fear of controlled thought processes and things of that sort were there.

And it also seems to me, looking at it not from the standpoint of the National Science Foundation or its parochial interests if it has any, but looking at it from the standpoint of the public welfare—and I think that is what you and I and everybody else are here for—it could actually work the other way, that the existence of this other nine-tenths could make it easier for an agency to engage in some controversy than one which ——

Senator HARRIS. But don't you agree ——

Dr. HAWORTH (continuing). Than one that——

Senator HARRIS. Don't you think—we will say we will hide the social science people under the science umbrella, and I will say to you——

Dr. HAWORTH. No.

Senator HARRIS (continuing). That there are social scientists who would love to continue that but I agree with what Tom Hughes is going to say tomorrow and I quote:

> Perhaps the time has come for the social sciences to be willing and confident enough to run the risk in being appraised in terms of their own contribution to knowledge and to society.

Dr. HAWORTH. Well, I am not one that believes that support of this by any agency, the National Science Foundation or National Social Science Foundation, either one, that support these things, is necessarily bad. Sure, it may arouse some controversy. But all I am saying is if there are controversial elements it might be harder for an agency that was engaged solely in social sciences than for one that is engaged in a lot of things. I think you can argue this both ways.

Senator HARRIS. I do, too. But it seems to me you are presenting reasons for social scientists to exist and I think there is great reason for them to exist. Then, so long as we pussyfoot around about telling the people there is reason for them to exist, why, the less likely it is that the people will ever know there is reason for them to exist.

Dr. HAWORTH. I would not subscribe, or at least I didn't mean in any sense to say, that the social sciences would hide under the others or anything of that sort. I think they ought to be brought out much more and the whole thing ought to be done on a much grander scale than it is. We are in perfect agreement on that.

Senator HARRIS. I agree. I think we had better be very innovative and controversial in our social science research and I think the two words will kind of go together because it seems to me again we have

made a mess of the development of science and technology by not anticipating and at the same time thinking about the effects of it, the automobile, for example. Now we have the air in most of our big cities to the point where it is dangerous to breathe. Though you and I smoke cigarettes, the Surgeon-General told us not to. But we make a conscious—and the gentleman on your right coughs, let the record note—but you and I make a conscious decision to do that. Little children don't make a conscious decision to breathe the air of Baltimore and Washington and New York.

Now, the same is true about the problem of detergents and what happened first and what may happen now after we have attempted to correct what is going into our water.

It seems to me that we had better be a little bit controversial about dealing with some of these modern problems and that, it seems to me, is the best argument I know for setting up a National Social Science Foundation. This bill carries an authorization, I think, of $20 million in comparison to your $500 million, to commence to get at these things perhaps in a rather basic ways.

Here is another statement Tom Hughes will make. I want to read it because it gets to another point.

> The more we can reduce,

He says—

> detailed Government direction in the pursuit of fundamental research in the social sciences, the more easily we shall maintain a healthy balance in Government-academic relations.

He is talking about a broader point but it seems to me than taking the social sciences out from under the umbrella of the $500 million budget where they are about a tenth of that, and putting them in a social science foundation, the better chance it is that they will have a free hand to have a go at some of these innovative ideas.

Dr. HAWORTH. I might make a general remark in that connection, Mr. Chairman. I believe that a larger fraction of the support of the Federal Government to all sorts of things in the academic institutions should be on a broader base rather than such a detailed base as it is now.

Senator HARRIS. You say in the last sentence of your statement:

> We need to integrate—

and that word integrate interests me—

> We need to integrate the social sciences with the natural sciences, not separate them.

It seems to me, as long as we are integrated on a 90–10 basis, I would rather have separate but equal facilities.

Any other statements? You or your associates?

Dr. HAWORTH. I don't believe I have any unless someone else does.

Senator HARRIS. Let me say we appreciate your presence here and your statement, which is very thoughtful and I know that a good deal of time has gone into it. We want to have after this series of hearings is over—we unfortunately are more or less in an adversary situation here and I am made to be more of an advocate with final conclusions than I really am. In order to get at these facts, we hope to have some

kind of forum where we can discuss perhaps several ways that the things might be accomplished. I'd rather sit around a table, and I hope that you might be able, you yourself, or perhaps others within the National Science Foundation, might be able to respond to an invitation which we will surely extend to you.

Dr. HAWORTH. We will be very happy to, Mr. Chairman.

Might I say that to me this has been a very stimulating two-man seminar this afternoon.

Senator HARRIS. Thank you very much. Thanks for coming.

We will meet tomorrow at 10 o'clock when we will hear from Mr. Leonard Marks of the U.S. Information Agency, Mr. Thomas Hughes of the State Department, and Mr. Jack Vaughn of the Peace Corps. Until then we are recessed.

Thank you, Dr. Haworth.

(Whereupon, the subcommittee was recessed at 4:15 p.m. to reconvene at 10 a.m. on Wednesday, February 8, 1967.)

(Dr. Haworth's prepared statement and supporting documents follow:)

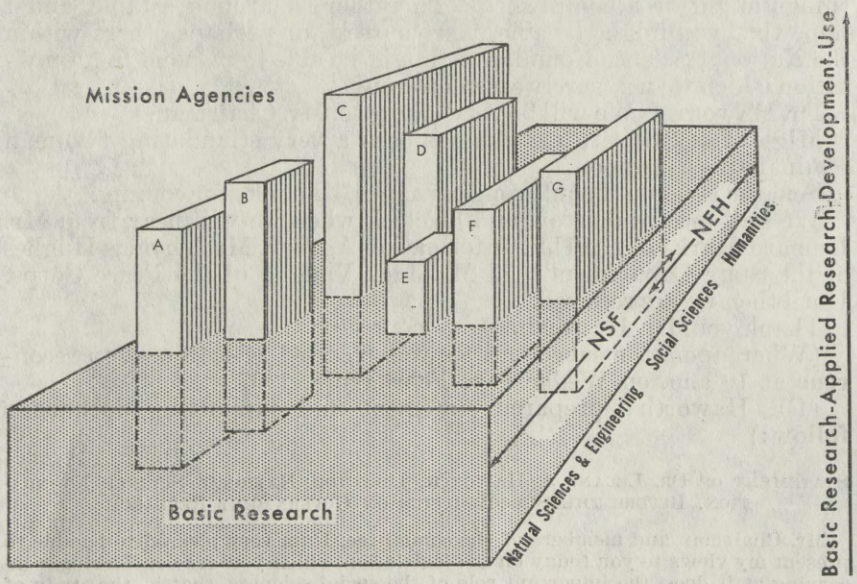
STATEMENT OF DR. LELAND J. HAWORTH, DIRECTOR, NATIONAL SCIENCE FOUNDATION, BEFORE THE SUBCOMMITTEE ON GOVERNMENT RESEARCH

Mr. Chairman and members of the committee, I am very pleased to be able to present my views to you today on the legislation which you are considering, concerning as it does, the important role of the social sciences, that is, the study of man in his environment. I think, Senator Harris, that you and your committee are performing a valuable national service in bringing the need for greater emphasis on social science research and its possible utility to the attention of the American people. The social sciences, in my opinion, are at last receiving the attention that they merit from the Federal Government.

As background to my discussion, I should like to state briefly some of my personel views regarding the appropriate role of science in the Federal Government and its relationship to the achievement of national goals. In the present stage of society's development, applications of science—that is, of the knowledge and understanding that constitute science—permeate virtually every sphere of human activity. Thus, nearly every Federal agency is involved in greater or lesser degree in utilizing science. Most of the so-called "mission-oriented" agencies concentrate their technical activities on applied research and development of particular and fairly immediate relevance to their missions. Most of them, however—and quite properly—also give support to applied research of a more general character and to some basic research. It is important that they do so not only in order to help build the storehouse of knowledge on which they will depend in the future but also to keep the agencies and their laboratories knowledgeable in the front-running scientific fields of relevance to their missions, to provide an attraction for scientists with the ingenious types of minds that are attracted by the opportunity to carry out such work and to provide a mutual awareness between the agencies and their problems and the scientists in the scientific community at large. Needless to say, the usefulness of such research is in no sense confined to the agency in question but spreads out in many ways to serve the common cause. Thus, these agencies not only draw sustenance from the underlying base of scientific knowledge and understanding but also themselves contribute to the constant expansion and renewal of that base. This is illustrated in a very crude, schematic way in the accompanying sketch.

In my opinion, this mode of operation is highly appropriate and very beneficial. Without question, it has contributed greatly to the outstanding achievements of the country in such fields as health, defense, atomic energy, space, agriculture, resource development and many others. Science is an all-pervasive tool, one that virtually every agency must use and use in a knowledgeable and sophisticated way.

Schematic Presentation of Federal Government Research



However, this is not enough. It is also essential that the Federal Government take responsibility for assuring that we continue to develop a sound and expanding base of sceintific knowledge across the entire spectrum of the mathematical, the physical, the biological, the engineering and the social sciences. The National Science Foundation was created by the Congress for this purpose. It is today the only agency of Government with the sole mission of supporting basic scientific research and science education. By incorporating all of the sciences, including most assuredly the social sciences, in its sphere of responsibility the Foundation is able to exercise a "balance wheel" effect within the total Federal scientific enterprise—supporting research in fields not receiving adequate support elsewhere, supplementing the basic research efforts of other agencies in key areas and in general helping fill the interstices between the areas supported by the mission-oriented agencies. In fulfilling this function, the National Science Foundation acts as a unifying force for the whole Federal basic research effort as well as contributing to the unity of scientific knowledge.

Recently and happily, the National Science Foundation has been complemented by the National Foundation for the Arts and Humanities (NFAH), thus extending the spectrum of Federal support to all branches of knowledge. Of especial relevance to our discussion today is, of course, the National Endowment for the Humanities (NEH) constituting one-half of the NFAH, which is active in supporting the social sciences from the humanistic as distinguished from the scientific viewpoint.

In order to provide you with a comprehensive statement of our views on government support of social science research in general, and on the legislation before you for consideration in particular, I have divided my presentation into three parts. The first section describes the present program of the National Science Foundation in the field of social science research, and the relation of this program to its counterparts in other government agencies. The second section describes some of the Foundation's plans for the development and expansion of its support for social science in the future, first in the light of the limitations imposed by present legislative authority, and second, what we would expect to do in the event our authority is broadened, to include support for applied research, as provided in the legislation passed by the House of Representatives last year and reintroduced in this Session as H. R. 459. In the third and final section I will state our views regarding S. 3896.

I.

The purpose for which the National Science Foundation was established in 1950 was to foster and encourage basic research and education in all the sciences. Although social science was not one of the specific disciplines enumerated in the National Science Foundation Act of 1950, it has been an integral and increasingly important activity of the Foundation since 1953, when the Foundation began the study recommended by Congress for a program in the social sciences comparable in every way to the ones in the natural sciences. At that time the total Foundation budget was $4.8 million, and the total Federal budget for basic social science research in all agencies was only $2.7 million. The Foundation's first social science program, approved by the National Science Board in 1954, was a limited one primarily in support of areas of social science which "converged" with the natural sciences. Shortly thereafter, in 1956, however, the social sciences were given separate identity when the social science research program was created, consolidating research support from all divisions and eliminating the criterion of "convergence". In 1960 the Social Science Division was established, placing the social sciences on the same administrative level as all the other programs of the Foundation.

Today, the social sciences not only have full divisional status in the research field, but are included in all of the Foundation's education, facilities, science information, and institutional development programs, without exception. Total research support for the social sciences in Fiscal Year 1967 is $21 million with a further increase projected for 1968.

Exhibit A lists Federal and National Science Foundation support of social science research over the period 1956-1967. As I have said, the Foundation's total social science research program will amount to about $21 million in FY '67. Of this, $14.5 million is funded by the Foundation's Division of Social Sciences. The remaining $6 million in research funds for FY '67 was provided as follows:

(*a*) By the Planning organization, chiefly for studies in economics, demography, scientific manpower, and interactions of science and technology with society—$1.1 million;

(*b*) By the Institutional Relations programs, as part of our science development and institutional base grants programs, chiefly in strengthening social science research capabilities at universities—$3.8 million;

(*c*) By the Science Information Service—$464,000;

(*d*) For special graduate research facilities, chiefly buildings and laboratories—$500,000.

In addition the social sciences have received some support from the Foundation's general program for graduate research facilities and will do so in two new institutional type programs being initiated this year: Departmental Science Development and College Science Improvement.

Furthermore there is a substantial expenditure by the Foundation on social science education—fellowship, teacher training and retraining, curriculum development, and undergraduate research participation, for which another $11 million is funded in FY '67. Educational support for the social sciences, which has also been steadily on the increase for the past decade, has such an important bearing on the research capabilities of the academic community that in deserves far more attention than has been accorded to it in recent discussions of the subject. Of course most of our research grants are to academic institutions and thus serve the purpose of graduate training as well as advancing scientific knowledge.

Concurrent with the growth of the Foundation's activities in the social sciences has been a growing awareness of their importance by the Federal establishment as a whole. This is clearly demonstrated by the data in Exhibits A and B (which I should like to submit for the record), which show how the Federal effort in both basic and applied social science research has grown in recent years. More than twenty departments and agencies support social science research and the total figure is now $326 million for both basic and applied research.

Exhibit C (which I should also like to submit for the record) sets forth a statistical breakdown of the Foundation's research program in the social sciences since its inception. In examining these figures I should make clear that because of problems of definition, several of the disciplines which I mentioned above are

grouped together under one category in the tables. From these figures you will observe how social science research in the Foundation has grown over the past several years.

In 1958 the annual research grant budget for what is now the Social Science Division was $850,000, and a staff of three handled 115 proposals and made 49 grants. When Divisional status was established in 1960, a staff of eight administered a budget of $3.8 million and awarded 166 grants. The present Division Director, Dr. Howard H. Hines, heads a staff of 16 and the budget for FY '67 is $14.5 million for the Division alone. The proposed budget for FY '68 includes an item of $18 million for the Division—an increase of 24%.

One important point should be noted in connection with both the range of disciplines covered by the Foundation's research program and the level of financial support. For some disciplines, such as archeology, history of science, and philosophy of science, the Foundation has been practically the sole source of Federal research funds; for other disciplines, such as political science, economics, linguistics and demography, it is the major source of basic, non-mission oriented work. The social sciences are now regularly established parts of the academic scientific enterprise and, as the Foundation assumes responsibility for the health and growth of college and university-based research and training in the sciences generally, it has conformed to the patterns and definitions prescribed for the social sciences by the academic community in the most liberal way open to it, consistent with its legislative authorization. A substantial part of the social science research program—about $3 million—may be classed as foreign area research. Virtually all of this is conducted by American scholars pursuing their researches at home and abroad. A small part of these funds goes into collaborative projects with foreign social scientists.

In describing the administration of the Foundation's social science research program and our criteria for it, let me first discuss two broad legislative boundaries which circumscribe it and which are inherent in the Foundation's mission. First, all our research programs in the social sciences at the present time must be "basic" in nature; second, they must be "scientific". (Section 3(a)(2) of the National Science Foundation Act of 1950 authorizes the Foundation to initiate and support "basic scientific research".) The Foundation interprets this language broadly, however, and encourages a variety of research approaches to a wide range of subjects, including research projects that are problem-oriented so long as the research supported holds promise of yielding valid scientific generalizations, rather than being limited to finding solutions for problems peculiar to a particular time, place or event.

Nevertheless, for the reason outlined above, certain areas of social science research are, at the present time, denied Foundation support. Thus, applied or professional clinical studies are not eligible. This excludes the larger part of social work, clinical psychology, legal studies, and a very large proportion of overseas research which is primarily applied in nature. In the latter connection, it may be noted that the Department of State, the Arms Control and Disarmament Agency, and the Peace Corps report all of the social science research that they support as being in the applied category.

Fortunately, the proportion of research in social sciences which meets the criteria of being scientific has been growing in recent years. Experience has shown that although techniques of investigation may vary among different branches of social science, the spirit of objective and analytical inquiry is common to all. There is every reason to hope that patterns and regularities observable in the social scene will become increasingly amenable to objective analysis and ultimately to statement in the form of scientific laws.

The specific criteria that we apply in our support of basic research projects in the social sciences are those which have been evolved over the years as offering the best combination of encouragement for the advancement of human knowledge combined with suitable safeguards against undesirable duplication, exceeding the bounds of legislative authority, and violation of standards of scholarly excellence and sound judgment. Investigators are free to seek support for problems of their own choosing, rather than those chosen by the Foundation. These may include work on methodology, disciplinary theory, the formulation and testing of propositions about the behavior of human beings in the social environment, and about

the structure, customs and institutions of society. Research which is concerned with a topic relevant to a critical social problem, and which seeks to develop generalizations and understandings on which later to base applied research into alternative solutions is encouraged. Investigators are free to propose research by any specific method—archeological, comparative, experimental, field survey, statistical, and theoretical, as appropriate.

A few examples of research projects currently supported may be of interest to you. In anthropology, we are supporting studies of traditional social and cultural patterns in contemporary non-Western societies, and the impact of modern influences on these societies. In linguistics we are supporting studies on the relationship between language, the individual culture and society. In economics we have supported studies in economic theory, allocation of economic resources, consumer behavior, money and credit, and economic effects of technical change. In economic and social geography we have supported population geography. In sociology and social psychology we are supporting studies of urban ecology, attitude and opinion formation and change, motivation, child rearing patterns, and social change in the developing nations. In political science we are supporting comparative studies of political development and modern political data collection and analytical techniques. A complete list of research grants awarded by the Social Science Division for FY '66 is attached as Exhibit E. You will observe how many of these studies have a bearing on the specific problems of society and national policy about which there is general concern.

A brief description of our procedures is in order. Generally speaking, the Foundation funds research grants in response to proposals made by scholars from the academic community and other institutions. Frequently a scientist is invited to submit a draft proposal for comment, and the Foundation assists him in framing a formal proposal through correspondence or informal discussion. Each formal proposal is normally reviewed by a number of professional experts, usually professors and academic specialists in the field covered by the proposal—experts who have good critical capacities and are, insofar as possible, unbiased.

Most proposals are also screened by an appropriate advisory panel composed of leading specialists who convene at regular intervals in Washington. Close liaison is also maintained at all times between the Social Science Division and other divisions of the Foundation. When a proposal is also under consideration by another agency, the Foundation contacts that agency before taking action, to avoid duplication of grants. In addition to the advisory panels, the Social Science Research Division has an advisory committee which acts as a "board of visitors" for the Foundation's efforts in the social sciences. The members of the advisory panels and the advisory committee for Social Sciences are listed in Exhibit D, which I would like to submit for the record.

In sum, the Foundation now supports a healthy and growing social science effort, well integrated into every one of the Foundation's divisional programs, in close relationship and continuous interaction with the natural sciences, and with a growing capacity to support and reinforce the research programs of mission-oriented agencies.

II.

Proposed National Science Foundation Programs in the Social Sciences

I now want to discuss our plans for augmenting and broadening the Foundation's social science program. We are very conscious of the need to relate this program to pressing national problems and the research requirements of the mission-related agencies. We are also conscious of the imperative need for making the insights of the social sciences available for use in the policy formation process, as relevant to both foreign and domestic problems confronting many government agencies. Although other government agencies will undoubtedly be increasing their support of social science research in areas relevant to their missions, the Foundation must continue to have a growing capacity to support a broad and flexible basic research effort which both supplements the efforts of the other agencies and broadens the entire spectrum of knowledge in the field. We have, therefore, carefully considered the kinds of support best suited to carry out an augmented program.

We consider it imperative to continue to rely primarily on the project research grant as a major instrument for advancing scientific knowledge. The opportunity

for an academic social scientist to receive support for a specific piece of basic research, not necessarily related to an agency mission, is a unique and widely appreciated contribution of the Foundation. This source of basic research support—major to anthropologists, economists, sociologists, and of growing importance to political scientists, social psychologists, linguists, and geographers—has become of crucial importance to the growth of the social sciences in the past decade.

As scientific disciplines the social sciences have had less time than other sciences to develop basic concepts. Their research findings have often been put prematurely into application. The social sciences do not differ from the natural sciences in the long lead time required for basic research to prove fruitful and in the necessity for maturing and testing conclusions, if they are to succeed when they are applied. The social sciences have the additional quality of an immediate relation to human activity. Even small variations in social conditions or in the organization of society brought about by the application of research findings can often bring major benefits in human welfare.

Our first intention then, is to continue the project support program, allowing for appropriate growth. Among areas of promise which we plant to stress in future research projects are regional and urban analyses, linguistics, sociological model building, socio-economic development, and archeological research on human evolution, particularly in Africa and Asia.

But a number of problems require the attention of social and natural scientists, particularly those in the fields of national social problems and international affairs, which are not amendable to attack through traditional mechanisms and we have been encouraging new types of organizational, institutional, and administrative mechanisms which would facilitate the kind of research that is a prerequisite to mounting constructive attacks on the issues of today and tomorrow.

There is a need to encourage a wider range of interdisciplinary collaborative research, both within the social sciences and between them and the natural sciences and engineering. Although most of what we now know as social science has been developed by individual workers, it is clear that many kinds of investigations now feasible and promising cannot be conducted by individual scholars working alone or with the assistance of a few students and a library. Indeed, it is apparent that some research activities cannot be carried on by an individual department or even by a single educational institution. Groups of scientists and in many cases engineers need to combine their efforts into collaborative enterprises clustered in research centers or institutes, especially if work is interdisciplinary or multi-disciplinary. Already research groups on separate campuses are establishing inter-university consortia or similar cooperative organizations to explore special fields or subjects requiring multi-disciplinary approaches. This is a natural development as the social sciences become more technical, the equipment and facilities more specialized (and costly), the data more numerous and complex and the subject areas broader and more comprehensive.

With present resources NSF has been able to assist only a very few of the specialized research groups in existence or in the process of formation, and then only partially. We see as a major priority in the development and future health of the social sciences the provision of long-term base support for special research centers, institutes, organizations and consortia. The common thread should be the effort to build well-trained and well-equipped core groups of specialists in various topics. These groups would constitute a significant and valuable national resource which could be utilized for mounting special projects. For example, if there were a center devoted to urban ecology, both government (at all levels) and industry could turn to it for aid in urban planning, which might range from advice regarding large scale redevelopment to, say, a locational analysis of the best place for a playground, a school, or a supermarket.

The following discussion of problem areas and proposed mechanisms to meet special needs is illustrative of the directions in which we are planning to move. In some instances we have had experience on a pilot basis and have established the feasibility of our approach; in others, more planning is required.

1. We need to give additional support to centers for advanced specialized research, particularly those engaged in attacking multi-disciplinary problems.

Some of these centers lead a precarious financial existence, and this inevitably wastes professional time. We believe there needs to be a rationalization of their organization, financial basis, regional-dispersion and specialization, for they will shape research in the future even more than they have up to the present.

Centers for urban ecology, for regional planning, for cognitive studies, for economic analysis, for computational linguistics, for population studies, for social systems research, for law and society, all combining research and training, can play an important part in expanding our knowledge of man in his environment. One interesting example is a proposed center for the long-term investigation of one local geographical region. This approach conceives of the community as an ordered aggregate of organisms, utilizing energy and raw materials in its functioning. A twenty-five year study of the continuing interaction of man, plants, and animals, together with their immediate physical and biological environment is planned and deserves support.

The social sciences now have only one center of a national character, the Center for Advanced Study in the Behavioral Sciences at Stanford. The Center affords senior scholars a place to pursue advanced research or to write up research results away from their normal academic environment. It is used intensively by the academic community. The Center has become one of the most prominent institutions in the social sciences in less than a decade. It needs funds to maintain services to visiting fellows and to plan and implement new ways of meeting the needs of academic researchers. A national center for social science research located in Washington is also a recurrent theme. Certainly Washington contains vital material—both archival and living—which is inadequately exploited. We believe that the National Science Foundation should play a leading role in encouraging and supporting such centers.

2. We need to improve the capabilities of survey centers concerned with research on problems of public opinion assessment, sampling and statistical analysis. Such centers would provide for continuing studies of aspects of social change in our society. The public opinion poll or survey is now an established technique—not only for basic social science, but for a range of useful applications, including such common ones as candidate and product preference. Academically-oriented survey organizations have different *foci* and standards from commercial polling companies. The subject matter of their questions is more complex and greater interviewing skills are required. Academic centers with this capability must be maintained and provided with assurances of continuity. If a reasonable share of the basic operating costs could be assumed by NSF, such centers would be able to attract and hold competent staff, undertake sponsored studies, and provide a service to individual researchers.

3. Additional centers for data archives are needed. In fields of science where experimental techniques ordinarily cannot be employed, the orderly accumulation of observations over time offers the best method of studying the phenomena with which those fields are concerned. Further, as techniques of observation become more rigorous, and as they result in data which may be treated quantitatively, it becomes increasingly revealing to bring together different sets of data taken over different periods of time by different investigators. With the advent of modern data processing machinery, the character of the social science data repository has completely changed. Computers have not only provided a means of processing, storing, maintaining, and analyzing vast quantities of data, but they have given the data archive the power to function as an integrated body of data, not just a library. Moreover, the archive as it is now emerging can provide a system for the handling of large sets of multi-level data. For example, the source data available to the investigator can include a large number of opinion surveys, the one-in-a-thousand census tape, a large collection of election statistics, and a large body of economic statistics. An exciting devolpment is the use of data from archives in computer simulation methods to answer questions about hypothetical conditions of the future. As individual specialized archives continue to be established, they will need funds for overhead and retrieval operations. At present, most get limited assistance from their universities, and from research grants. They find that they must charge users the full costs of use. This is unfortunate since excessive charges restrict access, particularly by those such as students who most need experience in secondary

analysis with large data bodies. The Foundation proposes to increase its support of data processing and archive systems as appropriate and feasible to meet this expanding need.

4. It is important that we expand our support of basic social science research in the underdeveloped world. Anthropologists have long been conducting research on non-U.S. cultures. At the present time a wide range of social science disciplines is involved in comparative studies of social, psychological, economic, and political topics in Asia, Africa and Latin America. All share a concern in understanding the problems of developing countries. There is as yet little coordination of these efforts.

We would like to see a series of regional basic research centers developed dealing primarily with the emerging areas of Asia, Africa and Latin America. Under such a program, U.S. universities with special area interests could initially establish pre-field training facilities in the U.S. Here the prospective overseas researcher would receive appropriate intensive training to supplement his own disciplinary competence. For example, an anthropologist could learn about the political structure of the country; a political scientist could learn about the social structure, and thus be better equipped to integrate his knowledge of politics into the larger concerns of the country. Both groups might require special language training whereas a linguist, already fluent, might require information about the most appropriate ways of approaching native speakers. This prior preparation would serve to make the U.S. researcher more knowledgeable about what he will encounter, better prepared to meet the field situation efficiently and without embarrassments, and more able to get on with his research quickly.

Where possible, sub-centers should also be established in the host countries, preferably in cooperation with a university or universities of that country. These sub-centers would provide expanded research and training opportunities. They would provide certain facilities and administrative services to facilitate research such as clearances, permits, introductions, housing and library. More important they would facilitate intellectual collaboration, for the sub-centers must be genuinely working, cooperative enterprises, or they will not succeed. The informed knowledge which comes from being a part of the local scene would be made available to all. Actual research locales would be dispersed, through sub-centers in accordance with needs, interests and opportunities, and in order to avoid the saturation of any single locality with researchers and research activities.

One of the problems which confronts U.S. social scientists interested in collaborating with researchers abroad is that there is a shortage of adequately trained social scientists indigenous to the developing areas. As one means of rectifying this situation and as a contribution to the collaborative character of the regional center program, training could be given to promising advanced students from the countries where sub-centers exist. Programs undertaken by universities aided by the International Education Act would form a logical base upon which to build this effort and the proposed centers would greatly enhance the productivity of U.S. foreign area studies.

Some examples of projects which might be undertaken collaboratively under this program are the influence of values on the utilization of natural resources; parallels and contrasts in internal migration and urbanization in different societies; sources of new leadership in developing countries; social factors affecting economic growth; the interplay between nationalism and ethnic and linguistic diversity in new states; and the relationship between family patterns and occupational aspirations and opportunities.

5. In a different context, we propose to increase support for a special class of projects in advanced methodology. By this I mean support for study groups that develop sets of methods or models for demonstrating new powers of analysis. Recently, a small number of individuals, organized as The Mathematical Social Science Board, developed a class of mathematical models which have brought new insights and approaches to bear on social science training and research programs. The pattern is flexible and can be adapted to various levels of difficulty and to the needs of several social science disciplines. We would propose to increase support for these unique and creative efforts in scientific experimentation.

So far I have been discussing only an expanded social science research program within the boundaries of our present legislative authorization, that is to say, basic scientific research. If the Foundation were authorized to support applied research, as is provided for in legislation passed last year by the House of Representatives and recently reintroduced as H.R. 459, we see some areas of social science and national interest which are inadequately covered at the present time, and which it would be entirely appropriate for the National Science Foundation to enter under such authority.

One would be programs to stimulate the increased application of social science research. There exists in many problem areas more scientific knowledge than is now being made available to the practitioners, that is, local officials, police officers, social workers, clergymen, etc. Bringing the relevant findings of social, economic, political, and psychological theory to bear on problems that concern them would help bridge the gap between the academic community and the "real world"—between theory and practice—and might result in improved performance of our social institutions. Not so many programs would then begin *de novo*, nor would communities be so likely to repeat the errors of the past.

A second area of opportunity arises from the large number of action programs in the public welfare field which are being inaugurated by Federal, State and local governments. Social science research is not often enough incorporated as a part of such programs, or if it is, it usually is limited to the planning phase. Yet there are excellent opportunities for subjecting large scale social programs to scientific analysis and for using the results in turn to advance social science. We need to be able to use these opportunities for independent and objective study of social change and what we learn can then be fed back into the planning of future programs.

Many of the most urgent problems facing our society are, however, technological in origin and remain problems because we have not developed the social technology with which to cope with the results of scientific technology. A combination of social science, engineering, and natural sciences is required to attack problems such as those arising from water and air pollution, population pressure and the inadequacies of mass transportation systems. However, the time has come when we must move beyond the facile identification of promising research opportunities.

We intend to establish special study groups with representation from the scientific and government communities to assist us in identifying areas where it would appear fruitful to sponsor work in the expectation that the results might contribute to the solution of specific problems. Other tasks we propose for these groups include recommendations on how fundamental research can be translated more effectively into useful ends for the betterment of society and advice as to which research areas require special stimulation.

In addition, The National Endowment for the Humanities and the Foundation have agreed to establish cooperative arrangements for the joint support of projects straddling the spheres of responsibility of the two agencies.

The mission-related agencies are developing research programs of increasing strength in both applied and fundamental areas of particular concern. Such research undertaken or supported by agencies having particular responsibilities must remain a keystone in the structure of Federal scientific research. The efforts of the National Science Foundation, as I have outlined them, can serve to underpin the nation's effort in the social sciences but can never supplant or be a substitute by those having the action responsibility. We plan, of course, to collaborate with them in the development of our program so that we can best supplement and complement their research.

As a final remark regarding our plans let me say that the program I have outlined is being developed at a time of much discussion and ferment about the future of the social sciences and particularly of the Federal Government's relationship to them. Most of what is proposed here would represent a logical and timely response to the changing environment. Except for projects in the class of applied research, it requires no new authorization, only increased funds. It is not a "crash program," suddenly contrived. It is a logical step in a program the Foundation has long been building. We have come a long way since 1950, when large Federal assistance to science was still new, Federal support was still

in the exploratory stage, and when many considered it not wise for the Federal Government to admit to any reliance on the insights of the social sciences. The Foundation's program in social science has been a part of this evolution. Modest though the funds have been in relation to the need, or even compared with funds in other fields, the National Science Foundation has made important contributions—unduplicated by other sources—to social science research and education.

III.

National Science Foundation Position on National Social Science Foundation Bill

I come now to our position on the proposed legislation before you. I would be less than candid if I did not express our grave reservations about the need for a separate social science foundation. The purposes of the bill—to strengthen social science and enhance its contribution to the national welfare—are entirely meritorious and laudable, but it seems to us that the means proposed to achieve them may not be the wisest alternative, and may in fact hinder and even defeat these purposes. In other words it does not seem to us that there is a demonstrated need for a new foundation devoted to social science research.

On the one hand there is no doubt that a separate foundation for the social sciences would offer another institutional "home" for social science research. It might provide a *locus* of intellectual stimulus in Washington. It would certainly provide another source of Federal funding for social science research. And it might possibly offer certain intangible benefits by giving it independent administrative status on a level equal with the arts, the humanities and the natural sciences.

On the other hand, there seems to be no doubt that the creation of a separate social science agency would carry with it several serious disadvantages.

First, and most unfortunate for the cohesion of both the Federal and the academic research efforts, it would seriously detract from the growing interrelation and interaction between the different branches of science—an increasingly important prerequisite to successful results in both the fields of pure science and in problem-oriented research. Thus, it would undermine and divide that unity of the underlying scientific research so essential to the support of the research and development efforts of the mission-oriented agencies and of the country.

Moreover, in pure science we are increasingly dependent on interdisciplinary approaches for new insights and scientific breakthroughs. In problem-oriented or applied research—on problems of population, urbanization, transportation, foreign areas, and environmental quality—it is becoming impossible to obtain balanced results on the basis of compartmentalized approaches. For example, how can one analyze problems of environmental pollution or urban renewal without considering physical, psychological, social, and geographical factors in all their interrelated aspects? Social and natural scientists need to be in close contact with one another and to augment their understanding of each other's disciplines and approaches.

Second, from the standpoint of efficient government operations, another foundation with specialized purposes and functions would be a step in the direction of proliferating and fragmenting governmental support of the fundamental research effort without creating any new authority or capability that is not included in those of the National Science Foundation and the National Endowment for the Humanities. Furthermore, it would be both inadvisable and unlikely for the mission-oriented agencies to surrender research programs directly related to their agency missions to organizations unfamiliar with the requirements and without direct responsibility for application of the results. Hence, there is little that a new agency would be authorized to do that cannot now be done elsewhere, although, to be sure, not in all cases as effectively as would be the case were the authority of NSF extended to the support of applied research as contemplated in H.R. 459.

Third, it is entirely possible that the increases for support of research in the social sciences that a new agency would be expected to bring might be balanced or even outweighed by adverse effects on the resources made available to the programs of other agencies for this purpose. There is some danger that

many of the more basic research programs of mission-oriented agencies and the National Science Foundation would be viewed as redundant with consequent cutbacks or limitations in funding. The new foundation might not be able to fill the gap, particularly during the first few years. This would be especially unfortunate because it is now clear that social science research is embarked on expanding statistical and data requirements entailing among other things massive expenditures on computers.

Fourth, it seems doubtful that the proposed new foundation could add appreciably to activities in the foreign field. The National Science Foundation and the National Endowment for the Humanities, acting separately or in concert can support between them a full range of foreign research of a basic nature in all the social sciences. Foreign area research and international studies in applied fields are conducted or supported by a number of mission-oriented departments and agencies. Moreover, it is questionable whether the special provisions of the bill for transfers of funds would enable the new foundation to "civilianize" foreign area research and free it from the suspicion (in the eyes of foreigners) of being a "cover" for political or intelligence activities. It is not certain that the safeguards incorporated in the bill, providing among other things, for research to be unclassified, will afford the protection anticipated. If funds for unclassified research, regardless of the innocuous nature of a particular research project, are given to the new foundation by the Defense Department or by the Central Intelligence Agency, the new agency and its grantees would in all probability be "contaminated" in foreign eyes, in all of their activities. Foreigners are simply not aware of funding subleties among departments and agencies and regard the U.S. Government as a whole and, indeed, to most anti-American factions and publicists, all such projects are fair game for misinterpretation and distortion.

In sum, it seems to us that a case demonstrating the inadequency of the current Federal organization for support of social science research, and the consequent need to establish a new mechanism, has not been made. On the contrary, the proposed legislation seems to us to represent a step in the opposite direction from that which we consider to be the most salutary way to maintain the cohesion of basic scientific research and augment the national endeavor in social science. We need to integrate the social sciences with the natural sciences, not separate them.

Thank you, Mr. Chairman.

Obligations [1] for total research support [2] for social sciences [3] and social psychology [4]

[In thousands]

Fiscal year	National Science Foundation			Total, Federal		
	Social sciences	Social psychology	Total	Social sciences	Social psychology	Total
1956	$220			$30,181		
1957	323			36,249		
1958	600			39,743		
1959	702			30,959		
1960	1,823			35,154		
1961	2,773			45,105		
1962	6,702			62,948		
1963	8,755	$2,392	$11,147	79,871	$39,965	$119,836
1964	14,135	1,591	15,726	102,412	57,656	160,068
1965	11,772	2,788	14,560	127,389	61,358	188,747
1966	14,830	2,493	17,323	188,375	87,161	275,536
1967	17,649	3,379	21,028	221,894	103,847	325,741

[1] Obligations data are from the "Federal Funds" series with the exception of NSF data for fiscal years 1966–68 which are based on presently available information.

[2] "Total research support" includes obligations for intramural research and for research performed extramurally under grants and contracts, plus prorated intramural management costs related to the research.

[3] "Social sciences" (as defined in "Federal Funds") includes cultural anthropology, economics, history, political science, sociology, and other disciplines or subjects in which the work is undertaken primarily for the purpose of understanding group behavior.

[4] "Social psychology" (as defined in "Federal Funds") includes research on personality; educational psychology; personnel psychology; and social psychology, including group processes, interpersonal relations, opinion and attitude change, and developmental psychology. Prior to fiscal year 1963 "social psychology" was not reported separately from "biological psychology" within the psychological sciences.

EXHIBIT B

Federal obligations for basic, applied, and total research in social science and social psychology for fiscal year 1967, by agency

[In thousands of dollars]

Agency	Social sciences			Social psychology			Total, social sciences and social psychology		
	Basic research	Applied research	Total research	Basic research	Applied research	Total research	Basic research	Applied research	Total research
Total, all agencies	57,870	164,024	221,894	45,251	58,596	103,847	103,121	222,620	325,741
Department of Agriculture	6,448	21,505	27,953				6,448	21,505	27,953
Department of Commerce	3,133	15,068	18,201	106	258	364	3,239	15,326	18,565
Department of Defense	1,935	2,050	3,985	6,596	5,377	11,973	8,531	7,427	15,958
Department of Health, Education, and Welfare	19,598	71,239	90,837	34,444	51,849	86,293	54,042	123,088	177,130
Department of Housing and Urban Development		233	233					233	233
Department of the Interior	2,587	1,056	3,643				2,587	1,056	3,643
Department of Labor	2,187	10,014	12,201				2,187	10,014	12,201
Post Office Department					50	50		50	50
Department of State		2,925	2,925					2,925	2,925
Advisory Commission on Intergovernmental Relations		145	145					145	145
Civil Aeronautics Board		153	153					153	153
Civil Service Commission				32	168	200	32	168	200
Federal Aviation Agency		11	11		5	5		16	16
Federal Home Loan Bank Board		270	270					270	270
Federal Trade Commission		310	310					310	310
National Aeronautics and Space Administration	450	917	1,367	594		594	1,044	917	1,961
National Science Foundation	16,852	817	17,669	3,383		3,383	20,235	817	21,052
Office of Economic Opportunity	1,200	33,800	35,000				1,200	33,800	35,000
Office of Emergency Planning		40	40					40	40
Peace Corps		712	712		688	688		1,400	1,400
Small Business Administration	527	132	659				527	132	659
Smithsonian Institution	2,953		2,953				2,953		2,953
Tennessee Valley Authority		727	727					727	727
U.S. Arms Control and Disarmament Agency		1,900	1,900					1,900	1,900
Veterans' Administration				96	201	297	96	201	297

Source: "Federal Funds for Research, Development, and Other Scientific Activities," vol. XV. NSF 66-25.

EXHIBIT C

NATIONAL SCIENCE FOUNDATION, RESEARCH GRANTS IN SOCIAL SCIENCES, PROPOSALS AND AWARDS, 1953–66

The attached tables summarize statistically experience with *project research grants* in the Division of Social Sciences or the individual program units within other divisions that supported the social sciences before a separate unit was created in FY 1958.

Notes to Table C–1: The first column is the administrative unit at NSF through which the funds were administered. BMS: Division of Biological and Medical Sciences; MP&E: Division of Mathematical, Physical and Engineering Sciences (the name has since been changed); PAO: Program Analysis Office (no longer existing); SOC: Office of Social Sciences (created 1958) and then Division of Social Sciences (created 1960).

Under "Grants Activated," the column "$ Appr'd" is the number of dollars awarded, whereas "$ Req't" is the number of dollars requested in proposals that resulted in awards.

Notes to Table C–2: The first column should read "Program," for it is the administrative unit within the Office (later the Division) of Social Sciences through which the proposals were handled. The programs have become specialized through the years. In general the coverage is:

Anthro(pology): Includes archaeology; social, cultural and physical anthropology; and linguistics.

Econ(omics): Includes economics and, until FY 1966, economic and social geography. The latter is now reported separately.

H(istory) and P(hilosophy) of S(cience): Should be read as *the* history and philosophy of science; does not include history in general.

Socio(logy): Includes demography, sociology, psycholinguistics and social psychology. Until FY 1966 included political science, which is now reported separately.

Spec(ial) Proj(ects): Includes projects for data archives and other special projects and programs. Specialized Social Science Facilities are supported through another budget but are administered by the same Program Director.

It should be noted that physical geography is assigned to Earth Sciences Section and psychobiology to the program of that name in BMS.

TABLE C–1.—*Support of social science research by the Division of Social Sciences or (before fiscal year 1958) preceding program units in other divisions*

Division	Fiscal year	Received		Grants activated			Withdrawn and declined	
		Number	Amount	Number	Amount approved	Dollar requirement	Number	Amount
B&MS	1953	3	82,150	0	0	0	0	0
B&MS	1954	12	187,500	4	72,700	43,700	6	75,100
MP&E	1954	5	57,074	2	27,000	30,000	1	8,300
PAO	1954	3	167,500	0	0	0	3	167,500
		20	412,074	6	99,700	73,000	10	250,900
B&MS	1955	21	347,300	5	51,700	100,300	10	126,900
MP&E	1955	10	138,192	3	28,700	36,245	4	39,645
		31	485,492	8	80,400	136,545	14	166,545
B&MS	1956	34	769,900	13	133,100	215,500	24	619,400
MP&E	1956	19	393,582	11	155,950	260,996	9	163,369
		53	1,163,482	24	289,050	476,496	33	782,769
B&MS	1957	36	929,100	20	186,400	341,400	14	543,200
MP&E	1957	6	139,886	6	55,250	144,688	4	45,491
		42	1,068,986	26	241,650	486,088	18	588,691
SOC	1958	115	4,078,500	49	725,950	1,604,500	57	2,234,600
SOC	1959	154	5,145,100	53	889,300	1,471,800	77	2,463,800
SOC	1960	228	14,057,200	114	2,167,486	4,538,700	123	9,721,200
SOC	1961	316	16,076,900	166	3,775,700	6,703,900	131	6,887,900
SOC	1962	462	24,479,000	220	7,809,145	11,037,145	186	10,997,000
SOC	1963	491	30,211,700	223	8,978,425	14,396,725	276	16,279,200
SOC	1964	491	32,261,300	246	9,378,176	18,683,011	256	15,244,000
SOC	1965	670	34,454,300	312	10,279,950	14,064,900	296	15,521,900
SOC	1966	683	40,688,460	345	12,592,020	20,708,220	306	19,551,900

TABLE C–2.—*Breakdown of research supported by Division of Social Sciences since fiscal year 1958 when separate disciplinary programs were initiated*

Discipline	Received		Grants activated			Withdrawn and declined	
	Number	Amount	Number	Amount approved	Dollar requirement	Number	Amount
Fiscal year 1958:							
Anthro	47	1,993,500	22	384,100	880,500	19	906,500
Econ	11	327,400	5	93,300	218,600	6	108,800
Socio	39	1,565,600	14	182,100	415,200	23	1,141,100
H&PS	18	192,000	8	66,450	90,200	9	78,200
	115	4,078,500	49	725,950	1,604,500	57	2,234,600
Fiscal year 1959:							
Anthro	50	1,574,000	23	353,700	550,200	20	362,100
Econ	24	1,155,100	5	137,900	195,800	15	818,100
Socio	52	1,833,800	14	279,000	416,200	29	1,084,700
H&PS	28	582,200	11	118,700	309,600	13	198,900
	154	5,145,100	53	889,300	1,471,800	77	2,463,800
Fiscal year 1960:							
Anthro	84	2,979,500	50	719,850	1,340,500	36	2,100,600
Econ	40	3,329,100	17	547,386	1,299,300	24	1,929,200
Socio	77	7,307,300	33	769,500	1,733,700	47	5,298,200
H&PS	27	441,300	14	130,750	165,200	16	393,200
	228	14,057,200	114	2,167,486	4,538,700	123	9,721,200
Fiscal year 1961:							
Anthro	115	4,257,700	85	1,454,000	2,966,800	34	1,595,900
Econ	44	2,796,200	17	618,000	1,016,000	17	1,021,700
Socio	124	8,241,900	43	1,290,700	2,135,300	67	4,095,400
H&PS	33	78,100	21	413,000	585,800	13	174,900
	316	16,076,900	166	3,775,700	6,703,900	131	6,887,900

TABLE C–2.—*Breakdown of research supported by Division of Social Sciences since fiscal year 1958 when separate disciplinary programs were initiated*—Con.

Discipline	Received		Grants activated				Withdrawn and declined	
	Number	Amount	Number	Amount approved	Percent	Dollar requirement	Number	Amount
Fiscal year 1962:								
Anthro	161	5,908,500	89	2,189,545	37	3,073,245	44	1,698,900
Econ	88	7,507,900	38	2,032,250	27	2,898,100	49	4,317,000
Socio	162	9,785,600	65	2,915,750	30	4,334,300	74	4,610,200
H&PS	51	1,277,000	28	671,600	53	731,500	19	370,900
	462	24,479,000	220	7,809,145	31.9	11,037,145	186	10,997,000
Fiscal year 1963:								
Anthro	174	7,959,400	94	2,654,750	33	4,580,350	71	3,050,300
Econ	84	7,733,300	37	2,211,100	29	4,032,900	53	2,914,200
Socio	172	12,900,200	63	3,660,975	28	5,172,975	128	9,492,600
H&PS	61	1,618,800	29	451,600	28	610,500	24	822,100
	491	30,211,700	223	8,978,425	29.7	14,396,725	276	16,279,200
Fiacal year 1964:								
Anthro	179	6,599,000	100	2,699,305	41	3,670,230	89	3,613,800
Econ	106	9,944,100	47	2,207,164	22	5,426,924	49	4,780,100
Socio	143	8,760,400	55	2,620,307	30	4,103,757	95	5,779,300
H&PS	51	1,861,800	35	572,800	31	760,400	23	1,070,800
Spec. Proj	12	5,096,000	9	1,278,600	25	4,721,700	0	0
	491	32,261,300	246	9,378,176	29	18,684,011	256	15,244,000
Fiscal year 1965:								
Anthro	223	10,227,500	112	2,896,600	28	3,731,800	95	4,595,900
Econ	137	7,742,700	65	2,454,950	32	3,651,000	62	3,576,300
Socio	230	13,040,300	93	3,474,400	27	4,771,600	113	6,420,500
H&PS	71	2,052,700	36	891,300	43	1,110,400	23	632,800
Spec. Proj	9	1,391,100	6	562,700	40	800,100	3	296,400
	670	34,454,300	312	10,279,950	29.8	14,064,900	296	15,521,900
Fiscal year 1966:								
Anthro	240	9,780,260	125	3,981,890	41	5,559,620	82	3,872,700
Econ	99	8,574,900	51	2,345,210	27	4,722,200	49	4,247,100
Geog	13	463,700	5	215,300	46	276,600	5	90,900
Socio	196	15,348,800	83	3,658,600	24	6,352,300	125	9,497,200
Pol Sci	47	1,937,800	17	335,650	17	496,300	15	847,900
H&PS	69	2,211,500	49	1,023,000	46	1,584,400	21	569,700
Spec. Proj	19	2,371,500	15	1,032,370	44	1,716,800	9	426,400
	683	40,688,460	345	12,592,020	30.9	20,708,220	306	19,551,900

EXHIBIT D

NATIONAL SCIENCE FOUNDATION

ADVISORY COMMITTEE FOR SOCIAL SCIENCES

Dr. Robert M. Adams, Department of Anthropology, University of Chicago, Chicago, Ill.
Dr. John R. Borchert, Department of Geography, University of Minnesota, Minneapolis, Minn.
Dr. Marshall Clagett, Institute for Advanced Study, Princeton, N.J.
Mr. Stanley Lebergott, Department of Economics, Wesleyan University, Middletown, Conn.
Dr. William H. Sewell, Department of Sociology, University of Wisconsin, Madison, Wis.
Dr. M. Brewster Smith, Department of Psychology, University of California, Berkeley, Calif.
Dr. Alexander Spoehr, Department of Anthropology, University of Pittsburgh, Pittsburgh, Pa.
Dr. James Tobin, Cowles Foundation for Research in Economics, Yale University, New Haven, Conn.
Dr. David B. Truman, Dean of The College, Columbia University, New York, N.Y.
Dr. Robin Williams, Department of Sociology and Anthropology, Cornell University, Ithaca, N.Y.

DIVISION OF SOCIAL SCIENCES

Advisory Panel for Anthropology

Dr. Robbins Burling, Department of Anthropology, University of Michigan, Ann Arbor, Mich.
Dr. James J. F. Deetz, Department of Anthropology, University of California, Santa Barbara, Calif.
Dr. Dell Hymes, Department of Anthropology, University of Pennsylvania, Philadelphia, Pa.
Dr. Robert Murphy, Department of Anthropology, Columbia University, New York, N.Y.
Dr. Irving Rouse, Department of Anthropology, Yale University, New Haven, Conn.
Dr. Evon Z. Vogt, Department of Anthropology, Harvard University, Cambridge, Mass.

Advisory Panel for Economics

Dr. Harold J. Barnett, Department of Economics, Washington University, St. Louis, Mo.
Dr. John S. Chipman, Department of Economics, University of Minnesota, Minneapolis, Minn.[1]
Dr. Richard M. Cyert, Graduate School of Industrial Administration, Carnegie Institute of Technology, Pittsburgh, Pa.
Dr. Rendigs T. Fels, Department of Economics, Vanderbilt University, Nashville, Tenn.
Dr. Franz Gehrels, Department of Economics, Indiana University, Bloomington, Ind.
Dr. Zvi Griliches, Department of Economics, University of Chicago, Chicago, Ill.

[1] Academic year 1966–67—Department of Economics, Harvard University, Cambridge, Mass.

Advisory Panel for History and Philosophy of Science

Dr. Romane L. Clark, Department of Philosophy, Duke University, Durham, N.C.
Dr. Donald Davidson, Department of Philosophy, Stanford University, Stanford, Calif.
Dr. John C. Greene, Department of History, University of Kansas, Lawrence, Kans.
Dr. Carl G. Hempel, Department of Philosophy, Princeton University, Princeton, N.J.
Dr. Martin J. Klein, Department of Physics, Case Institute of Technology, Cleveland, Ohio.
Dr. John E. Murdoch, Committee on the History of Science, Harvard University, Cambridge, Mass.

Advisory panel for political science

Dr. Robert E. Lane, Department of Political Science, Yale University, New Haven, Conn.
Dr. Richard L. Park, Department of Political Science, University of Michigan, Ann Arbor, Mich.
Dr. William H. Riker, Department of Political Science, University of Rochester, Rochester, N.Y.
Dr. James A. Robinson, Department of Political Science, Ohio State University, Columbus, Ohio.
Dr. Kenneth N. Waltz, Department of Political Science, Brandeis University, Waltham, Mass.

Advisory panel for sociology and social psychology

Dr. Theodore R. Anderson, Department of Sociology and Anthropology, University of Iowa, Iowa City, Iowa.[2]
Dr. Donald T. Campbell, Department of Psychology, Northwestern University, Evanston, Ill.
Dr. Ernest Q. Campbell, Department of Sociology and Anthropology, Vanderbilt University, Nashville, Tenn.
Dr. Albert H. Hastorf, Department of Psychology, Stanford University, Stanford, Calif.
Dr. Richard J. Hill, Department of Sociology, Purdue University, Lafayette, Ind.
Dr. Hanan C. Selvin, Department of Sociology, University of Rochester, Rochester, N.Y.
Dr. Ivan D. Steiner, Department of Psychology, University of Illinois, Urbana, Ill.
Dr. Percy H. Tannenbaum, Mass Communications Research Center, University of Wisconsin, Madison, Wis.

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[2] Academic year 1966–67—Department of Sociology, University of Oregon, Eugene, Oreg.

EXHIBIT E

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966

ANTHROPOLOGY

Grant No.	Institution	Investigator and title	Amount	Duration
GS–36, amendment I	University of Maryland	W. Deshler: African Agricultural Patterns	$2,300	January 1963–January 1966.
GS–109, amendment I	National Museum Center for Prehistory and Palaeontology.	L. S. B. Leakey: Prehistory at Olduvai Gorge	31,800	April 1963–December 1968.
GS–133, amendment I	University of Chicago	F. C. Howell: Acheulian Site in Torralba, Spain	7,200	April 1963–December 1966.
GS–205, amendment II	Harvard University	I. De Vore, E. Z. Vogt: Evolution of Human Behavior	11,800	Do.
GS–222, amendment I	University of Oklahoma	R. E. Bell: Caddoan Archeology	16,200	August 1963–August 1966.
GS–539, amendment I	Southern Methodist University	F. Wendorf: Nubian Prehistory and Geology	5,900	September 1964–September 1966.
GS–557, amendment I	University of Colorado	G. W. Hewes: Archeological Salvage in the Aswan Reservoir Area.	44,200	August 1964–August 1966.
GS–610, amendment I	University of Minnesota	R. E. W. Adams: Ceramic Chronology of the Southern Maya	1,100	January 1965–January 1967.
GS–623, amendment I	Kentucky Research Foundation	A. Gallaher, Jr.: Directed Change in a Peasant Society	1,400	May 1965–May 1966.
GS–705, amendment I	Case Institute of Technology	O. H. Prufer: The Welling Site	10,100	February 1965–August 1966.
GS–861, amendment I	University of Hawaii	L. Mason: Doctoral Dissertation Research in Anthropology	800	August 1965–August 1967.
GS–903	Bernice P. Bishop Museum	R. W. Force: Polynesian Culture History	129,200	July 1965–July 1967.
GS–909	University of Houston	P. M. Kolenda: Cultural Processes in a Village Enclave	5,300	July 1965–July 1966.
GS–910	Florida Atlantic University	W. H. Sears: Prehistory of the Lake Okeechobee Basin	76,500	July 1965–July 1969.
GS–911	University of California (Los Angeles)	C. W. Meighan: Cultural and Temporal Correlations in West Mexican Archeology.	75,200	July 1965–July 1968.
GS–916	Brandeis University	G. L. Cowgill: Computer Analysis of Archeological Data From Teotihuacan.	3,400	July 1965–July 1966.
GS–918	Idaho State University	A. L. Bryan: Pleistocene Man in America	6,000	July 1965–January 1967.
GS–923	Harvard University	J. O. Brew: The Rungus Belief System	16,200	July 1965–July 1966.
GS–924	University of California (San Bernardino).	R. C. Owen: Demographic Correlates of the Use of Alcohol	15,200	July 1965–December 1966.
GS–925	University of Washington	W. A. Fairservis, Jr., R. B. Ekvall: Pattern and Role of a Tibetan Institution.	38,500	July 1965–January 1967.
GS–926	Idaho State University	C. N. Warren: San Dieguito Complex	22,700	July 1965–November 1967.
GS–927, amendment I	Brandeis University	J. M. Halpern: Parallel Cultural Evolution in Peasant Societies	66,300 5,000	July 1965–July 1967.
GS–928	Idaho State University	E. H. Swanson, Jr.: Experiments in Flint Working Technology	30,200	Do.
GS–930	Washington State University	D. E. Walker, Jr.: Acculturation of the Nez Perce	2,900	July 1965–July 1966.
GS–935	University of Pennsylvania	H. M. Hoenigswald: Conference on Indo-European and the Indo-Europeans.	4,900	Do.
GS–939	University of North Carolina	J. J. Honigmann: Incipient Urbanization	57,500	September 1965–September 1968.
GS–941	University of Washington	E. B. Harper: Family Economics in a Peasant Society	27,800	July 1965–October 1966.
GS–947	Illinois State University	A. A. Paloumpis: Ichthyological Studies in Scientific Archeology	15,700	September 1965–September 1966.
GS–949	Los Angeles State College Federation	H. J. Landar: Taxonomic Bibliography of North American Indian Languages.	45,400	September 1965–September 1967.

GS-956	University of Hawaii	W. G. Solheim II: Archaeology of Thailand	47,500	Do.
GS-959	Johns Hopkins University	N. Dyson-Hudson: A Comparative Analysis of Pastoral-Nomad Societies.	24,500	August 1965–November 1966.
GS-961, amendment I	University of Chicago	R. Singer: Pleistocene Sites in South Africa	34,800	July 1965–August 1967.
GS-964	Southern Methodist University	E. B. Jelks: Wichita Indians of the Southern Plains	77,200	September 1965–September 1966.
GS-965	University of Hawaii	R. R. Jay: Culture Change in Rural Societies	6,000	Do.
GS-968	do	L. Mason: Culture Change in the Marshall Islands	21,900	Do.
GS-975	University of California (Santa Barbara).	J. Deetz: A Study in Archeological Methodology	31,200	September 1965–September 1967.
GS-976	Harvard University	E. Z. Vogt: An Aerial Ethnographic Study of Tzotzil-Tzeltal Communities.	32,700	Do.
GS-979	Washington State University	A. C. Satterthwait: Sentence-for-Sentence Translation: Arabic-English.	25,600	September 1965–September 1966.
GS-984	Chicago Natural History Museum	P. S. Martin: Evolution of Social Organization in Prehistoric Arizona.	66,700	November 1965–November 1967.
GS-985	Stanford University	H. Befu: A Duolocal System	6,600	October 1965–October 1966.
GS-987	Eastern New Mexico University	C. I. Williams: Origins of the Anasazi	36,300	September 1965–February 1967.
GS-990	Museum of New Mexico	B. N. Colby: Variation in a Complex Society	57,800	December 1965–December 1967.
GS-993	do	A. E. Dittert, Jr.: Excavation of LA 5793, Southwestern New Mexico.	1,630	October 1965–October 1966.
GS-1002	Florida State Museum	J. A. Ford: Formative Period Cultures Around the Gulf of Mexico.	22,800	December 1965–December 1967.
GS-1003	University of California (Berkeley)	H. P. Phillips, D. A. Wilson, M. H. Moerman: Unifying Aspects of a Complex Society.	99,900	December 1965–February 1970.
GS-1004	University of Wisconsin	C. M. Otten: Genetic and Nongenetic Variability	29,000	January 1966–January 1967.
GS-1007, amendment I	Washington University	J. W. Bennett: Experimental Coring at Monks Mound	4,800 960	December 1965–June 1966.
GS-1014	Harvard University	C. DuBois: Culture Change and Stability	39,600	January 1966–January 1968.
GS-1018	University of Florida	E. S. Wing: Economic Patterns of Prehistoric Communities of the Gulf-Caribbean Area.	22,800	Do.
GS-1022	Michigan State University	M. S. Maxwell: Pre-Dorset Sites of Baffin Island	21,600	February 1966–February 1967.
GS-1026	do	C. E. Cleland: Prehistoric Cultures of the Grand Traverse Bay Area, Michigan.	15,900	Do.
GS-1028	University of Pennsylvania	F. Rainey, E. Ralph: Dating of Archeological Evidence by Thermoluminescence.	16,200	January 1966–January 1967.
GS-1031	Southern Illinois University	P. J. C. Dark: An Ethno-aesthetic Study of the Kilenge	36,900	January 1966–August 1967.
GS-1033	University of Pittsburgh	J. P. Gillin: Spanish American Cultural Values	3,000	January 1966–July 1966.
GS-1036	Yale University	H. C. Conklin: Ethnoecological Study of the Philippines	86,000	March 1966–March 1968.
GS-1037	University of Oregon	A. C. Spaulding: Archeology of South Central Alaska	13,900	March 1966–September 1967.
GS-1038	University of Pennsylvania	S. Worth, J. Adair: The Use of Film in Cross Cultural Communication.	40,000	January 1966–January 1967.
GS-1040	do	F. Rainey: Development of the Cesium Magnetometer	17,000	Do.
GS-1046	Washington State University	R. E. Ackerman: The Archeology and Ethnography of Cape Newenham.	73,500	April 1966–April 1968.
GS-1053	Hunter College—City University of New York.	A. Riesenfeld: The Effects of Upright Posture	800	February 1966–February 1967.
GS-1054	University of Colorado	S. T. Brooks: Human Skeletal Remains From the Niah Caves, Malaysia.	15,600	Do.

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966—Continued

ANTHROPOLOGY

Grant No.	Institution	Investigator and title	Amount	Duration
GS–1061	University of New Mexico	J. M. Campbell: Doctoral Dissertation Research in Anthropology.	$1,300	March 1966–March 1967.
GS–1062	University of Illinois	O. Lewis: Doctoral Dissertation Research in Anthropology	5,800	April 1966–October 1967.
GS–1064	University of California (Los Angeles)	J. Wilbert: Doctoral Dissertation Research in Anthropology	3,300	May 1966–May 1967.
GS–1067	Cornell University	M. E. Opler: Doctoral Dissertation Research in Anthropology	400	March 1966–September 1966.
GS–1068	Columbia University	A. P. Vayda: Doctoral Dissertation Research in Anthropology	5,500	April 1966–July 1968.
GS–1070	Rice University	E. Norbeck: An Anthropological Study of New Social Institutions.	14,700	May 1966–May 1967.
GS–1072	University of Arizona	T. P. Culbert: Tikal Ceramic Studies	19,500	May 1966–August 1968.
GS–1075	Washington State University	R. D. Daugherty: The Ozette Village Site	106,200	May 1966–May 1967.
GS–1076	University of Wisconsin	C. S. Chard: Preceramic Cultural Development in Japan	21,500	April 1966–July 1967.
GS–1078	Prescott College	R. C. Euler: Culture History and Prehistoric Settlement Patterns of the Grand Canyon.	20,700	March 1966–December 1966.
GS–1084	University of Chicago	D. M. Schneider: Doctoral Dissertation Research in Anthropology.	11,600	June 1966–November 1967.
GS–1085, amendment I	Southern Illinois University	P. J. C. Dark: Doctoral Dissertation Research in Anthropology	5,100	July 1966–July 1967.
GS–1086	University of Minnesota	E. A. Hoebel: Doctoral Dissertation Research in Anthropology	4,300	April 1966–June 1967.
GS–1088	University of New Mexico	H. W. Basehart: Doctoral Dissertation Research in Anthropology.	5,400	April 1966–October 1967.
GS–1089	University or Oregon	V. R. Dorjahn: Doctoral Dissertation Research in Anthropology	7,900	August 1966–November 1967.
GS–1090	University of California (Berkeley)	J. D. Clark: Doctoral Dissertation Research in Anthropology	3,400	May 1966–November 1966.
GS–1091 amendment I	Southern Illinois University	W. Hardenbergh: Doctoral Dissertation Research in Political Science.	3,100	July 1966–July 1967.
GS–1094	Harvard University	H. L. Movius: Origin and Development of Upper Paleolithic Culture in Western Europe.	37,400	May 1966–May 1968.
GS–1097	Indiana University Foundation	W. R. Hurt: Archeology of the Sambaquis	18,200	May 1966–May 1967.
GS–1098	University of Wisconsin	M. L. Fowler: The Cahokia Site	71,400	April 1966–April 1968.
GS–1099	University of Oregon	D. F. Aberle: Navajo Kinship	30,500	May 1966–May 1968.
GS–1100	University of Michigan	M. Titiev: The Changing Culture of the Hopi Indians at Oraibi	13,400	April 1966–April 1967.
GS–1111	Harvard University	T. C. Patterson: Archeology of the Peruvian Andes	19,100	May 1966–May 1967.
GS–1112	do	D. L. Oliver: Doctoral Dissertation Research in Anthropology	11,300	May 1966–May 1968.
GS–1113	Yale University	H. C. Conklin: Doctoral Dissertation Research in Anthropology	12,100	July 1966–March 1968.
GS–1118	Cornell University	V. W. Turner: A Comparative Study of Initiation Symbolism	7,900	June 1966–December 1966.
GS–1119	University of Oregon	V. R. Dorjahn: Doctoral Dissertation Research in Anthropology	5,200	August 1966–February 1968.
GS–1125	Brandeis University	A. Weingrod: Village-level Modernization	18,800	April 1966–July 1967.
GS–1126	University of Wisconsin	N. C. Tappen: Molar Teeth of Old World Monkeys	1,600	May 1966–May 1967.
GS–1127	University of Arizona	K. L. Hale: A Grammatical Study of Walbiri	19,600	Do.
GS–1128	Columbia University	M. Harris: Techniques for Behavioral Analysis	39,000	August 1966–August 1967.
GS–1132	Southern Illinois University	W. W. Taylor: Beaker Ware of Western Europe	13,100	May 1966–June 1968.
GS–1136	University of Wisconsin	D. E. Thompson: Alanysis of Huanuco Ceramics	22,900	May 1966–May 1967.

GS-1137	University of Michigan	L. L. Pike: Doctoral Dissertation Research in Anthropology	2,000	July 1966–July 1967.
GS-1139	University of Utah	W. R. Miller: The Development of Shoshoni-Panamint Dialects	24,300	May 1966–May 1968.
GS-1141	University of Wisconsin	D. A. Baerreis, J. E. Freeman: Climatic Change and the Woodland Cultures of Wisconsln.	79,400	Do.
GS-1146	The Amerind Foundation, Inc	C. C. DiPeso: Cases Grandes Material Culture	84,000	Do.
GS-1149	Ohio State University Resident Foundation.	C. A. Callaghan: Analysis of Miwok Languages	11,100	July 1966–July 1968.
GS-1154	Southern Illinois University	J. S. Handler: African Populations In the West Indies	12,900	April 1966–September 1967.
GS-1155	Robert S. Peabody Foundation for Archaeology.	D. S. Byers: Tehuacan Archeological Investigations	30,600	June 1966–June 1968.
GS-1156	do	R. S. MacNeish: The Beginning of Agriculture in Peru	7,000	May 1966–November 1966.
GS-1175	Yale University	F. G. Lounsbury: Mayan Linguistics	47,300	June 1966–June 1968.
GS-1176	University of Florida	C. H. Fairbanks: A Spanish Kiln Site	10,700	May 1966–May 1967.
GS-1177	SUNY—Board of Regents Research Fund (Albany).	W. A. Ritchie: Coastal Ecology and Adaptation	17,300	May 1966–May 1968.
GS-1182	University of Chicago	E. Stankiewicz: Accentual Patterns of the Slavic Languages	56,800	Do.
GS-1183	University of California (B)	B. Berlin, P. H. Raven: Studies in Tzeltal Botanical Ethnography.	107,300	June 1966–October 1968.
GS-1185	University of Missouri	W. R. Wood: Archaeology of the Western Ozark Highlands	18,000	June 1966–June 1967.
GS-1192	Southern Methodist University	J. L. Shiner: Prehistory and Geology of the North Central Sudan.	77,400	August 1966–August 1968.
GS-1193	Duke University	W. LaBarre: A Comparative Study of Crisis Cults	9,700	June 1966–June 1967.
GS-1195	Columbia University	E. P. Lanning: Early Man in South America	29,800	May 1966–May 1967.
GS-1196	University of Michigan	J. B. Griffin, A. A. Gordus: Neutron Activation Analysis of Archeological Artifacts.	71,700	May 1966–May 1968.
GS-1201	Duke University	T. O. Beidelman: Ukaguru Development	5,000	May 1966–November 1966.
GS-1216	Dartmouth College	E. Harp, Jr.: Arctic Archaeology	65,400	May 1966–January 1969.
GS-1217	Yale University	H. W. Scheffler: Revitalization Movements in the British Solomons.	48,800	June 1966–September 1968.
GS-1218	Antioch College	M. Ember: Cross Cultural Studies of Marital Residence	9,000	May 1966–August 1967.
GS-1219	XXVII International Congress of Orientalists.	R. H. Fifield: XXVII International Congress of Orientalists	20,000	May 1966–November 1967.
GS-1222	University of Rochester	R. Millon: Map of Classic Period Teotihuacan	186,800	August 1966–August 1968.
GS-1224	University of Illinois	J. B. Casagrande: A Comparative Study of Four Andean Communities.	58,300	June 1966–September 1968.
GS-1226	Brown University	D. D. Anderson: Archeology of the Onion Portage Site	99,800	May 1966–May 1968.
GS-1240	New York University	J. Bordaz: Analysis of Archeological Materials from Suberde	24,200	May 1966–May 1967.
GS-1244	University of California (Santa Barbara).	S. M. Horvath, B. R. Finney: Polynesian Marine Technology	15,500	May 1966–May 1967.
GS-1245	Northern Illinois University	J. H. Funnerson: Apache Archeology in Northeastern New Mexico.	28,800	May 1966–May 1968.
GS-1249	University of California (Los Angeles)	P. Carrasco: Social Organization of Ancient Mexico	19,700	June 1966–June 1968.
GS-1252	Denver Museum of Natural History	H. M. Wormington: Excavation of an Agate Basin Site Near Kersey, Colo.	5,700	June 1966–December 1966.
GS-1255	University of Illinois	J. C. McGregor: Doctoral Dissertation Research in Anthropology.	7,000	June 1966–December 1967.
GS-1256	Pennsylvania State Unviersity	J. W. Michels: Prehispanic Obsidian Industry	16,400	June 1966–June 1968.
GS-1257	University of California (Los Angeles)	R. L. Beals: Impact of a Modern National Economy on a Traditional Market System.	73,700	August 1966–August 1968.

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966—Continued

ANTHROPOLOGY

Grant No.	Institution	Investigator and title	Amount	Duration
GS-1259	University of Oregon	L. S. Cressman: Restudy of the Fort Rick Site	$10,900	May 1966–November 1968.
GS-1261	University of Houston	P. M. Kolenda: Family Structure in India	28,300	July 1966–February 1968.
GS-1264	Yale University	L. Pospisil: Social Change Resulting From Commercialization of a Simple Economy.	21,800	September 1966–September 1968.
GS-1268	Idaho State University	E. H. Swanson: Glaciation and Man in the Birch Creek Valley of Eastern Idaho.	39,200	June 1966–June 1967.
GS-1270	University of Pittsburgh	L. K. Brown: Family and Kinship in a Japanese Town	1,600	June 1966–December 1966.
GS-1271	Boston University	C. Gabel: The Later Stone Age in the Lake Victoria Region	33,100	June 1966–June 1968.
GS-1273	University of Rochester	G. E. Williams: Data Formats for Systematic Ethnography	7,200	July 1966–January 1967.

ECONOMICS

GS-388, amendment I	University of Rochester	N. Kaplan: The Role of Capital Formation in Soviet Economic Growth.	$6,200	June 1964–December 1966.
GS-721, amendment I	University of California (Davis)	T. Mayer: Disaggregated Demand Function for Money	2,100	July 1965–July 1966.
GS-931	University of North Carolina	G. S. Tolley: Econometric Analysis of Changes in Consumption Habits.	43,400	July 1965–July 1967.
GS-937	University of Pennsylvania	O. E. Williamson: Discretionary Behavior of the Firm	13,100	September 1965–June 1966.
GS-938	Harvard University	H. S. Houthakker: Studies in U.S. Consumption and Savings	69,600	September 1965–September 1968.
GS-940	University of North Carolina	J. C. Ingram: European Capital Markets and Balance-of-Payments Adjustment.	76,800	Do.
GS-942	University of Pennsylvania	R. A. Easterlin: Economic Development in Historical Perspective.	27,300	September 1965–September 1966.
GS-943, amendment I	University of Michigan	R. M. Stern: Factors Affecting Exports	15,000 900	Do.
GS-944	Southern Methodist University	D. S. Huang: Quantitative Studies of Consumer Durables	31,600	September 1965–June 1967.
GS-948	University of California (Los Angeles)	R. M. Williams: Regional Economic Analysis	46,500	August 1965–January 1968.
GS-950	do	K. Brunner: Econometric Studies of Monetary Processes	56,100	August 1965–August 1968.
GS-977	Purdue Research Foundation	S. N. Afriat: Analysis of Consumers' Preferences and Construction of Index Numbers.	14,900	September 1965–September 1966.
GS-980	University of Virginia	J. M. Buchanan: Decision Rules and Institutional Organizational Forms.	63,000	September 1965–September 1967.
GS-983	Purdue Research Foundation	R. L. Basmann: Exact Finite Sample Distributions	63,600	October 1965–September 1967.
GS-986	Stanford University	T. Amemiya: Special Analysis and Econometric Theory	24,100	October 1965–October 1967.
GS-988	Wayne State University	R. F. Kosobud: Time Series Study of Consumer Behavior	30,300	Do.
GS-989	University of Pittsburgh	C. Goodrich, J. Rubin: Comparative Economic History	24,300	September 1965–September 1966.
GS-994	University of Wisconsin	R. F. Miller, M. H. David: Micro-Economic Data Preparation	153,900	October 1965–October 1967.
GS-1006	University of Virginia	A. Whinston: Quadratic and Nonlinear Programing for Economics.	34,500	February 1966–February 1968.

GS-1011	University of Michigan	W. F. Stolper: Doctoral Dissertation Research in Economics	2,500	January 1966–January 1967.
GS-1024	Washington University	T. Rader: General Economic Equilibrium Theory	28,600	Fdebruary 1966–February 1968.
GS-1030	University of Rochester	R. N. Rosett: Sampling Distribution of Probit Analysis and Related Techniques.	28,000	Do.
GS-1045	Wesleyan University	R. C. Vogel: Corporate Demand for Liquid Assets	12,800	April 1966–October 1967.
GS-1051	University of Rochester	R. N. Rosett: Doctoral Dissertation Research in Economics	660	February 1966–February 1967.
GS-1059	University of California (Berkeley)	J. W. Garbarino: An Analysis of the Salaries of Scientific and Academic Personnel.	19,200	July 1966–October 1967.
GS-1101	Massachusetts Institute of Technology.	P. Temin: Econometric Study of Inflation in the 1830s	8,700	June 1966–June 1967.
GS-1104	Duke University	T. H. Naylor, W. H. Wallace: Computer Simulation Experiments for Economic Systems.	77,100	July 1966–July 1968.
GS-1106	University of California (Berkeley)	D. E. Laidler: The Demand for Money	17,000	July 1966–October 1967.
GS-1107	University of Michigan	D. B. Suits: Quantitative Economics	91,600	August 1966–August 1968.
GS-1110	do	E. Mueller: Doctoral Dissertation Research in Economics	2,500	May 1966–December 1967.
GS-1120	Yale University	D. D. Hester: Doctoral Dissertation Research in Economics	2,000	April 1966–April 1967.
GS-1123	University of Kansas	J. P. Quirk: Scope of the Correspondence Principle in Comparative Statics.	18,400	July 1966–July 1967.
GS-1130	Iowa State University of Science and Technology.	W. R. Maki, J.R. Prescott: Simulation Studies of Rural-Urban Development.	76,500	September 1966–September 1968.
GS-1133	Brandeis University	J. S. Berliner: Innovation in the Soviet Economy	52,600	Do.
GS-1145	University of Pennsylvania	E. S. Phelps: Price-Wage Behavior and the Inflationary Process	57,100	Do.
GS-1148	University of California (Berkeley)	D. L. McFadden: Doctoral Dissertation Research in Economics	800	June 1966–June 1967.
GS-1152	The Brookings Institution	G. Fromm, E. Kuh, L. R. Klein: An Econometric Model of the United States Economy.	226,300	July 1968.
GS-1169	University of Pennsylvania	O. E. Williamson: Analytical Research in Industrial Organization.	30,500	June 1966–June 1968.
GS-1191	University of California (Los Angeles)	J. Marschak: Economics of Information and Organization	90,600	July 1966–July 1968.
GS-1198	University of Minnesota	A. O. Krueger: A General Equilibrium Analysis of Balance of Payments Theory.	35,000	September 1966–September 1968.
GS-1202	Yale University	T. C. Koopmans: Mathematical Economic Models	101,100	July 1966–July 1968.
GS-1204	University of California (Berkeley)	G. Debreu: Measure Spaces of Economic Agents	33,600	Do.
GS-1205	University of Hawaii	H. T. Oshima: A Tri-Sector Model for Economic Development	43,100	Do.
GS-1206	Ohio State University, Research Foundation.	K. Brunner: Econometric Studies of Monetary Processes	49,100	July 1966–September 1967.
GS-1212	Yale University	D. D. Hester, J. Tobin: Financial Institutions and Capital Markets.	110,900	April 1966–July 1968.
GS-1213	University of Minnesota	C. Hildreth: Econometric Models in Statistical Decision Making	53,000	April 1966–April 1968.
GS-1220	The National Industrial Conference Board.	D. Creamer: Statistical Analysis of Location of Manufacturing	3,000	June 1966–June 1967.
GS-1235	Northwestern University	I. Adelman: Optimizing Models for the Planning of Investment in Education.	93,500	June 1966–June 1968.
GS-1243	University of Pennsylvania	N. D. Baxter: Empirical Study of Corporate Financing Decisions.	49,200	July 1966–July 1968.
GS-1250	Brown University	M. J. Beckmann, H. E. Ryder, Jr.: Dynamics of Stability and Growth.	55,300	September 1966–September 1968.
GS-1260	University of California (Berkeley)	J. W. Garbarino: Doctoral Dissertation Research in Economics	1,900	July 1966–January 1967.
GS-1272	University of Wisconsin	R. E. Baldwin: Determinants of the Structure of International Trade.	43,800	September 1966–September 1968.
GS-1274	Wesleyan University	R. A. Miller: Relationship of Concentration and Profit in Manufacturing.	9,900	June 1966–October 1967.

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966—Continued

SOCIOLOGY AND SOCIAL PSYCHOLOGY

Grant No.	Institution	Investigator and title	Amount	Duration
GS–191, amendment I	Harvard University	A. Inkeles: Social and Cultural Aspects of Modernization	$26,100	May 1963–September 1966.
GS–221, amendment I	University of Colorado	W. N. McPhee: Formal Models of Mass Social Processes	7,300	July 1963–July 1966.
GS–513, amendment I	Harvard University	T. Parsons, N. W. Storer: The Academic Profession	4,700	July 1964–July 1966.
GS–536, amendment I	Yale University	R. J. Rummel: Dimensionality of Nations	13,600	Do.
GS–580, amendments I and II.	Massachusetts Institute of Technology	C. Tilly: Social Disorder in the Urbanization of France	11,600 6,300	September 1964–September 1966.
GS–602, amendment I	San Diego State College Foundation	R. A. Lewis, J. W. Leasure: Population Changes in Russia: 1860–1959.	6,700	Do.
GS–639, amendment I	Cornell University	R. C. Young, S. Muller: Development of Rigid Societies	3,700	January 1965–August 1966.
GS–728, amendment I	Social Science Research Council	P. Herring: Research Practicum in Experimental Social Psychology.	36,700	April 1965–April 1968.
GS 822, amendment I	Tufts University	T. B. Roby, E. Singer: Behavioral Factors in Decision-Making	4,000	June 1965–June 1967.
GS 920	Cornell University	D. P. Hayes, L. Meltzer: Paralinguistic Dimensions of Social Interaction.	51,400	July 1965–September 1967.
GS–921	University of Wisconsin	L. F. Schnore: Ecological Patterns in American Cities	83,700	July 1965–July 1968.
GS–929	University of Michigan	L. Guttman, J C Lingoes: Nonmetric Analysis in Social Science	58,800	July 1965–July 1967.
GS–932	Loyola University of Chicago	H. H. Johnson: Magnitude of Attitude Change	4,900	September 1965–September 1966.
GS–945	University of Colorado	K. E. Davis: Ingratiation and Persuasion	31,300	September 1965–September 1967.
GS–946	University of Michigan	D. E. Stokes: Comparative Analysis of Representation	56,100	Do.
GS–951	North Carolina State University	G. S. Leventhal: Self-Deprivation as Aggression and Control	30,000	Do.
GS–953	University of Illinois	L. A. Jakobovits: Repetition in Behavior	17,200	September 1965–May 1967.
GS–954	University of Connecticut	J. Lopreato: Stratification and Economic Development	37,700	September 1965–September 1967.
GS–955	University of Minnesota	K. E. Weick: Behavioral Consequences of Cognitive Inconsistency.	8,600	September 1965–September 1966.
GS–957	University of Kentucky	M. J. Lerner: Cognitive Processes in Interpersonal Attraction	30,400	September 1965–September 1967.
GS–958	Northwestern University	R. F. Winch: System Determinants of Influence	73,000	Do.
GS–960	Columbia University	R. K. Merton: Sociology of Science	99,900	August 1965–August 1967.
GS–962	University of California (Santa Barbara).	C. H. Hubbell: Input-Output Analysis of Networks	33,600	September 1965–January 1967.
GS–963	University of Illinois	H. S. Upshaw: Principles of Scale Formation	7,700	September 1965–September 1966.
GS–966	University of Delaware	R. C. Ziller: Self-Other Orientations	30,000	September 1965–September 1967.
GS–970	University of Michigan	P. E. Converse: Urban Time Use Survey	111,700	September 1965–January 1967.
GS–981	Western Michigan University	J. A. Schellenberg: Dependence and Cooperation	15,000	January 1966–January 1968.
GS–982	Johns Hopkins University	A. Stinchcombe: Social Context of Industry	13,800	October 1965–October 1967.
GS–991	University of Michigan	D. W. Lewit: Group Composition and Communication	48,000	Do.
GS–992	Columbia University	L. M. Wiggins: Latent Process Models of Behavior	19,000	Do.
GS–999	Purdue Research Foundation	M. Pilisuk: Psychology of Conflict	48,400	November 1965–January 1968.
GS–1000	University of California (Riverdside)	N. Miller: Group Structure and Control	30,400	November 1965–September 1967.
GS–1001	University of Chicago	B. D. Wright: Sample-Free Model for Psychological Measurement.	43,300	November 1965–November 1967.

GS–1005	Center for Advanced Study in Behavioral Sciences.	P. S. Cutler: Work Group on Consistency Theory	34,800	December 1965–December 1966.
GS–1009	Columbia University	D. C. Glass: Resolution of Cognitive Discrepancies	32,400	January 1966–January 1968.
GS–1015	University of Chicago	D. MacRae, Jr.: Multivariate Analysis of Legislative Behavior	41,300	Do.
GS–1016	Kent State University	N. B. Cottrell: Cognitive Dissonance as a Nonspecific Energizer	37,100	Do.
GS–1020	Indiana University	E. F. Jackson, R. F. Curtis: Vertical Mobility and Status Inconsistency.	39,900	Do.
GS–1023	Research Foundation of State University of New York.	I. Silverman: Role-Related Behavior in the Psychological Experiment.	21,600	Do.
GS–1025	University of Chicago	R. D. Bock: Multivariate Analysis of Quantitative Data	64,000	Do.
GS–1027	University of Michigan	A. Rapopot: Psycholinguistic Models	37,300	January 1966–January 1967.
GS–1029	Tufts College	F. W. Wicker: Scaling the Intrinsic Meaning of Speech Sounds	5,000	February 1966–February 1968.
GS–1032	University of California (Santa Barbara).	C. G. McClintock, D. M. Messick: Strategic and Motivational Aspects of Social Interaction.	38,300	January 1966–January 1968.
GS–1034	Kansas State University of Agriculture and Applied Science.	E. J. Phares: Perceptions of Influence on Behavior	31,100	February 1966–February 1968.
GS–1035	Cornell University	F. W. Young: Properties and Determinants of Community Growth.	32,500	January 1966–January 1968.
GS–1042	University of Minnesota	K. E. Weick: Behavorial Consequences of Cognitive Inconsistency.	42,700	February 1966–February 1968.
GS–1043	Massachusetts Institute of Technology	J. M. Beshers: Models of Internal Migration	61,200	Do.
GS–1044	University of Connecticut	W. I. Wardwell: Doctoral Dissertation Research in Sociology	1,700	January 1966–January 1967.
GS–1048	Brown University	S. Goldstein: Doctoral Dissertation Research in Sociology	11,300	February 1966–February 1967.
GS–1049	University of Oregon	R. C. Ziller: Self-Other Orientations	28,000	January 1966–September 1967.
GS–1056	University of Minnesota	E. C. Walster: Compensatory Responses in Interaction	52,000	February 1966–February 1968.
GS–1057	Yale University	W. Bell: Doctoral Dissertation Research in Sociology	4,500	March 1966–March 1967.
GS–1060	University of Chicago	D. W. Fiske: Personality Measurement	73,600	May 1966–May 1968.
GS–1073	Harvard University	K. J. Gergen: Self-Presentation and Social Expectancy	27,400	July 1966–July 1968.
GS–1077	Duke University	J. Smith: Socio-Economic Differentiation of Populations in Urbanized Areas.	61,300	June 1966–June 1968.
GS–1081	University of Minnesota	M. D. Dunnette: Interpersonal Perception and Behavior Prediction.	86,200	Do.
GS–1083	Stanford University	J. L. Freedman: Psychological Mechanisms for Resisting Persuasion.	35,500	Do.
GS–1087	Oakland University	J. R. Pitts: "Conference on the Sociology of the Intellectual" to be held at Oakland University, Rochester, Mich., May 5–8, 1966.	5,100	May 1966–May 1967.
GS–1093	Vanderbilt University	E. Weinstein: Altercasting in Social Interaction	49,200	June 1966–June 1968.
GS–1095	University of Chicago	M. J. Rosenberg: Evaluation Apprehension and Counter-Attitudinal Performance.	57,100	Do.
GS–1105	University of Washington	E. Stotland: Experimental Studies of Empathy	39,000	May 1966–May 1968.
GS–1108X	Columbia University	W. J. McGuire: Correlates of Persuasibility and Social Perception.	39,800	June 1966–June 1968.
GS–1114X	Duke University	E. E. Jones: Person Perception and Self-Presentation	60,700	Do.
GS–1115	Stanford University	J. M. Carlsmith: Determinants of Obedience and Compliance	30,100	Do.
GS–1116	University of Michigan	M. Manis, R. M. Dawes: Compound Judgment	38,500	Do.
GS–1117X	Cornell University	U. Bronfenbrenner: Cross-Cultural Studies of Child Rearing	91,400	July 1966–July 1968.
GS–1121X	University of California (Los Angeles)	H. H. Kelley: Studies of Social Relationships	88,600	April 1966–April 1968.

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966—Continued

SOCIOLOGY AND SOCIAL PSYCHOLOGY—Continued

Grant No.	Institution	Investigator and title	Amount	Duration
GS–1122	University of Pennsylvania	R. D. Lambert: Industralization and Labor Market Dynamics	$40,700	June 1966–June 1968.
GS–1140	do	D. S. Thomas: Correlates of Migration and Urbanization	123,000	September 1966–September 1968.
GS–1143	University of California (Berkley)	R. S. Lazarus: Stress Response Patterning	47,900	Do.
GS–1144	Research Foundation of State University of New York (Buffalo).	S. C. Jones: Self-Evaluation and Inter-personal Evaluation	20,000	June 1966–June 1968.
GS–1151	University of California (Berkeley)	C. Mendelsohn: Doctoral Dissertation Research in Psychology	900	May 1966–May 1967.
GS–1153	Harvard University	J. S. Bruner: Language and Cognition	110,900	July 1966–July 1968.
GS–1158	University of Illinois	H. S. Upshaw: Principles of Scale Formation	29,200	June 1966–June 1968.
GS–1168	Purdue Research Foundation	R. Perrucci: Organizations, Careers and Professional Performance.	33,200	September 1966–September 1968.
GS–1170	Stanford University	M. Zelditch, Jr.: Authority Structures and Evaluations	127,400	July 1966–July 1968.
GS–1173	University of Oregon	J. M. Armer: Value Transition in Preindustrial Society	32,200	June 1966–June 1968.
GS–1184	Washington University	R. Buckhout: Psychophysiology of Attitude Change	18,400	June 1966–June 1967.
GS–1194	University of California (Los Angeles)	B. E. Collins: Environmental Pressure and Personal Conviction	49,200	June 1966–June 1968.
GS–1203	University of Chicago	S. R. Maddi, L. M. Rulla: Personalty Change in Adults	46,400	May 1966–May 1968.
GS–1221	University of California (Irvine)	M. Cole: Learning and Thinking in a Non-Western Culture	86,400	June 1966–June 1968.
GS–1223	University of California (Santa Cruz)	D. Marlowe: Detrminants of Bargaining	13,700	July 1966–July 1968.
GS–1225	Harvard University	E. G. Mishler: Family Structure and Interaction	55,200	September 1966–September 1968.
GS–1227	University of Texas	J. Lopreato: Stratification and Economic Development	11,700	September 1966–September 1967.
GS–1228	Cornell University	L. Berkowitz: Representations of Aggressive Events	68,500	October 1966–October 1968.
GS–1238	New York University	J. Darley: Bystander Intervention in Emergency Situations	34,600	June 1966–June 1968.
GS–1239	Columbia University	B. Latane: Bystander Intervention in Emergency Situations	28,700	Do.
GS–1241	Social Science Research Council	E. Sibley: Sociolinguistics	76,900	May 1966–May 1968.
GS–1253	Harvard University	P. J. Stone, D. C. Dunphy: The General Inquirer System for Content Analysis.	54,600	September 1966–September 1967.
GS–1253	University of Wisconsin	C. Perrow: Comparative Study of Organizations	11,500	Do.
GS–1264	New Mexico State University	H. R. Marshall: Learning of Conformity in Preschool Years	32,600	June 1966–June 1968.

HISTORY AND PHILOSOPHY OF SCIENCE

GS–912	California Institute of Technology	D. J. Kevles: American Physics: 1865–1939	$1,400	July 1965–January 1966.
GS–913	University of Illinois	M. H. Fisch: A Biography of Charles S. Peirce	40,900	July 1965–July 1968.
GS–914	Oregon State University	J. B. Spencer: The Zeeman Effect and the Bohr Theory of the Atom: 1913–1925.	11,200	July 1965–September 1968.
GS–915	Northwestern University	W. Jaffe: Leon Walras' Contributions to Economics	65,700	July 1965–January 1968.
GS–917	University of North Carolina	J. Heintz: Computer Investigations of Logical Systems	28,300	July 1965–July 1968.
GS–919	Vanderbilt University	R. A. Fraser: The Development of Scientific Discourse	22,400	July 1965–January 1968.
GS–922	Cornell University	L. P. Williams: The Scientific Contributions of Andre-Marie Ampere.	22,700	July 1965–September 1967.
GS–933	Woods Hole Oceanographic Institution	H. L. Burstyn: The History of Oceanography	8,700	July 1965–July 1970.
GS–952	University of California (Berkeley)	C. Susskind: The History of Radar	6,000	August 1965–August 1966.
GS–967	Washington University	T. S. Hall: Two Physiological Treatises of Rene Descartes	30,800	September 1965–September 1967.

GS–969	Fountain Valley School	F. M. Brown: The Letters of Hermann Strecker, Lepidopterist	3,400	Do
GS–971	Case Institute of Technology	R. E. Schofield: Experimental Natural Philosophy in 18th Century Britain.	37,000	Do.
GS–972	University of Wisconsin	A. J. Ihde: Development of Biochemistry in America	37,300	Do.
GS–973	Bryn Mawr College	H. Leblanc: Mathematical Logic	8,300	September 1965–September 1966.
GS–978	Brandeis University	N. Goodman: Theory of Symbols and Schemata	51,100	September 1965–September 1967.
GS–1010	Ohio Wesleyan University	R. B. Angell: The Logic of Subjunctive Conditionals	11,300	January 1966–January 1968.
GS–1012	University of Chicago	H. Mehlberg: Time, Space and the Atom	19,000	January 1966–January 1967.
GS–1013	University of Michigan	D. C. Lindberg: John Peckham and the Progress of Late Medieval Optics.	8,700	January 1966–January 1968.
GS–1017	Northwestern University	D. Joravsky: A History of Michurinist Biology	9,700	January 1966–June 1966.
GS–1047	Yeshiva University	A. E. Woodruff: History of 19th Century Physics	10,200	February 1966–February 1968.
GS–1058	University of Notre Dame	K. M. Sayre: Pattern Recognition and Formation by Machine	40,200	May 1966–May 1968.
GS–1069	Harvard University	I. B. Cohen: Doctoral Dissertation Research in History of Science.	3,100	May 1966–November 1967.
GS–1074	Indiana University Foundation	E. Grant: The Concept of Void Space in Medieval Physics	36,700	June 1966–June 1968.
GS–1102	State University of Iowa	G. Bergmann: The Foundations of Mathematics	21,700	May 1966–May 1969.
GS–1103	University of Pittsburgh	W. Sellars: Structure of Concepts of Time	30,000	May 1966–May 1968.
GS–1121	University of Minnesota	G. Maxwell: The Interpretation of Scientific Theories	29,000	July 1966–July 1968.
GS–1131	Washington University	R. S. Rudner: Non-Evidential Factors in Inductive Logic	37,100	May 1966–August 1968.
GS–1135	University of Minnesota	M. Brodbeck: Concepts and Explanation in Social Sciences	14,700	June 1966–June 1969.
GS–1138	Case Institute of Technology	R. E. Schofield: Doctoral Dissertation Research in the History of Science.	3,100	April 1966–July 1967.
GS–1142	University of Texas	D. D. VanTassel: Doctoral Dissertation Research in the History of Science.	1,800	May 1966–November 1966.
GS–1150	Indiana University Foundation	M. Scriven: Scientific Understanding	46,600	June 1966–September 1968.
GS–1157	University of Vermont	W. J. King: The Quantification of Physical Sciences: 1600–1875	6,000	May 1966–May 1967.
GS–1171	Vassar College	R. Rappaport: Government Patronage of Science in France: 1740–89.	4,800	June 1966–August 1967.
GS–1172	Yale University	N. R. Hanson: History of Aeronautical Theory	14,400	June 1966–June 1967.
GS–1178	Western Reserve University	S. Gorovitz: Linguistic Analysis and Physical Theory	2,900	May 1966–November 1966.
GS–1179	University of Rochester	H. E. Kyburg: The Logical Foundations of Statistical Inference	15,100	June 1966–August 1967.
GS–1180	University of Illinois	J. M. Vickers: Rules of Inference and the Determination of Belief.	7,200	Do.
GS–1207	Harvard University	E. I. Mendelsohn: Physical Models and Physiological Concepts in Nineteenth Century Biology.	10,100	June 1966–June 1968.
GS–1209	University of Texas	R. Palter: Observation and Interpretation in the History of Physics.	11,600	June 1966–September 1967.
GS–1214	Harvard University	I. B. Cohen: The Scientific Thought of Isaac Newton	59,900	July 1966–September 1968.
GS–1215	Princeton University	J. R. Wallace: The Language of Explanation	15,300	Do.
GS–1236	University of Notre Dame	E. Manier: The Meanings of "Fitness" and the Logic of Functional Analysis.	7,200	May 1966–May 1968.
GS–1242	Washington University	R. B. Barrett: Finite Logistic Systems	19,400	July 1966–July 1968.
GS–1262	Yale University	A. H. Aaboe: Babylonian Astronomy	18,800	June 1966–June 1968.
GS–1263	City University of New York—City College Research Fund.	R. C. Jeffrey: Objective and Intersubjective Considerations in Decision Theory.	24,600	Do.
GS–1265	Princeton University	T. S. Kuhn: Quantum Mechanics: 1897–1928	66,900	July 1966–July 1968.
GS–1267	University of New Hampshire	C. J. Schneer: Conference on the History of Geology	13,300	June 1966–June 1968.
GS–1269	Wellesley College	J. Goodfield: 20th Century Embryology	23,000	August 1966–August 1968.
GS–1275	University of Wisconsin	E. N. Hiebert: The History of Noble Gases	4,400	July 1966–January 1967.

National Science Foundation, Division of Social Sciences grant list, July 1965 through June 1966—Continued

SPECIAL PROJECTS

Grant No.	Institution	Investigator and title	Amount	Duration
GS–324, amendment I (political science).	University of California (Berkeley)	C. Y. Glock: Development of a Data Repository System	$4,800	January 1964–October 1966.
GS–466, amendment I (interdisciplinary.)	Center for Advanced Study in Behavioral Sciences.	P. S. Cutler: Advanced Study and Research in Social Sciences	53,800	December 1964–October 1966.
GS–934, (linguistics)	University of Oklahoma Research Institute.	J. E. Grimes, R. V. Andree: Linguistic Information Retrieval Program for Analysis of Aborginal Languages.	41,100	July 1965–July 1967.
GS–996, (political science)	Williams College	P. K. Hastings: Acquisition of Foreign Survey Data	88,000	November 1965–November 1967.
GS–997, (linguistics)	The Newberry Library	E. P. Hamp: Conference on Linguistic Bibliography and Computer Technology.	5,300	November 1965–November 1966.
GS–1021, (political science.)	Syracuse University Research Institute.	F. G. Burke: Microfilm Acquisition Program	24,700	December 1965–December 1966.
GS–1052 (sociology and social psychology).	National Opinion Research Center	P. H. Rossi, R. L. Crain: Feasibility of Establishing a Sampling Frame for American Communities.	63,400	February 1966–August 1967.
GS–1071 (economics)	University of Washington	E. M. Horwood: Real-Time Computer Experiments in Urban Analysis.	40,800	April 1966–April 1967.
GS–1199 (anthropology)	Museum of the American Indian	C. Guadagno: Preservation of Photographic Archives	54,900	May 1966–May 1968.
GS–1208 (anthropology)	Human relations area files	C. S. Ford: Cross-Cultural Research Materials Improvement Program.	49,400	June 1966–June 1967.
GS–1237 (economics)	Yale University	R. Ruggles: Generalized Economic Information Data Files	170,600	July 1966–July 1968.
GS–1258 (political science	Columbia University	A. H. Barton: A Program of Collaboration and Research Services Among Social Science Data Archives.	[1] 293,800	May 1966–May 1968.
GK–835 (linguistics)	Massachusetts Institute of Technology	H. J. Zimmermann: Research of Communication Sciences	[2] 36,220	February 1966–February 1967.

SPECIALIZED FACILITIES

GS–1129 (anthropology)	Museum of New Mexico	K. H. Honea: Research Equipment for Southwestern archeology Facility.	$5,100	May 1966–May 1967.
GS–1147 (linguistics)	University of California (Los Angeles)	P. N. Ladefoged: Equipment for Speech Communication Research Facility.	58,000	June 1966–June 1967.
GS–1229 (economics)	University of California (Berkeley)	F. E. Balderston: Management Science Research Facility	124,300	June 1966–June 1968.
GS–1231 (political science).	University of Michigan	W. E. Miller: Improvement of Data Processing Facilities	250,000	June 1966–June 1967.
GB–4000 (anthropology)	Duke University	J. Buettner-Janusch: Facilities and Maintenance for Phylogenetic and Ethnological Research with Prosmian Primates.	[3] 68,450	August 1965–August 1969.
GB–4779 (anthropology)	University of Florida	J. C. Dickinson: Specialized Research Facility for Natural and Social Sciences.	[4] 312,650	February 1966–February 1968.
GB–4970 (anthropology)	Panhandle-Plains Historical Museum	J. T. Hughes: Facilities and Curatorial Support for the Scientific Collections of the Panhandle-Plains Historical Museum.	[5] 25,000	April 1966–April 1968.

GEOGRAPHY

GS-995	University of California (Berkeley)	A. R. Pred: Metropolitan Complementarity and Hinterland Competition.	$17,700	December 1965–December 1967.
GS-1066	University of Chicago	B. J. L. Berry: Doctoral Dissertation Research in Geography	4,300	August 1966–August 1967.
GS-1082	University of Michigan	W. R. Tobler: Spectral Analysis of Geographical Distributions	83,500	May 1966–May 1968.
GS-1109, amendment I	University of Minnesota	P. W. Porter: Doctoral Dissertation Research in Geography	8,900	June 1966–January 1968.
GS-1211	University of Pennsylvania	B. Harris: Location and Structure of Housing Demand and Supply.	93,400	July 1966–July 1968.

POLITICAL SCIENCE

GS-1008	University of Michigan	W. E. Miller: Research Conference on the Comparative Study of American Political Behavior.	$15,300	January 1966–January 1967.
GS-1019	University of Connecticut	L. L. Gerson: Doctoral Dissertation Research in Political Science	1,200	Do.
GS-1041	Northwestern University	R. Tanter: Comparative International Processes	38,600	February 1966–February 1968.
GS-1055	University of Kansas	R. D. Laird: Comparative Study of Agricultural Systems	9,000	February 1966–February 1967.
GS-1063	University of North Carolina	J. W. Prothro: Doctoral Dissertation Research in Political Science.	1,550	June 1966–June 1967.
GS-1065	University of Pittsburgh	C. Beck: Doctoral Dissertation Research in Political Science	2,500	May 1966–May 1967.
GS-1079	University of Rochester	A. S. Goldberg: Causal Model of Voting Behavior	4,500	June 1966–June 1967.
GS-1080	University of Georgia	T. R. Dye: Research Conference on the Comparative Study of Local Communities.	12,500	April 1966–April 1967.
GS-1092	Stanford University	G. A. Almond: Doctoral Dissertation Research in Political Science.	1,100	May 1966–May 1967.
GS-1096	University of Kansas	F. H. Heller: Doctoral Dissertation Research in Political Science	1,300	July 1966–July 1967.
GS-1134	Duke University	A. Kornberg: Comparative Study of Political Socialization and Recruitment.	86,100	July 1966–July 1968.
GS-1174	University of Connecticut	E. C. Ladd, Jr.: Comparative Study of Ideology	23,600	June 1966–June 1968.
GS-1181	University of Georgia	F. K. Gibson: Doctoral Dissertation Research in Political Science.	2,500	June 1966–June 1967.
GS-1197	University of California (Irvine)	L. A. Froman, Jr.: Experimental Tests of a Theory of Bargaining.	28,600	July 1966–July 1968.
GS-1200	State University of Iowa	S. C. Patterson: Doctoral Dissertation Research in Political Science.	8,800	June 1966–June 1967.
GS-1210	Massachusetts Institute of Technology	I de Sola Pool: Doctoral Dissertation Research in Political Science.	17,700	June 1966–June 1968.
GS-1230	University of Hawaii	P. J. Rummel: Dimensionality of Nations	73,300	July 1966–July 1968.

[1] $366,300 total awarded.
[2] $181,100 total awarded.
[3] $406,700 total awarded.
[4] $1,112,650 total awarded.
[5] $75,300 total awarded.

NATIONAL FOUNDATION FOR SOCIAL SCIENCES

WEDNESDAY, FEBRUARY 8, 1967

U.S. SENATE,
SUBCOMMITTEE ON GOVERNMENT RESEARCH,
COMMITTEE OF GOVERNMENT OPERATIONS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:10 a.m., in room 1318, New Senate Office Building, Senator Fred R. Harris (chairman) presiding.

Present: Senators Harris and Hansen.

Also present: Dr. Steven Ebbin, staff director.

Senator HARRIS. The subcommittee will be in order.

This morning we are resuming the hearings in the second day to consider Senate bill 836, a bill to create a National Foundation for the Social Sciences.

I am pleased to announce at the beginning of this second day of hearings that at his request yesterday I added as a cosponsor of this bill the name of the ranking minority member of this subcommittee and the ranking minority member of the full committee, Senator Mundt, which brings to a total of 20 the number of Senate cosponsors.

We are pleased to hear first this morning from Mr. Thomas L. Hughes, Director of the Bureau of Intelligence and Research, in the Department of State.

I believe, Mr. Hughes, you have some associates with you. We would appreciate your presenting them if you will.

TESTIMONY OF THOMAS L. HUGHES, DIRECTOR, BUREAU OF INTELLIGENCE AND RESEARCH, DEPARTMENT OF STATE, ACCOMPANIED BY DR. RAYMOND PLATIG, DIRECTOR, AND JOHN SEWELL, STAFF MEMBER, OFFICE OF EXTERNAL RESEARCH, BUREAU OF INTELLIGENCE AND RESEARCH

Mr. HUGHES. Thank you, Mr. Chairman.

I am accompanied this morning by Dr. Raymond Platig, who is Director of the Office of External Research in the Bureau of Intelligence and Research, and Mr. John Sewell, who is a member of that Office.

Senator HARRIS. Fine. You have a prepared statement, Mr. Hughes. You may either present it in full or excerpt from it or however you may desire.

Mr. HUGHES. Thank you, Mr. Chairman.

On behalf of the Department of State, I am glad to accept your invitation to appear before you to discuss S. 836, a bill to create a

National Foundation for the Social Sciences. I shall attempt to answer each of the questions posed in the chairman's letter with regard to the Department of State. I understand you already have heard testimony from the U.S. Arms Control and Disarmament Agency and the Peace Corps and will hear from the U.S. Information Agency later this morning.

STATE DEPARTMENT USE OF THE SOCIAL SCIENCES

The origins of the State Department's Bureau of Intelligence and Research, as this subcommittee knows, trace back to 1946 when the research branch of the Office of Strategic Services transferred to State. During World War II this Office had drawn from the universities an imposing array of first-rate academic talent—scholars who applied their traditional methods of analysis and evaluation to novel foreign area research materials in order to meet Government policy needs. This group formed the nucleus of the Department's present research organization.

There had been specialized research offices in State before 1946. The foreign area research they conducted during and before World War II was integrated into the new postwar organization. The Geographer of the Department has always done research into such geographical problems as the delineation of boundaries and the allocation of visa quotas. During the war he had developed a small staff of geographer-economists to help answer the many current questions on national resources and trade relations of other countries. In the Bureau of American Republics Affairs there was a small group which performed social science research on problems of the area. There was also a biographic intelligence unit. And during the latter part of the war the Department organized a large group of political and economic experts to assist in laying plans for the peace; this group rapidly disbanded in 1945. When the new Research Office was placed in the State Department in 1946, the biographic, geographic, and Latin American groups joined it.

As the postwar era unfolded, the U.S. Government faced a series of unprecedented foreign policy problems. As traditional diplomacy gave way to ideological confrontation, policymakers sought out the research of political scientists, psychologists, and sociologists in the hope that it could provide fresh insights into the new problems of the cold war. In the newly independent countries we began to assist in modernizing societies whose natural resources, physical conditions, economic systems, and most especially, whose human resources, in particular their cultural patterns and thought processes, their values and attitudes, were often quite different from anything in our own historical experience. Anthropologists, economists, and historians could collect and analyze the unprecedented amounts of data needed to understand these societies in transition. As it became clear that the wartime experience had provided only a foretaste of postwar research needs, the research bureau became a permanent arm of the Department of State.

It might be noted in passing that these same forces operated to expand the social science research interests of other departments and

agencies whose activities necessarily involved them in the problems of other countries. For the most part, these departments and agencies chose not to develop their own in-house research bureaus but rather to contract either with established private individuals and centers or with nonprofit institutions set up specifically to serve the research needs of the agency.

In some degree, these decisions related to a different urgency of timing, a longer leadtime than the daily operating emergencies which confront the Department of State. Thus today, though many of these departments and agencies invest a good deal more money in social science research than does the Department of State, it remains true that the Department did inherit and does have a substantial and experienced in-house capability for social science research and analysis. I have always considered the State Department contract research program as a supplement to, not a substitute for, a strong internal capability which needs constantly to be enhanced through the infusion of new minds having command of a variety of intellectual perspectives and research techniques of proven analytical power. The reasons I attach importance to such an in-house capability will become clear in my later remarks.

RESEARCH IN STATE TODAY

Although social science research in the present-day State Department continues to be focused in the Bureau of Intelligence and Research, there are specialized research activities conducted in other parts of the Department as well. The Historical Office, for example, located in the Bureau of Public Affairs, produces studies for use within the Department which set U.S. policy in historical perspective. In the academic community the Historical Office is best known for its distinguished series of documentary collections, Foreign Relations of the United States.

The legal adviser conducts technical studies in legal matters which border on the social sciences. Within the Policy Planning Council there is constant study of current and long-range American foreign policy. The Foreign Service Institute has undertaken linguistic research leading to the preparation of teaching materials. Similarly, the Bureau for Educational and Cultural Affairs has certain specialized interests which require occasional social science-related studies. Finally, the Deputy Under Secretary for Administration has established a Center for International Systems Research to apply systems research methods to foreign affairs management problems.

Between all of these offices and the Bureau of Intelligence and Research there is the closest cooperation. We undertake studies in concert, use one another's consultants, and keep everyone informed of relevant activities. Needless to say, we maintain close working relations as well with the Department's geographic bureaus and the Bureau of International Organization Affairs.

THE BUREAU OF INTELLIGENCE AND RESEARCH

The State Department's Research Bureau today has a budget of more than $4 million per year, employs some 350 persons, and produces over 1,000 formal research papers annually for use within Government—and at least an equal number of ad hoc informal written

responses. These research papers and informal responses meet conditions that are impossible to reconcile with the use of outside academic research facilities. It may be need for speed of response, or diplomatic sensitivity—nearly all these papers are classified—or the need for professional researchers who through daily association with policy officers understand the elements of their problems without extensive guidance.

We have found a great need for such a corps of scholars who keep themselves at all times fully informed on situations and problems abroad so that they can analyze and forecast developments, point out facts that are being forgotten or ignored, and quickly assemble data and interpretations on any odd corner of the international scene. It is not a job that can be done by scholars who divide their time between such demands as teaching or following personal lines of research and meeting Government needs.

The work of the professional researchers in the Bureau comprehends not only the painstaking collection and analysis of fact, but also the exercise of judgment and clear and quick presentation. It is more than what serious journalists would produce if they had time—it is an exercise at once more rigorous, continuous and above all operational—that is to say, related to something the United States or a foreign country may want to do, or be forced to do.

Our in-house papers must incorporate selectively not only the whole mass of information coming into government from all parts of the world, but also the results of social science research conducted in the Nation's universities and research organizations. To assure that our Bureau is fully aware of the information and insights available in the academic community, we have maintained for nearly 20 years an Office of External Research charged foremost among several duties with identifying academic research in foreign affairs that would be of value to the Government. This office has long been the State Department's institutionalized bridge for feeding into the policy machinery the discoveries and insights of scholarships as well as feeding back into the scholarly world the insights and needs of which policymakers became aware.

The size of an agency's in-house or contract research budget is not an adequate measure of its interest in research. Equally important are the steps the agency takes to identify and assimilate the vast amount of private research in foreign affairs. The 5,000 new academic studies added each year to our External Research catalogs, the 450 academic research papers borrowed each month by Government officers from our Foreign Area Research Documentation Center, the more than 400 Government contract studies identified and annotated annually by the External Research staff, and the uncounted but significant number of man-days spent each year by officers of our Research Bureau participating in academic and professional conferences and seminars and visiting research centers, are an earnest of State Department interest in a broad range of social science research.

CONTRACT AND CONSULTANT PROGRAM

To supplement the State Department's in-house research effort, the Bureau of Intelligence and Research has modest funds to contract out studies, employ consultant services, and advance interagency

research coordination efforts. In the last 5 fiscal years (1962 through 1966) these expenditures have totaled $641,000, or an average of $128,000 per year. By carefully husbanding our resources, contracting directly with individual scholars——

Senator HARRIS. Just a moment, Mr. Hughes. Do I understand you to say that the average of $128,000 a year is the total amount spent in contracts by the State Department?

Mr. HUGHES. No, sir; by the Bureau of Intelligence and Research in its own external research contracting program. In addition to that there would be expenditures by the Bureau of Educational and Cultural Affairs in the Department of State and if one wants to include the much larger funds related to the international educational and cultural exchange program, or the $5 million East-West Center in Hawaii, whose funds are obtained through the assistance of centers for research and study abroad program, the figure would mount considerably. But in terms of the research specifically contracted for policy-oriented purposes by the State Department in a given year, the figure I have just mentioned is correct, $128,000 average for the last 5 fiscal years.

Senator HARRIS. All right. You may proceed from that point.

Mr. HUGHES. By carefully husbanding our resources, contracting directly with individual scholars, arranging for joint funding of projects with other agencies, skimming off research results from projects supported by others, and similar devices, we have obtained 65 studies from the inception of the program in 1961 through the end of 1966. Of these, 53 were contracted to individual researchers, usually affiliated with universities, and the rest were undertaken by university research centers or nonprofit research organizations. Forty-one studies were classified, 24 were unclassified.

Many of these contract projects have been formulated by the Bureau of Intelligence and Research as part of its effort to anticipate ways in which it will be asked to serve the Department, others have been requested directly by ther parts of the Department. They have been primarily political studies, often focusing on the dynamics of modernization and change in the developing countries from the perspectives of political party organization, leadership groups, and changing aspirations. Others have dealt with international legal questions, boundary issues, regional political and economic trends, and a variety of other topics. The one unifying element has been the decision in each case to make use of some special knowledge and insight not currently available within the Government.

Concurrently we have made increasing use of academic consultants as another way of supplementing the research talent available within the State Department. There are 323 consultants now on the Department's rolls, of which nearly one-fourth were appointed on the initiative of the Bureau of Intelligence and Research. We call in consultants from universities and private research organizations to work with our specialists and other Department officers nearly every week of the year. These consultants all are cleared by the State Department's Office of Security in the same way as are our regular employees.

Consultants have discussed with us political development in Africa, implications of recent Soviet economic reforms, and the political role

of the military in developing countries. In connection with our contract research program, consultants have been asked to assist in the formulation of research designs, suggest alternative avenues of approach to research problems, appraise available personnel and other research resources, provide information on possible duplication of research efforts, and review and criticize draft manuscripts prepared internally or under contract. A 2-day meeting of Department officers and consultants last June made an intensive assessment of our performance in carrying out the President's request to Secretary Rusk that the State Department review other agencies' plans for contract research which might involve risks to our foreign relations.

In addition to using individual consultants, the State Department has established and makes regular use of advisory panels whose members are drawn largely from the academic community. Six new panels of this kind have been created in recent months to advise on a broad range of foreign policy problems.

RELEVANCE OF CONTRACT RESEARCH

What has been the relevance of our social science contract research to the mission of the State Department? Such a question brings us face to face with the very great difficulty of evaluating the impact of research on policy; we cannot offer a precise estimate of the impact our inhouse research has had on policy, though I am confident it has been considerable and at times very important.

Evaluating the importance of contract research is still more difficult. That there is a gap between the private research scholar and the policymaker is becoming a commonplace—in fact, it is this gap which, within the State Department, usually has to be filled by the Bureau of Intelligence and Research. It might be said that the question the policymaker or operator wants answered is often of the type: Will there be a coup in country X next week? This question can only be answered by an intelligence and research bureau (if at all). The social science theorist is more disposed to ask: What forces working on and in the societies of cultural area Y appear most related to the incidents of political instability in that area? The policy-oriented researcher might formulate the question as: What are the factors in country X which promote the likelihood of political violence there and what properly can we do to alleviate these and to blunt the intensity of the violence?

If the answer to either of these latter two questions is immediately available it clearly would be of some assistance to the operator who has immediate problems, but if the answers depend upon launching and completing a research project, it is understandable that even the best intentioned policymaker might be skeptical of the contention that the research will help him. In the end, it is the Bureau of Intelligence and Research that can work both to have the material available by anticipating the need for it, and can make it useful by applying it to the precise questions that bother the policymaker.

In our contract studies we have therefore tried to steer clear of both the immediately operational kind of research epitomized in the question: Will there be a coup in country X? and of purely theory-building

exercises in which the action payoff, though potentially great, is necessarily uncertain and in any case may be many years down the road. In general we have felt that the former kind of research is best done in-house, and the latter best done in academic centers in which the pace of work is set by appropriate scholarly criteria rather than by consumer deadlines. As a result, most of our contract studies have been attempts to have outside experts apply such knowledge as is at hand, or can quickly be gathered to emergent situations that we judge, permit us sufficient leeway to allow time for careful—if sometimes hurried—research and analysis.

Our experience with contract research payoff is similar to research experience elsewhere, that is, although only a few of our contract studies have overfulfilled our hopes, none have been totally without value. Some of the most successful have been those in which we teamed one of our permanent staff with an outside researcher, or else brought in a professor to work with classified materials in closed association with Department policy and research officers. In these cases we have often obtained the best of both worlds: the academic expertise and perspective of the scholar and the policy sense and insight of the operator.

At the same time we have supported on a very modest scale clearly defined, relatively fundamental research studies of an unclassified nature which have on occasion turned out to be extraordinarily relevant to State Department needs. A paper by a Columbia University Law School professor, for example, on the conflict of laws pertinent to international aviation accidents was highly useful in preparing the U.S. position last year on revision of the Warsaw Convention. Studies done for us 2 years ago on the Chinese Communist leadership and on civilian-military relations in Communist China have taken on a new relevance in recent months. In attempting to strike the right balance between fundamental and applied research, we have learned that some fundamental research can, over time, turn out to be more relevant to the practical needs of the State Department than some of the more applied research. The time factor appears to be the crucial element here. Research outside the Government requires time. Yet instant answers are what the operator often needs. Research cannot help him except insofar as he possesses or can glean some useful knowledge from research already completed. The trick is to have research-produced knowledge on hand when the operator needs it, and that will always be an uncertain art requiring the exercise of judgments about future policy needs, the state of both knowledge and research, and the capabilities of researchers.

PLANS FOR FUTURE SUPPORT

In our future support of social science research under contract, I would hope that we could continue to maintain a flexible mix of classified and unclassified studies, of fundamental and applied research, of individual study papers, and of research organization projects. With means as modest as ours, and with no present expectation that they will increase, a sizable proportion of our funds will have to continue to be devoted to meeting the direct operational needs of our policy bureaus—needs which we cannot meet because we lack either the time or the expertise in-house.

At the same time I have been impressed by a recent National Academy of Sciences-National Research Council conference report which argues that operating agency support for fundamental social science research can, when the research projects are well selected for their pertinence to the agency's mission, make a number of important contributions. Among these are: (a) adding to those areas of knowledge judged to be most relevant to the future action problems of the agency, (b) enhancing the ability of agency personnel to understand and apply relevant scientific knowledge, (c) helping develop academic researchers who understand the agency's mission and are available for consultation, (d) uncovering pertinent new problem areas in need of research, and (e) enhancing the agency's ability to recruit and retain qualified personnel for in-house research.

I find these arguments persuasive and supported by our own limited experience. I hope, therefore, that we can continue to devote a portion of our funds to more fundamental studies with no protension that they will have immediate action payoff but with a reasonable expectation that they will expand our reserve of information and analyses to meet anticipated Department needs. The fact that operating departments and agencies need to keep their research programs—even their programs in support of fundamental social science research—in some reasonable relationship to their missions, suggests to me that the sum total of agency support for social science may not add up to what is best for the social sciences themselves or for the country as a whole. If I am wrong about that, it can be only because of some happy accident. This leads me to the most difficult, and from the point of view of this subcommittee, perhaps the most basic, of the questions you have posed. That is: What effect would you expect a National Social Science Foundation to have on the type and quality of the social science research you support; on the social sciences in general?

EFFECT OF A NATIONAL SOCIAL SCIENCE FOUNDATION

I am not aware that anyone now knows how much support the social sciences receive from all sources. The National Science Foundation, whose Director I understand testified yesterday before the subcommittee, does compile each year statistics on total Government spending on social science research. My office has supplied the subcommittee with the best estimate possible on Government-sponsored foreign area social and behavioral science research in the last fiscal year. But I am not aware that anyone knows—or even without knowing has said—how much and what kinds of support from which sources the social sciences need if they are to make their optimum contribution to knowledge and to American society. It certainly lies beyond the writ of any one agency of Government, even beyond the writ of the State Department with its broad foreign affairs interest, to answer for the whole of the Government's concern with the social sciences, let alone for the whole of the country's concern.

It is precisely at this point that the various recent proposals—including the one of this subcommittee—for additional national foundation-type attention to the social sciences hold their greatest

promise. One of the things the social sciences appear to need at the present moment is more data collection and analysis bearing on the state and needs of the social sciences themselves. The National Academy of Science-National Research Council has recently formed, in collaboration with the Social Science Research Council, a Survey Committee on the Behavioral and Social Sciences. This Committee has support from the National Science Foundation as well as private sources. Its report will no doubt provide us with a better national picture of the manpower, funding, trends, strengths, weaknesses, contributions, potentialities, and needs of the various social sciences than we have today. But unless I misread the situation there will still be need for continuing efforts to convert a single snapshot into a time-series and eventually into a moving picture; to keep current those assessments of strengths and needs which must underlie the wise allocation of resources; and to allocate resources with primary regard to the criterion of what will best advance the social sciences and enhance their contribution to knowledge and to society. These are, I believe, the kinds of benefits to the natural sciences and the Nation that have been set in train by the activities of the National Science Foundation; I would hope that the increasing attention being given to the social sciences would have similar benefits.

With your permission, I would like to expand these general remarks, Mr. Chairman, in two somewhat more specific aspects.

In recent years the State Department has sought to coordinate some social science matters touching upon foreign affairs under the umbrella of the Foreign Area Research Coordination Group (FAR). I described its activities in my previous testimony before this subcommittee. Organized in 1964, the FAR has brought together some two dozen Federal agencies in a voluntary effort to promote more systematic coordination of Government contracting for research related to foreign areas and international affairs. The agencies involved spent some $36 million on such contracting in fiscal year 1966, so this is a matter of some importance. It should be noted, however, that this figure tells us nothing at all about the amount being spent for social science research related to domestic problems and programs.

I stress this because it is important to keep in mind that the overview being developed out of FAR activities—and it is a very helpful overview—is a limited one. It focuses upon social science research dealing only with foreign areas and international affairs funded by—but not conducted in—Government agencies. Neither FAR itself, nor any of the foreign affairs and military agencies that are members, is able either to develop a national picture of the social sciences or so conduct its program as to take into account any elements of the picture other than the needs of the agencies themselves. We are hoping that increasingly the FAR member agencies will be able to conduct their programs in a way that will be of maximum benefit to all of these agencies, but even that accomplishment will leave much to be done if the overall national context of these programs is to be properly understood and taken into account.

Increasing national foundation-type attention to the social sciences could, and I believe should, help in doing those things that FAR cannot do. Were it to do so, it would much improve the information

available to FAR about the environment in which it operates and the resources on which it draws and by that token would contribute to the social science programs of FAR member agencies.

There is another aspect of foundation-type activity on which I would like to comment—that is the fostering of innovation. Untied from the particular attributes, interests, and missions of other agencies, foundation-type funding might foreshadow a qualitative change in Government support for the social sciences. The peculiar role of foundations in fostering innovation was well described a few years ago by John Gardner, now Secretary of Health, Education, and Welfare. He was referring to private foundations, of course, but I think that the same could be said of the experience of the National Science Foundation and, hopefully, might apply as well to the proposed social science foundation:

> How could the foundations, contributing such a modest fraction of the total (spent in the U.S. for educational, scientific, and cultural activities), have achieved such a reputation for influence and accomplishment? They have been on the whole well staffed, but it is not superiority of staff that accounts for their performance. I believe most serious students of the subject would say that it is due to the effectiveness of the modern foundation as a device for fostering innovation. It is designed to make money go a long way in the service of creativity and constructive change. It is one of the few institutions in our society that can keep itself free to act quickly and flexibly in support of the talented individual or institution that wishes to undertake an experimental program. Anyone who has had administrative responsibilities knows that one of the great barriers to new developments is that the conventional institution rarely has funds for innovation.

It would, I believe, be highly desirable for all national foundations to give innovation a high priority. As the social sciences develop, it is particularly important that Government support not force them into an inflexible system inhibiting a variety of public and private initiatives. This can be avoided by deliberately fostering innovation, a function with high risk but one which a foundation can better run than can an operating agency which must always keep its programs supportive of its mission.

For those of us in the foreign affairs research business there is a related aspect of the peculiar nature of foundation support that especially commends it to us—its capacity for dealing with longer range problems. Has Government-sponsored research dealt sufficiently with the remoter contingencies, with what Walt Rostow has described as "the relevance of the less obvious"? Government foundation-type funding for basic research in the social sciences can support such studies more easily than can the operating agencies.

To summarize these brief and admittedly, but necessarily, general remarks about the effect of a National Social Science Foundation on the social sciences and on our own research program, I would stress again that it is only with respect to foreign affairs that I have given thought to the question, point out that I detect no agreement among the social scientists themselves as to the likely impact of the proposed Foundation, and speak in terms of two possible outcomes:

The first and more favorable outcome would include the possibilities that greater foundation-type support for the social sciences would (1) develop a continually current national picture of the state and needs of the social sciences and the related needs of society for the social sciences; (2) rationalize Government support of basic social

science research; (3) inform and help coordinate Government and private initiatives to support, advance and use the social sciences; (4) foster innovation and otherwise help develop the social sciences to a degree commensurate with their relative importance to society. Were these things to take place, the effect upon the State Department's research program would be indirect and long-range but highly beneficial in that there would be an increase and improvement in the quality of an important segment of the intellectual capital on which we must draw.

The second and less favorable outcome would include the possibilities that foundation-type support for the social sciences would (1) be undertaken without sufficient examination and cognizance of the present national picture and encounter difficulties in relating to present activities, both Government and private; (2) lead to excessive centralized influence over the total national effort in the social sciences, discouraging rather than fostering innovation and initiative; (3) result in an increase of a possibly distorting influence by Government on the orientation of the total national research effort. Were these things to take place, the effect upon the Department's research program would be also indirect and long range but debilitating in that we would encounter increasing difficulty in determining and meeting our own research needs.

In general, however, I believe there is sufficient wisdom in both the public and private sectors of our open society that can be brought to bear upon this matter to assure that the effects of additional national foundation-type attention to the social sciences will prove more advantageous than disadvantageous to that society, to the social sciences themselves, and to the State Department's stake in their development and utilization. And I would like to stress that the advantages to society and government should not be underestimated. It is, after all, largely to the social and behavioral sciences that we must look for help in anticipating and coping with the vast changes being induced by the natural sciences and their related technologies.

COMMENTS ON S. 836

You have asked me, Mr. Chairman, for specific comments on S. 836. Rather than going through the bill line by line, it might be more helpful to the subcommittee if I stated some general propositions we in the State Department consider important, relating these to the provisions of S. 836. The basic rationale for these propositions is to be found in the need for Government funds to advance the foreign affairs dimension of fundamental social science knowledge through the support of private research free from control by the operating agencies of the Government.

A new institution created to support basic social science research should be divorced from the immediate policy needs and operating missions of any Government agency. It should, for example, be prohibited from conducting classified research. Although many Government agencies, including the Bureau of Intelligence and Research in the State Department, must sponsor classified research due to the sensitive nature of the subject or the data used, such research is better

done by the operating agencies that have need of it and secure procedures for handling it. Thus I am happy to see that section 10(b) of S. 836 specifically prohibits the foundation from conducting classified research.

Secondly, I feel that any new institution should not sponsor applied research closely tied to the mission of any Government agency. Admittedly the distinction between "fundamental" and "applied" research is not easy to make, a fact of which our colleagues in the physical sciences are well aware. I suppose the clearest distinction that can be made revolves around the purpose of the research—that is, whether its primary orientation is to advance knowledge for its own sake, for its general utility, or for a more specific range of action or policy concerns.

Although even this distinction between "fundamental" and "applied" cannot be unambiguously imposed on all research projects, it is my feeling that the emphasis in the agencies should be on applied or mission-oriented research, while the emphasis in any new foundation should be on fundamental research. This posits a generous dose of tolerance on both sides where these emphases tend to meet and overlap. I sympathize with the argument that there may be cases where mission-oriented research could be better performed by an independent agency. But the bad effects outweigh the good; the foundation becomes enbroiled in policy controversies and comes under suspicion, whether justified or not, of being a tool of the operating agencies. The agencies, and the social sciences, will be better served in the long run by a foundation which sponsors only fundamental social science research.

S. 836 makes no specific provisions regarding mission-oriented research. I note, however, that the terms "basic knowledge" and "basic research" are used in speaking of the purposes and authority of the proposed foundation. I would assume, therefore, that the sponsors of the bill plan to have the foundation concentrate most heavily on this aspect of social science research.

Similarly, the new institution should not be required to undertake any program at the direction of an operating agency. The same reasons that I cited above pertain—the agencies are better suited to sponsor research related to their own mission; a foundation should concentrate on fundamental research. Thus I think the strong prohibition against agency direction contained in section 7(c) is wise.

Finally, I believe that a new foundation should be prohibited from accepting transferred funds from an operating agency. I appreciate the arguments in favor of such transfers, especially that transfers would increase the funds available for research sponsorship in the early years when a foundation's budget is likely to be small. But such transfers are also likely to be small simply for the reason that most agencies consider that they have need for all their available research funds.

Section 7(c) specifies that the foundation can accept funds for projects requested by other agencies provided the projects are within the purposes and authorization of the act and that the transferred funds do not exceed "an amount equal to 25 per centum of the amount expended by the Foundation in such year for projects pursuant to this

act from funds appropriated to the Foundation." I would prefer that such agency transfers be prohibited. If, however, there appears to the subcommittee to be good reason for the retention of this clause, I would favor adding a provision that any such transfers of funds be accompanied by full and immediate disclosure of the source, the amount, the purpose, and the projects to be undertaken with the funds.

Certain provisions of S. 836 touch specifically on the State Department's responsibilities for our relations with other countries. Thus, section 6 concerns making arrangements with foreign governments and international agencies and section 8 deals with notification of and negotiations with foreign governments concerning projects to be undertaken within their respective countries. The State Department's Office of the Legal Adviser believes that some changes in these sections of the bill would serve to make the State Department's role with regard to the foreign and international activities of the Foundation consistent with the part it plays in the analogous activities of the National Science Foundation and make the Department's role conform with its responsibility in the field of international relations. Representatives of the Office of the Legal Adviser have indicated that they would like to meet with the subcommittee or its staff to discuss the suggested revisions.

The question also arises as to the relationship between a new foundation and the authority contained in the President's letter of August 2, 1965, to Secretary Rusk which established State Department review of Government foreign area research projects for the purpose of avoiding risk to U.S. foreign relations. You will understand that I would prefer to reserve final judgment on how that authority might apply to the activities of the proposed foundation until the legislation is actually enacted. However, I would point out that social science research dealing with foreign areas that is undertaken with funds appropriated to the National Science Foundation and the National Institutes of Health, and undertaken with the funds that support the Fulbright program and the National Defense Education Act, has been exempted from the State Department's research review procedures. I am sure the Department's Research Council would want to give careful consideration to the possibility of making similar arrangements with regard to the program of the new Foundation.

NEED FOR A NATIONAL SOCIAL SCIENCE FOUNDATION

Finally, Mr. Chairman, you asked for comments on the need for a National Foundation for the Social Sciences. We see both advantages and disadvantages in this proposal as well as in the proposal under discussion in the Congress for giving a clearer mandate to the National Science Foundation.

The State Department has no strong preference as between either of these particular institutional arrangements.

Certainly there is some merit in expansion of the National Science Foundation to encompass greater support for the social sciences. Many scholars feel that the social sciences are coming to share many research techniques with the natural sciences and that several fruitful lines of inquiry can be found where the two worlds meet. As Secre-

tary Rusk told another congressional committee 2 weeks ago, "We welcome the alliance of the natural sciences with the social sciences in meeting new facets of old problems in the world laboratory." Strengthening the social science role of the National Science Foundation might also be a more efficient arrangement administratively as it would avoid the need to duplicate the Science Foundation's basic educational and statistical services.

On the other hand, a new Foundation would give the social sciences a separate identity within the Government and a status more akin to that of the natural sciences. Where substantive interests merge and the techniques for conducting research in the social and natural sciences intersect, cooperative arrangements can be developed in the Federal Government as they are even now in the private sector. In addition a separate foundation could be more responsive to social science research which incorporates "normative," "humanistic," or "impressionistic" elements than could a foundation strongly oriented toward the more precise sciences. Perhaps the time has come for the social sciences to be willing and confident enough to run the risks of being appraised in terms of their own contribution to knowledge and to society.

Whatever the future sources of Federal funding for fundamental research in the social sciences may be, I would hope that serious attention would be given to the comparative advantages of institutional over project support for fundamental social science research. In mission-oriented research, it is clearly the prerogative of each operating agency to decide for itself what research projects best meet its policy needs and what academic investigators can best be relied on to produce the needed reports. In fundamental research, such essential questions as choice of study topic and selection of investigator can best be decided through normal academic processes, not by a Government administrator. The more we can reduce detailed Government direction in the pursuit of fundamental research in the social sciences, the more easily we shall maintain a healthy balance in Government-academic relations.

Senator HARRIS. Thank you very much, Mr. Hughes, for an excellent and a highly responsive and very helpful statement.

On page 16 you list again, as you did last year before this committee, the total expenditure in foreign area research in social and behavioral sciences, I believe, as $36 million, that is the amount which was contracted out for fiscal year 1966. Do you have some general breakdown of that figure as to which agencies spend what percentage?

Mr. HUGHES. Yes, indeed we do, Mr. Chairman. It is my impression that this breakdown was made available to the subcommittee last October. If it has not, it can be immediately.

I can go through it at any level of detail you would like.

Senator HARRIS. Why not give us the round figures and percentages if you have them. I know we had it in last year's record, but I would like to have it in this year's record also.

Mr. HUGHES. Let me say, in introducing these figures, Mr. Chairman, that the rough figure of $35 million is the result of——

Senator HARRIS. $36 million.

Mr. HUGHES. I think the actual figure is $35.7 million which we finally came up with. This is the result of inquiries relayed to the

other Government departments and agencies following my appearance before this subcommittee last year.

We asked the participating departments and agencies to use as broad a definition of research as possible in order to give an accurate picture of Government spending in social and behavioral research on foreign areas and international affairs. And therefore there are many items included in the $35.7 million figure which go beyond the criteria we used last year when I testified before this committee. At this time we gave a rough estimate that, strictly speaking, Government-contracted research in the foreign area field would be on the order of about $25 million.

Senator HARRIS. $25 million, yes, I recall.

Mr. HUGHES. The $10 million difference results from the injunction which we expressly laid upon the contributing departments and agencies to include as much as possible in their definition of this type of research.

Senator HARRIS. Right.

Do you have some breakdown of that $35.7 million for fiscal year 1966 by agencies?

Mr. HUGHES. Generally speaking in round numbers we would carry for the Agency for International Development about $6 million.

Senator HARRIS. AID, $6 million.

Mr. HUGHES. These are round figures. The Department of Agriculture, $300,000; Arms Control and Disarmament, $825,000; Department of Defense, $10,250,000; HEW, $6.5 million; National Science Foundation, $3,225,000; Peace Corps, $250,000; Smithsonian Institution, $800,000; Department of State—and this includes, as I mentioned earlier, a $5.5 million figure for assistance to centers for research and study abroad, largely the East-West Center in Honolulu—$6.5 million; U.S. Information Agency, $425,000; miscellaneous programs, $500,000, being a total of about $36 million.

The specific breakdown is available, and I believe it was sent to the committee staff a few months ago.

Senator HARRIS. Fine. Without objection, that complete breakdown will be made a part of the record.

Is there a breakdown of those figures as to what proportion of those amounts were in classified research and what proportion was in unclassified research?

Mr. HUGHES. I do not believe we have that figure, Mr. Chairman, and I think it would be hazardous to try to arrive at it. We could, however, do our best to do so and submit it to the committee if you so desire.

Senator HARRIS. Do you know what proportion of the $10,250,000 of the Defense Department is unclassified research?

Mr. HUGHES. I do not have that figure, Mr. Chairman.

Senator HARRIS. Is that an available figure, one that you can get for us or not?

Mr. HUGHES. Yes, that would be easier for us to get than some of the others.

Senator HARRIS. Would you supply that then and when we receive it, without objection we will make it a part of the record because it bears upon this question about contracted research, and perhaps some

that would be contracted for a National Social Science Foundation. It is rather obvious that the largest single amount of expenditure in the foreign area research of social and behavioral sciences is made by the Defense Department.

(The following letter was subsequently received for the record:)

DEPARTMENT OF STATE,
THE DIRECTOR OF INTELLIGENCE AND RESEARCH,
Washington, D.C., February 20, 1967.

Hon. FRED R. HARRIS,
Chairman, Subcommittee on Government Research, U.S. Senate.

DEAR MR. CHAIRMAN: During my testimony before the Subcommittee on Government Research on February 8, 1967, you asked me to provide the Subcommittee with the percentage of the social science research sponsored by the Department of Defense which was unclassified. I understand from my staff that you are satisfied with the information on this subject given to you by Dr. MacArthur of the Defense Department during his testimony on February 16, 1967.

Let me say that I enjoyed appearing before the Subcommittee and will follow its deliberations in the future with great interest.

Sincerely,

THOMAS L. HUGHES.

Senator HARRIS. You include in your figures this year a good many items that you did not include last year, and I am talking about the State Department now, $6.5 million; what is the reason for that?

Mr. HUGHES. The reason is that we broadened the definition of research in order to get the maximum figure we could for Government spending in the research field, even though this research is not related to policy formulation.

Senator HARRIS. Does it result in a research paper?

Mr. HUGHES. Not necessarily. Some of it is funding of studies, the benefits of which would not be transmitted directly to the Government.

Senator HARRIS. To the State Department.

Mr. HUGHES. That is right.

Senator HARRIS. Your way to break down these figures then, is to show that you either get a research product or some product of benefit to the sponsoring agency.

Mr. HUGHES. Yes; I think we can do that. For instance, in the overall $6.5 million State Department figure, $5.5 million is attributable, as I mentioned, to centers for research and study abroad, and that would not be policy-oriented research or policy-involved research.

Senator HARRIS. Right. So the more narrow definition we were using last year would provide a total expenditure by the State Department for foreign area research in social and behavioral sciences of how much?

Mr. HUGHES. For the most part that would be embraced by the $125,000 figure for total research contracting.

Senator HARRIS. For 1 year, and this is the total administered by the Bureau of Intelligence and Research.

Mr. HUGHES. Yes. Conceivably, there would be added to that the Bureau of Cultural and Educational Affairs for a few contracts in their field. If we are really talking about research contracted to aid in policy formulation, research contracted for because the State Department needed something and lacked the in-house capability, we are talking more on the order of $125,000 by a long shot than $6 million.

Senator HARRIS. By that narrower definition, what sort of total would we come to, and I am talking perhaps of a different definition—I am talking about research where the research is some sort of research product, of some benefit to the Department or some study which the Department received. What would be your total, not $35.7 million, but what would be your total under that kind of a definition? Would that be about what we are talking about last year, $25 million?

Mr. HUGHES. I think it would be closer to what we were talking about last year, yes, sir, Mr. Chairman; but I cannot over-emphasize the extreme difficulty in trying to break down these figures for different purposes.

If you look at the Department of HEW, we are including millions of dollars in the Office of Education, Public Health Service, and Social Security Administration. It is very difficult to look at those figures and try to break out the policy payoff, the policy relevance of this research.

Senator HARRIS. I am not making a value judgment——

Mr. HUGHES. I understand.

Senator HARRIS. Nor am I asking that question in order to make a value judgment, rather to try to learn more nearly what the percentage of the total social and behavioral science research expenditures in foreign countries is made by the military as opposed to civilian agencies.

Mr. HUGHES. That figure is fairly clear.

Senator HARRIS. How much of that $10,250,000 of the Defense Department would be in the kind of research that I am talking about? Virtually all of it; isn't that so?

Mr. HUGHES. Yes, if you include both the more specifically mission-oriented research as well as the basic research funded by the Pentagon, if you assume both of them are relevant to Defense Department needs.

Senator HARRIS. Yes; mine isn't a question of whether it is basic or applied research. My question is whether it is research. If it is just paying somebody to study abroad, that is something different from either applied or basic research and, therefore, your percentage would not be 10 to 6 between the Defense Department and the State Department if you are talking about either applied or basic research which produced a research product, rather it would be more like 10 to less than 1; would it not?

Mr. HUGHES. Oh, yes; considerably less.

In fact, we have often felt that the State Department component of this whole business is under 1 percent of the total amount of Government-contracted foreign research.

Senator HARRIS. That is precisely what I am getting at.

Does it seem to you rather anomalous in a civilian society that the military would be funding most of the social and behaviorial science research we do in foreign countries?

Mr. HUGHES. Well, I don't want to be misunderstood in anything I say, Mr. Chairman, and as you know I am appearing officially, not personally, this morning. I think that the military would be among the first to admit that if the research which they think is vital for the Department of Defense were being conducted on a larger scale elsewhere they wouldn't have to do it. I think they would be the

first to say that because needed research is not available, they are engaging in the extensive way they are in overall social science research support.

Senator HARRIS. Would you want to make any comment, and perhaps you would not, as to whether or not you feel that the foreign policy goals of our Government would be better served by having such research done under the aegis of a civilian rather than a military agency? I am talking about unclassified research now.

Mr. HUGHES. I think if you look at that question in strictly theoretical terms the answer is unquestionably "Yes." There is no doubt at all that military auspices are less efficacious for the conduct of foreign affairs research than nonmilitary auspices.

On the other hand, I want to stress that we can't approach this thing theoretically. We must see what the overall budgets are before we can strike a net balance across the board among all these different elements.

Senator HARRIS. Let me first say I agree with your first conclusion when you said yes. I also understand the second half of your statement and that is the budget problems about where would you get the money, and it is that: it is a recognition of both those positions that has caused us to come to this halfway house in this bill, where up to 25 percent and not more of what an NSSF supports or makes grants or contracts for might be done at the request of a mission-oriented agency and paid for with funds transferred by them, and I recognize the difficulties in that.

My only feeling is that it is better than what we are doing now, though eventually, the best way to do it would be by direct appropriation to the National Social Science Foundation itself. But I would also agree with you where you say in your statement—

> I would favor adding a provision that any such transfers of funds be accompanied by full and immediate disclosure of the source, the amount, the purpose and the projects to be undertaken with the funds—

I agree with that very strongly, that is our intent and has been all along, and if the bill needs to be amended to say so more clearly, why we certainly will see that it is amended.

I also agree with you in what you say that any National Social Science Foundation should not undertake to do classified research, and that is, as you noted, a prohibition in this bill.

I would point out, also, that the Social Science Foundation would not be required to do any contract research for a mission-oriented agency but would simply provide an opportunity for the agency to have the best possible scholar work on a project where the support would be from the NSSF, which would not accept money with classification strings attached and which would negotiate the terms before the scholar got involved. Such a person would be much more likely to accept a grant from NSSF than a contract from Defense.

I also want to say that on behalf of the committee we accept your offer, which we appreciate, containing your statement on page 24 where you say that, "Representatives of the Office of the Legal Adviser have indicated that they would like to meet with the subcommittee or its staff to discuss the suggested revisions," that is the revisions concern-

ing the Department's role in the field of international relations in this type of research, we accept that; it is a generous offer and we appreciate it very much.

I note the advantages which you list on page 19, that a separate Social Science Foundation might provide, and I particularly like the last two sentences on page 25 of your statement where you say—

> In addition, a separate foundation could be more responsive to social science research, which incorporates "normative" or "impressionistic" elements than could a foundation strongly oriented toward the more precise sciences.

It seems to me that is a very important point, because I think there is a tendency to feel that social science isn't a science at all, perhaps it isn't, but it may be in, exactly in those vague and fuzzy and unscience-like areas that we need our most innovative and original thinking today. And it is my judgment that that could be done best if the social sciences were unfettered by control of an agency which is primarily oriented toward the natural and physical sciences.

Mr. HUGHES. Mr. Chairman, I might interject at this point that I was discussing this testimony the other night with the Secretary of State and he made a very strong point himself in precisely this direction.

I know that he is deeply concerned about the pace of technological and scientific developments which have a bearing on American foreign policy problems all around the world, and he states rather categorically, that the social sciences have an enormous obligation in the next few years to try to keep pace with and to mediate between, the policy-makers and planners—to come up with better and more imaginative solutions than we have at the moment.

Senator HARRIS. Right. I certainly agree.

I also agree with that last sentence on page 25 which is—

> Perhaps the time has come for the social sciences to be willing and confident enough to run the risks of being appraised in terms of their own contribution to knowledge and to society.

I think the difficulty is that if the social sciences are totally dependent upon the National Science Foundation, 90 percent of whose budget is in the natural and physical sciences, or totally mission-oriented agencies, although we understand that is a proper and a very laudable function of mission-oriented agencies, the tendency, I would think, would be against innovation, because one small, but perhaps controversial, segment of such an agency's program might cause difficulty in regard to the bulk of its program, the great percentage of which is in some other field.

You say on page 26:

> The more we can reduce detailed government direction in the pursuit of fundamental research in the social sciences, the more easily we shall maintain a healthy balance in government-academic relations.

I agree. Your point is on institutional as opposed to project grants, which I think is a very weighty one.

I would add a corollary which is that if we can reduce detailed government direction by setting up a separate National Social Science Foundation we also will accomplish some of the same good ends because they will be better able, I think, to be innovative.

Secretary Wirtz yesterday made much the same point that you made at the bottom of page 25 when he said, and I paraphrase, if we don't intend to be innovative and original about these new problems of today and really get at them in new ways, why then probably present government agencies are quite satisfactory, and we can go forward with the same programs. But if we want to be innovative and think anew about some of these problems that nobody has ever had to face or solve before, why then probably we ought to go about it with a new agency, and I think that is a very good point.

Senator Hansen is here, a valued member of this subcommittee.

Senator Hansen, do you have any questions or comments?

Senator HANSEN. Thank you, Mr. Chairman, I don't believe I do. I have been very much interested in what Mr. Hughes has had to say.

Senator HARRIS. The thing we talked about some last year, Mr. Hughes, and was of concern to a good many people at that time, and still is, is the problem of closing sources for foreign area research for the social and behavioral sciences, partly, I think, an outgrowth of the flap over Operation Camelot and Project Simpatico, and it was our hope that perhaps by placing such research under civilian control we might keep those sources from being closed down completely.

Would you care to comment on that?

Mr. HUGHES. I think our experience in the interval since I appeared before you last, Mr. Chairman, indicates that the tightening up which has occurred inside Government departments and agencies in terms of the letting of proposed research contracts has been beneficial. I think people are more aware of the problem of saturation. There is greater awareness of the problem of researchers stepping on each other's toes as well as the toes of foreign governments.

The sheer increase in awareness has itself been highly beneficial, and I think that we have not noticed the same kind of proportionate increase in this kind of problem which seemed to be taking place up to a year ago.

In that sense, even the adverse publicity which has been such a handicap in so many different ways has been of benefit in that it has made participants, all of us across the board, acutely aware of problems that they can get themselves into. This is not, of course, just a problem for the Government. In a large sense, it is a problem for the private research community, because the Government cannot control the behavior of private American researchers far and wide. In terms of numbers, energies, emotions, claims, preemptive moves, the total international picture of American scholars abroad and what they are doing to their own profession and to foreigners, is a growing problem—one that, in the last analysis, is going to have to be handled on a voluntary basis by the private scholarly community of this country.

Senator HARRIS. I agree, and I think that, as I pointed out on the Senate floor, the administrative procedures which were instituted after Camelot and before Simpatico, had a very salutary effect, and I think it worked very well in the Simpatico instance.

The only thing left, it seems to me, that raises objections and very real ones, in my mind, is the very fact that such research is largely

funded by military agencies. I think within that limitation you have done exceptionally well in minimizing the difficulties for our country and for scholarship and research generally after Operation Camelot.

One of the problems, too, that is a separate kind of problem but involved in the same thing is what some have called intellectual colonialism where we go into a country and without helping to build up their social science personnel and research and scholarship—we gain information through research and come back home leaving them not really much better off than they were before. That seems to foster in the minds of the host country people, the thought that perhaps our social scientists are part of a sinister secret operation which attempts to learn more about the people in the host country in order to manipulate them. And it is our hope expressed by some of the wording of this bill, some of which you have touched on, that we might create a closer arrangement with people in the host country and in the process of learning more, help them to learn more and leave them better able to learn more in the future about themselves.

Mr. HUGHES. There, too, Mr. Chairman, I think during the past year we have had ground for encouragement. The impression I have from papers that have come over my desk is that more people, more agencies, more departments in Washington, are more concerned than ever before about the importance of advance notification to foreign governments, cooperation of foreign governments, participation of local scholars in joint efforts, sharing of the research product with the country concerned. The whole notion of pooling our interests with those of foreign governments and foreign scholars is increasingly coming to the fore as one of the major objectives of the program.

Senator HARRIS. I think that is very wholesome because knowledge wherever it is in the world is going to be helpful to us if it is open and available, and that is the intent of this bill. Whether it is derived from the scholarship in any country, by the foreign nationals or by us, if it contributes to our better understanding then it is good.

So I think what you are doing is wholesome in that regard.

Well, I don't have anything further.

Do you, Mr. Hughes, or your associates, have anything further you would like to say?

Mr. HUGHES. I have nothing except to thank the committee for giving us an opportunity to come before you again this morning and to congratulate the committee for its continuing interest in this very important subject.

Senator HARRIS. Thank you very much. Thank you for coming and thank you for your testimony.

Our last witness this morning will be Barbara M. White, who is Associate Director, Policy and Research, of the U.S. Information Agency.

Mr. Vaughn, Jack Vaughn, Director of the Peace Corps, had been out of town, arriving this morning and will be testifying at 1:15 this afternoon.

Miss White, do you have a prepared statement? We are very pleased that you are here, and you may proceed as you please.

77-334—67—pt. 1——10

TESTIMONY OF BARBARA M. WHITE, ASSOCIATE DIRECTOR (POLICY AND RESEARCH), U.S. INFORMATION AGENCY

Miss WHITE. Thank you, Senator.

Let me say first that I appreciate the invitation of this subcommittee to express the views of the U.S. Information Agency on the proposed legislation to establish a National Foundation for the Social Sciences. While USIA is concerned only with programs overseas, not within the United States, the legislation being considered is of interest to the Agency.

USIA welcomes efforts to strengthen the role of social sciences in dealing with the problems of international affairs. Obviously political science, psychology, sociology, anthropology, economics and other social sciences are of basic importance in gaining an understanding of peoples and societies around the globe. To promote international understanding and a cooperative world, the United States needs the knowledege and insights that social science can provide.

Thus USIA is entirely in accord with the aim of expanding the quantity and quality of social science research.

The U.S. Information Agency has a dual mission. USIA counsels the executive agencies on the implications of foreign attitudes and opinions as they affect U.S. international policies and actions. And USIA works to create throughout the world understanding and support for the policies, actions, aims and ideals of the United States.

The Agency's programs draw heavily upon the social sciences. It has been truly said that to be understood one must first understand the audience. Thus USIA needs to be well informed about the people with whom it communicates in more than a hundred countries. The Agency needs to know their values and aspirations, their attitudes on current issues, their patterns of communication.

And after programs have been launched, the Agency needs to know if they have had the desired results.

Greater promotion of social science research would be of value in two ways to USIA in its task of intercultural communication. The Agency would profit not only from findings of substance but also from improvements in methods and techniques in the social sciences.

The Agency will, of course, need to continue with its own specialized program of audience and media research. This program does not include basic social science research, but is limited to questions directly related to Agency activities. To determine if limited resources are being used in the best possible way, specific studies of Agency programs and products are required. The composition of a Voice of America radio audience, the level of difficulty in a magazine, the comprehension of a theme in a documentary film, the uses of an Agency library—all have to be constantly examined and squared against both objectives and cost to arrive at the judgments that efficient program planning and budgeting demand.

The attached sheet shows the USIA research budget over the past 5 years, with division between contract research studies and staff salaries and expenses.

In summary, the U.S. Information Agency would welcome, and benefit from, an expansion of social science research, although the Agency's own research program would continue to be essential to its operations.

(The attachment referred to follows:)

Listed below are figures showing USIA's research budget over the past 5 years. These expenditures would not be considered "support of social science research" in the broad sense, but show the extent of USIA expenditures for research for program purposes.

USIA research budget

	Fiscal year 1962	Fiscal year 1963	Fiscal year 1964	Fiscal year 1965	Fiscal year 1966
Salaries and expenses	$761,846	$703,798	$794,237	$947,898	$1,013,450
Travel	13,603	10,457	15,674	16,504	10,147
Contract research studies	209,043	213,710	233,756	268,993	212,437
Total	984,492	927,965	1,043,667	1,233,395	1,236,034

Senator HARRIS. I take it, the Agency itself has no position as to how that might be accomplished or whether this bill should be passed to establish a separate foundation?

Miss WHITE. No, I think it would really not be within the province of USIA to express an opinion on the exact form in which the Federal Government should attempt to do this, or between one form and another. I think you would understand that.

Senator HARRIS. Right. The burden of your testimony is that to increase the quality and quantity of social science research would be helpful to the mission of USIA?

Miss WHITE. Right.

Senator HARRIS. Right.

Any questions, Senator Hansen?

Senator HANSEN. I was very much interested in what you have to say, Miss White.

Let me ask: As you contemplate the role that a national social science foundation might take, would it be your expectation that it could supplement some of the things you are doing and contribute meaningfully to an expansion of the development of this sort of information you need and that you would find valuable?

I gather from what you say that you still recognize the need, as you stated, of your continuing the research activities with your own Agency.

Miss WHITE. That would depend, of course, Senator, on the exact form of the programs of the new foundation or of expansion of programs in existing foundations. However, just to give you an example of the kind of basic social science research that would be of great interest to USIA but which we cannot under our own budget undertake, we are very much interested in the whole process of communication, how do ideas go from one person to another, how are they understood.

A great deal of work has been done in the social sciences on this process of communication, but much more remains to be done. USIA would profit greatly by increased studies.

Another example would be, say, a study of the social structure, psychology of people in a given country or area.

Again, for our operators who are working in that country, such a basic study would give us great insight, but it is not the kind of a study the USIA itself would finance.

Therefore, I would foresee the possibility that some of the basic research that this foundation could sponsor could conceivably be of great interest to us. Obviously, there are many areas in domestic research that would not be particularly relevant to the Agency's mission.

Senator HANSEN. I think your point is very well made that in exploring the effectiveness of our present and used means of communication we might indeed develop new ways of communicating the same information and do it more efficiently, and at less cost than previously.

Miss WHITE. I might say that some of our research staff are watching closely for research studies that are being done both in Government agencies and in the private community, to gain insight that might be of value to the USIA.

Senator HARRIS. I might say the only change we added to last year's bill is the word "communications" in the list of definitions in those social sciences which would fall within the purview of the National Social Science Foundation.

Miss WHITE. We still have a lot to learn about communications not only in one country but interculturally.

Senator HARRIS. Thank you very much, Miss White, for your testimony and for your presence.

We will recess until 1:15 at which time we will hear from Mr. Jack Vaughn of the Peace Corps.

(Whereupon, at 11:25 a.m., the subcommittee recessed, to reconvene at 1:15 p.m., the same day.)

AFTERNOON SESSION

Senator HARRIS. The subcommittee will be in order. We will resume our hearing on S. 836, a bill to create a National Social Science Foundation.

We are very honored to have, as we resume this afternoon, Mr. Jack Hood Vaughn, who is Director of the Peace Corps.

Mr. Vaughn, I think you have some people with you. If you would please introduce them.

TESTIMONY OF JACK HOOD VAUGHN, DIRECTOR OF THE PEACE CORPS; ACCOMPANIED BY ERIC STEVENSON, GENERAL COUNSEL; AND CHARLES PETERS, DIRECTOR OF EVALUATION AND RESEARCH

Mr. VAUGHN. I would be pleased to, Mr. Chairman.

As usual, we have tried to outnumber the subcommittee. On my right I have our general counsel, Eric Stevenson, and on my left is Charles Peters, who is the Director of Evaluation and Research for the Peace Corps. You have heard that fairly recently we combined the functions of evaluation and research, and Dr. Peters heads both offices.

Senator HARRIS. Right. Very well. Fire away.

Mr. VAUGHN. All right, sir.

I have a short statement that I would like to read in part, Mr. Chairman.

Senator HARRIS. Good.

Mr. VAUGHN. Performance of the functions proposed for the National Foundation for the Social Sciences by S. 836, I believe, could make an important contribution to the success of the Peace Corps. We know far too little about the countries in which we work, and far too little about the whole process of human resource development which is our work.

We have two particular problems here, Mr. Chairman: One concerns those countries where we have had little opportunity to understand the social, political, economic, religious, and other background where the United States has never had bilateral programs, such as Botswana, and Mauretania.

Senator HARRIS. Such as what?

Mr. VAUGHN. Botswana, formerly Bechuanaland, is one of our new countries in Africa, and we have never had an aid program there. We are starting from scratch and we need to go ahead and send volunteers. The other group of countries would be those which are rapidly evolving, and where we may know a good bit about the rural peoples and the tribes, but we know very little about the man who is halfway in the 20th century and who is rapidly changing—the new urbanite, the new youth of that country.

In these two areas especially we feel this great need for additional information.

We think that governmental action that would improve our knowledge of these matters, that would increase the number and improve the quality of the social scientists who are needed to select and train as well as study our volunteers, would clearly benefit us.

We do not anticipate that the existence of the new foundation would change the type of research that we now do, which is entirely mission-oriented, but to the extent fundamental social science knowledge is advanced, the quality of our own mission-oriented research should improve.

Today we are discomforted by the awareness that several studies we are commissioning on the cross-cultural problems of volunteers working in particular jobs in particular countries must rest on very sandy foundations because of the lack of basic studies on the cultures involved and on the validity of the assumptions underlying our work in those cultures.

As for the specific provisions of the bill, the Peace Corps, and I personally, are in total accord with the declaration of the purposes in paragraphs (1) through (6) of section 2.

The Peace Corps has no views as to the relative desirability of accomplishing these purposes through the National Foundation for the Social Sciences or an expansion of the social science program of the National Science Foundation. However, we would hope that any such organization would adhere to the principles of free access and no classification proclaimed in section 10 of S. 836. It is essential that basic social science research be above suspicion.

For similar reasons we strongly oppose any control by an operating agency over the activities of the Foundation or any similar organization. We would also oppose the acceptance of funds by such an organization from other Government agencies, since it would create an appearance of such control. We, therefore, urge the most careful review of 7(b) of S. 836.

We would also urge that the Foundation or any similar organization be charged with responsibility to review periodically the state of knowledge in the various social sciences, to determine the most significant knowledge gaps, to direct its program toward filling those gaps, and to act as a clearinghouse for information on all social science research either completed or in progress.

Thank you, Mr. Chairman.

Senator HARRIS. I believe you have some attachments there which answer the specific questions which were asked.

Mr. VAUGHN. Yes, sir.

Senator HARRIS. Without objection, that appendix will be inserted in the record at this point.

(The appendix referred to follows:)

(Answers to first four questions in Harris-Vaughn letter of January 13, 1967. (The preceding statement deals with questions five and six.))

1. What use has your department made of social science research in the past?

The Peace Corps has used social science research to increase the effectiveness of recruiting, selecting, training and programming processes. Research has helped make our recruiting more efficient by identifying the population group, college seniors, which combines to the highest degree, availability for service and ability to serve effectively. In selection, research demonstrated that certain steps in our early selection process were not productive. They were eliminated and a saving of $350,000 has resulted. Research has produced techniques and materials that have made our training more realistic. Research has also enabled us to identify the level of language proficiency necessary for our Volunteers to attain by the end of training. Social scientists have studied the impact of our teaching program in the Philippines and our community development program in Peru. One study, soon to be completed, seeks to identify the significant factors in site selection for our community development Volunteers. Another study scheduled for completion this year is assessing the effectiveness of our health project in Malawi. In Colombia, a study by the Institute for Communication Research at Stanford University has provided continuing feedback to our operational staff while the study was underway, resulting in substantial redirection and improvement in our educational television program.

2. What types of unclassified social science research has your department supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories, who has done this research for you? What fields of social science are included?

All our research reports are unclassified. Ninety per cent of it has been done under contract. We are in the process of effecting a slight reduction in our contract program and a substantial increase in our in-house research activity. The reason is that some of the operational matters we need studied simply are not a matter of compelling interest to outside social scientists.

About 75 per cent of Peace Corps contract research has been done by scholars in the universities and research institutes connected with them. Another 20 per cent has been done by non-profit research organizations such as the American Institute for Research. The remaining five per cent has been done by commercial research firms.

The fields of social science that have been involved most heavily in Peace Corps research are psychology, sociology and anthropology. But we anticipate that almost all of the social sciences will be included in our research activity as time goes on.

3. What has been the experience of your department concerning the relevance of social science research which you've funded to the mission of your agency?

All of our research has been relevant to the mission of the Peace Corps. Some of it hasn't been very helpful.

4. What has been the magnitude of your support of social science research in the last five years? What are your plans for future support of social science research?

In the five-year period starting with FY 62, the Peace Corps has obligated $1,939,000 for contract research in the social sciences.

Fiscal Year 1962	$112,000
Fiscal Year 1963	175,000
Fiscal Year 1964	555,000
Fiscal Year 1965	601,000
Fiscal Year 1966	496,000
Estimate, Fiscal Year 1967	433,000
Estimate, Fiscal Year 1968	400,000

Our slight decrease in contract research is being accompanied by an increase in in-house research.

Senator HARRIS. I want to say that I appreciate your going to the trouble to be here and prepare this testimony. I appreciate what you have had to say.

I agree with what you say in your first paragraph there that governmental action that would improve our knowledge of these matters, that would increase the number and improve the quality of the social scientists who are needed to select and train, as well as to study our volunteers, would clearly benefit the Peace Corps.

I am interested in what you say the work of the Peace Corps is, human resource development.

It seems to me that is a rather basic thing in modern life. If we knew exactly how to do it, the AID program would be easier and so would the BIA, the Indian affairs program, and the war on poverty. It seems to me they are all involved in a rather basic, common way.

I heard you say the other day that the fact that we don't really know how to accomplish community development is best exemplified by the situation of the American Indian.

Mr. VAUGHN. That is right, sir.

Senator HARRIS. I think that is very true. I wonder if you could elaborate a little on that.

Mr. VAUGHN. I would be pleased to, Mr. Chairman.

I have come to the conclusion, after having witnessed the sending of perhaps 2,000 Peace Corps volunteers into urban community development, and here I would like to make the distinction between urban and rural, to work in the slums around the world. They become cynical and come home early. They give up and despair, and I know many VISTA volunteers around the country have the same experience. But I am not prepared to give up.

Our premature return rate for volunteers working in urban community development, as opposed to all other categories of jobs, is about five times as high. We are not prepared to give up because we believe that if you put aside the issue of war and peace, the single most difficult and important problem in the world today is the problem or the assortment of problems that stem from the urban slums in our country and abroad. We are still grappling and still groping to try to find some better techniques or any techniques, for example, better training will help. As yet we don't understand how much money is a factor.

We Americans are prone to paper over with money when we don't know what to do, and the problem of the Peace Corps is we don't have any money; we just have people who are trying to find ways to communicate, to move, not just individuals but whole slum communities forward. At the same time we don't know how political we have to be.

I suspect there is a real element of politics in any country to get support and to get leadership, and here, again, we can't get involved too directly because we are nonpolitical. But I see this as the payoff area. I think Sargent Shriver and I together could scrape up a lot of appropriated funds to pay to somebody who had an answer as to how we can move a society, an urban ghetto society. But I don't see any glimmers yet.

I know we are putting a lot of time and a lot of volunteer lives and some money on this problem. We hope in the next 2 or 3 years to be able to come before you and say, "We have started to learn how to develop this human resource, the urban soul."

Senator HARRIS. I think I said in our conversation the other day that my trip last fall to Central America convinced me we are going to have to move our AID activities more into the cities. I believe that is more and more, where the problems are growing just as they are here in this country and around the world. We haven't really understood what to do about our own cities either, perhaps we can learn about both places at once.

I read an article written by a Communist in a French magazine lately, where he said, "We are losing the battle in the rural areas of Latin America. People are commencing to do for themselves, and perhaps our ideology of the agrarian revolution is a false one, and perhaps we are going to have to move now more into the cities where there is greater unrest to be exploited," and so forth—it seems to me there may be a lesson in that for us. I agree with you, we don't know what to do, but we are going to have to commence to find out and that is the kind of thing I hope we might do through greater attention to and visibility for the social sciences through their own separate agency, the National Social Science Foundation.

You and I talked, too, about the training program there is for Latin Americans at Loyola University, which incidentally I am going to visit this coming weekend, and I was interested to learn that you were a prime mover in establishing that training program.

I did see a "before" and "after" of what they are doing, a young fellow who is coming, and then other people who had gone through that school.

Mr. VAUGHN. Yes, sir.

Senator HARRIS. And they turn out to be activists in developing their communities when they get back and they weren't that when they came. I went to see what Father Twomey and his group are doing in the meantime.

How did that program get started?

Mr. VAUGHN. It, like so many good things in this world, was not the original idea of a bureaucrat, but we soon saw the potential there, and went actively after small groups in all of the Alliance for Progress countries. Most countries would send four or five people at a time—it looked so good and it was so broad. It covers labor, agriculture

and most of the broad vocational skills. We are getting heavier all the time on young men and women in their late teens and early twenties, as being the ones who are going to be able to move these societies, I, too, Mr. Chairman, have seen some of the young products, and I detect a sophistication and an awareness of what their job is, and they do indeed become leaders after that relatively short exposure to this kind of training.

I am much impressed with that and wish that we could do it not only in an expanded fashion here, but in two or three other centers in Latin America.

Senator HARRIS. Right. I certainly agree.

Perhaps what we can learn from those things in a sort of demonstration research project would be very applicable. As a matter of fact, that is one of the reasons I am going down there, it is not because of my interest in Latin America but because it might be applicable, to the situation of the American Indian, and the war on poverty generally.

This business of human resource development, to somehow motivate people and give them the opportunity to do for themselves, is really basic, I think.

Mr. VAUGHN. Yes.

Senator HARRIS. And I wish we knew more about it.

Mr. VAUGHN. Yes. I think there is one strong point for having this outside Latin America, and that is these young people have never had any status at all, never any recognition, and the more leaving the country on official business to come back with a piece of paper plus the knowledge of his friends that he has been through this gets him off to a good start, whereas if he had an in-country, 6-week training program, he would never know he left home. I think there is some real value in having this outside his country.

Senator HARRIS. The thing that has worried me and, of course, is reflected in this bill, is that I find many Latin American people have in their minds a very militaristic image of the United States. I said yesterday in these hearings, that I found a good many of them to be among the intellectual communities of these countries they feel that our military has a rather overpowering influence in the development of our policy and policies toward Latin America. So it was my thought that if we continued to fund some $10 million per year of social science research in foreign countries through the Department of Defense we would rather exacerbate the situation and I think that in the long run our objectives would best be served were such research done—and I am talking now just about unclassified research—done under sponsorship of a National Social Science Foundation with its own funds. It was my thought that for the time being appropriations procedures being what they are, and the fact that it is easier to get a $73 billion budget approved for the Department of Defense than it is a $20 million budget for the National Social Science Foundation, that we might come to some halfway measure for this transfer of funds.

You will note and approve, as I do, that this bill prohibits classification of any research done by this National Social Science Foundation.

Mr. VAUGHN. Yes, sir.

Senator HARRIS. But you come down on the other side of that than I do on whether they might take a transfer of funds and do, so long as everything was fully disclosed, research for a mission-oriented agency. Don't you think that might be somewhat better than what we are doing now?

Mr. VAUGHN. I think it would be somewhat better; yes, sir.

Senator HARRIS. Well, I appreciate that response.

The other concern that appears in my mind is that more and more I think we are drying up our sources in foreign areas for social and behaviorial science research because of the suspicion that research is somehow, involved with a sinister plot to manipulate the peoples we are studying.

Mr. VAUGHN. Yes, sir.

Senator HARRIS. And it is my hope that under a civilian agency like the National Social Science Foundation we might get away from that suspicion somewhat.

Does that seem to have any merit to you?

Mr. VAUGHN. Yes, it does. We do suffer from the impression on the part of many of our friends that the research we are proposing is somehow for another purpose, an ulterior purpose, and to the extent that we can completely open it up to make everybody a participant, everybody understanding fully what is involved and something to be shared fully by everyone, I think this is what we should be shooting for.

Senator HARRIS. I think you are involved in what is a very, very important and worthwhile innovative idea, the idea of using the dedication that there really is in this country, to help other people, and at the same time to help oneself and I think they have some impact on the rest of us by what they have learned.

That was a rather wild idea to some people, I think, when it was first thought up.

I think we will have to be at least that wild or wilder, if we are going to get at some of the tremendous problems we have domestically in the urban areas; in population growth, in foreign countries, and so forth, particularly in light of the tremendous development and technology brought about by the natural and physical sciences.

It seems to me that if we have to depend for the kind of innovative research in the social sciences on funds from the National Science Foundation, which is now split 90–10 in favor of natural and physical sciences, or to mission-oriented agencies although they will, of course, continue and must continue in what they do in connection with their mission in the social sciences, if you have to depend on that kind of support, I am afraid there will be those who won't want to risk the 90 percent by the controversy that is probably going to accompany the 10 percent unless they play it safe.

These ideas, I think, have got to be controversial if they are going to be worth anything because they have got to be innovative and original. I am afraid that the pressures will be that "let's don't rock the boat because the little old 10 percent that we are getting for the social sciences in the National Science Foundation," which is admit-

tedly going to grow some, "may endanger our budget for the 90 percent that goes to the natural and physical sciences." That is why I think that you have to have a separate organization if you are going to have any innovative thinking.

Does that make any sense to you?

Mr. VAUGHN. Yes, sir. I think, from our rather narrow point of view, that the main area causing us problems and slowing down our progress, is the area of cross-cultural relations studies. What are the attitudes of our friends we are working for abroad?

In the other areas, where we have had to compensate for the volunteers' original deficiencies such as language and skill training and so forth, we have done well. In fact, I think we do language teaching as well as anybody anyplace.

But in the cross-cultural part: what is the environment in which the volunteer will be working, what are the people's values and aspirations and complexes and idiosyncracies, how do you get along, what do you do and what do you not do. Finally, in that area, we get a little better, and then suddenly we go into eight new countries and we don't have any understanding really as to what their backdrop is.

So we could profit greatly from a big expansion in research in this particular area.

Senator HARRIS. Well, I am really honored you came, and I appreciate your testimony and your response to questions.

I wonder if either of your associates have any remarks they want to make before we wind up.

If not, thank you very much.

Mr. VAUGHN. Thank you.

Senator HARRIS. We will recess until February 16.

(Whereupon, at 1:45 p.m., the subcommittee recessed, to reconvene February 16, 1967.)

NATIONAL FOUNDATION FOR SOCIAL SCIENCES

THURSDAY, FEBRUARY 16, 1967

U.S. SENATE,
SUBCOMMITTEE ON GOVERNMENT RESEARCH,
COMMITTEE ON GOVERNMENT OPERATIONS,
Washington, D.C.

The subcommittee met, pursuant to recess, at 10:15 a.m., in room 1114, New Senate Office Building, Senator Fred R. Harris (chairman of the subcommittee) presiding.

Present: Senators Harris, Montoya, and Mundt.

Also present: Dr. Steven Ebbin, staff director.

Senator HARRIS. The subcommittee will be in order.

I am sorry that a meeting with the chairman of our full committee, Senator McClellan, kept me from getting here on time.

Today we continue our hearings on S. 836, which is a bill to create a National Foundation for the Social Sciences. We commenced these hearings, this being the third day, with witnesses from various agencies and departments within the executive department of the Federal Government. It is our thought that upon the conclusion of today's hearings, we shall hear from various social science associations and from those within the social and behaviorial science community in the country, and probably a part of those hearings will be in the form of seminars.

Our first witness today is Dr. Paul Miller, Assistant Secretary for Education in the Department of Health, Education, and Welfare.

Dr. Miller, we welcome you here. You have some associates whom we would like you to present to the subcommittee at this time, if you will.

TESTIMONY OF DR. PAUL MILLER, ASSISTANT SECRETARY FOR EDUCATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, ACCOMPANIED BY DR. SAMUEL HALPERIN, DEPUTY ASSISTANT SECRETARY FOR LEGISLATION; DR. ALICE RIVLIN, DEPUTY ASSISTANT SECRETARY FOR PROGRAM EVALUATION; AND JOSEPH WHOLEY, OFFICE OF ASSISTANT SECRETARY FOR EDUCATION

Dr. MILLER. Mr. Chairman, I am privileged with the opportunity of coming before you and other members of the committee. I am equally pleased to introduce my colleagues.

To my right is Dr. Alice Rivlin, the Deputy Assistant Secretary for Program Evaluation in the Department, an economist by training.

Next to her is Dr. Joseph Wholey, also of the Program Evaluation Division.

And Dr. Samuel Halperin, on the end, the Deputy Assistant Secretary for Legislation in the Department, a political scientist by training.

My field is sociology, I think pertinent to our discussions here this morning.

Senator HARRIS. I am pleased to have with us today the ranking minority member of our parent committee and also of this subcommittee, and a cosponsor of S. 836, Senator Mundt.

It there anything you wish to say, Senator Mundt, before we proceed?

Senator MUNDT. No. I welcome the delegation and am happy to hear what they have to say.

Senator HARRIS. Fine.

You have, Dr. Miller, a prepared statement and you may proceed from that or excerpt from it, whichever you may wish to do.

Dr. MILLER. Mr. Chairman, we have prepared, I think, a relatively brief statement and I think perhaps I shall give it and not give the appendixes, which we shall submit for the record in response to some of your questions.

Senator HARRIS. Thank you. You may proceed.

Dr. MILLER. As I have said, we are grateful for the opportunity to appear before the subcommittee and to testify on S. 836, the proposed "National Foundation for the Social Sciences Act of 1967."

Before addressing myself to what I believe are some general issues raised by the proposed legislation, I would like to respond to Senator Harris' letter of January 12 to Secretary Gardner. Senator Harris' specific inquiries call for a considerable analysis of data. I regret that we will not be able to provide complete answers for approximately a month, but as an interim measure I have asked agencies within HEW to prepare brief replies to the Senator's first four questions and these are attached to the copies of my testimony.

Senator HARRIS. Without objection, those attachments will be made a part of the record at the conclusion of the statement of the Secretary and additional answers which are to be made available later will also be made a part of the record.

Dr. MILLER. Senator Harris' questions are insightful and we appreciate them because they stimulate the kind of organizational introspection we feel is vital. I will see that the complete answers are made available to the subcommittee as soon as possible.

I now would like to comment more generally on the implications of S. 836. In this record, I wish to make it clear from the outset that we strongly endorse what appears to be the general purpose of the bill—increased Federal attention to and support for social science research.

Over the last several years the charge has been made that the Federal Government, indeed, the entire Nation, has given too little attention to the social sciences. Much of this concern has centered upon the disparity in dollar support between this natural and social science. There is little doubt that this disparity exists. The evidence is both available and convincing.

The National Sciences Foundation, for example, has reported that the Federal Government's actual obligations for all types of basic research in fiscal year 1964 totaled nearly $1.6 billion, of which the social sciences received only $34 million. In other words, in fiscal year 1964, the social sciences received only 2.1 percent of the total amount obligated for basic research by the Federal Government. The projection for fiscal year 1965 and 1966 are similar—2.2 and 2.6 percent, respectively. The figures for applied research are only slightly different. For fiscal year 1964, the obligations for applied social science research were 2.3 percent of nearly $3 billion total applied research obligations, and for fiscal years 1965 and 1966, 2.7 and 2.9 percent.

We do not wish to imply that funds for natural science research be reduced. However, the small percent of dollars allocated to social science research is of vital concern. The overwhelming success of our natural science activity has been a double-edged sword: While it cannot be denied that modern scientific developments have led to technological innovations which enhance all our lives, it must also be acknowledge that this same technology has, at times, vastly outstripped our ability to control it. Smog, water pollution, congestion, and human dislocation suffice to list but a few examples. The point I wish to emphasize is that the continued disparity between support for the natural and the social sciences runs the risk of creating a cultural imbalance wherein technological innovation far surpasses our ability to assimilate it.

As we review some of the great technological achievements of our country, one must conclude that our capability for generating and disseminating new technology has been greater than our capability for devising adequate organization to match achievements with aspirations. Indeed, as but one example, one of the great American paradoxes resides in our breathtaking achievements in agricultural productivity, yet the ominous presence of rural poverty is around us and rural community services are substantially below the standard that our citizens have come to expect. Without question, one of the reasons for these unintended consequences has been the traditional orientation of agricultural research to plants and animals and only slight attention, until recent years, to human resources and institutions. In another example, our sharing of technical programs with the developing countries has frequently fallen short of full success because of our inadequate understanding of the culture, history, and institutional make-up of areas different from our own. The International Education Act of 1966 passed in the closing days of the 89th Congress speaks to the problem and also refers to one of the proposed provisions of S. 836.

Let me repeat that this is no plea to cut back on support for the natural sciences. Even if the events of our time would allow us, we have little to gain by such a deemphasis. Rather, the need is for a greater effort to understand man's relationship to the new developments of the natural sciences and modern technology. And it is here that we feel the social sciences can play a crucial part.

Aside from concern for the disparity of support, the social sciences are worthy of added attention on several other grounds. If we direct

our attention to the demands of today's world and the needs of tomorrow's, a great majority of our problems are clearly of the sort to which the social sciences have and should increasingly turn their attention. It makes no difference whether we look at our own country specifically or if we look at the world generally. Men face problems building and renewing the economies of nations. Men are trying to create new kinds of political institutions which are more responsive to people. Men face the real problem of living with—in fact, preserving—diversity in a world brought closer and closer by new marvels of transportation and communication. For all these and other problems we can no longer afford to relegate the social sciences to a second-rate, stepchild position. Thus, we enthusiastically applaud the sponsors of S. 836 and the members of this subcommittee in their drive to discuss and develop means for providing increased support for the social sciences.

Having made clear our support for the general intent of S. 836, I must go on to say that we are in moderate disagreement with a number of the specific provisions contained in the bill. Specifically, we are concerned over the proposal to establish a separate Federal agency concerned exclusively with encouraging and supporting the social sciences.

Our concern is based on several factors. The first is a philosophical matter. To be sure, a separate Federal agency would assist in providing the added Federal attention which we all agree the social sciences need. However, it seems to us that the establishment of an organization devoted exclusively to the social sciences runs the considerable long-range risk of implying that there exist two kinds of science—the so-called natural sciences and the social sciences. Indeed, one might argue that we have already gone too far in fragmenting the universe of knowledge. As a development unique to the American intellectual community, an unfortunate separation of thought has occurred between the social sciences and the humanistic disciplines. We have seen fit recently to draw back from this and move to reduce the cleavage. This seems to us a more desirable direction than moving to institutionalize the cleavage between natural science, social science, and the humanities.

Although differences may exist in the state of development among the respective disciplines, the fundamental process of objective inquiry does not differ whether the focus be upon people or nature. Science is a set of procedures, a frame of mind, if you like; as such, it is neither more nor less applicable to different fields of investigation. In short, to establish a separate agency for social science runs the risk of implying that there is a field called science and something different known as social science. Such a distinction, we feel, is unwise and could permanently cast the social sciences as something less than science. Accordingly, the establishment of a new agency could institutionalize the separation between the divisions of science and make a desirable future integration more difficult, if not impossible. The possible consequences of this separation are immense—for the social sciences, for curriculum unity in our colleges and universities, and for the seminal interaction of various fields of thought.

In addition to this philosophical concern for separating the two realms of investigation, we feel that the establishment of a new Federal agency for social science might seriously impede the very substantial progress which is being made in the practical integration of the social and natural science disciplines. Researchers themselves are increasingly finding the boundaries between the two realms arbitrary and constraining. The problems which attract the attention of today's investigators do not easily divide into physical, biological, or social compartments. As I mentioned earlier, the problems which face us today are in substantial measure problems of cultural lag, problems where our technological innovations have outrun our social abilities to grapple with them. These problems often call for extensive interdisciplinary scientific approaches.

For example, air pollution is as much a concern of political scientists as it is of chemists, as much a concern of sociologists as it is of physicists. Much of our failure to solve such problems today is due to our inability to grasp them in their wholeness. In short, we attack them on a piecemeal basis. While the problems are general, our solutions have become increasingly specific.

The establishment of a National Foundation for the Social Sciences could possibly inhibit the coordination and integration of scientific disciplines in their study of these problems. Moreover, a separate agency mght seriously complicate the formulation of a much needed overall, comprehensive, nationwide policy on scientific research. As I implied earlier, the problems of our times call for a carefully considered, all-encompassing national policy on science, not two national policies, one for science and one for social science.

In addition, we feel that current efforts to achieve more efficient administration of Federal programs through the appropriate consolidation of related activities would best be served by the inclusion of social science research within the structure of the National Science Foundation.

We have also noted an apparent difference between the language of the bill and the nature of the initial questions asked of HEW. The bill would appear to favor the encouragement of basic or pure research, research aimed at answering fundamental questions about man and his environment, without concern for immediate implementation or recommendations. On the other hand, some of the questions appear to imply that there is a need for social science research which is policy-oriented in keeping with the mission of the agency involved.

We grant the crucial importance of social science research to both worlds. That is, policy-oriented research and longer range, fundamental research are equally important for the survival of our Nation and the betterment of man generally. Nevertheless, we feel that establishment of a separate Federal agency to foster applied social science research would be questionable. In order to carry out applied research successfully, it is necessary to have considerable contact between the researcher and the practitioner. Such contact serves to acquaint the researcher with the procedures of the program in question and the realities which set limitations upon the program's opera-

tions. It is difficult to see how a separate agency, such as a National Foundation for the Social Sciences, would have the capability and understanding to maintain this necessary practitioner-researcher relationship. Thus, we do not feel that its should be the function of any new Federal emphasis to fund or support applied social science research. The applied or policy-oriented research should remain without the domain of the agencies involved.

Having elaborated upon the bill at hand, let me emphasize again that we differ with the proposals contained in S. 836 only over means and not over ends. The fundamental need to redress the lack of emphasis presently given to social science research indeed demands action. It is our belief that this action could best take the form of partially redirecting the attention of an existing Federal agency. Specifically, we believe that the National Science Foundation carries the added advantage of facilitating the formulation of a much needed comprehensive national policy on science research. Furthermore, it would facilitate coordinated, interdisciplinary scientific activity, and would prevent the institutionalization of a distinction between science on the one hand and social science on the other.

To insure that the social sciences receive support commensurate with their needs, we feel that the following measures would be highly desirable and would like to suggest them for your consideration: (1) That funds be earmarked by Congress for the social sciences within the NSF appropriation; (2) NSF should be directed to take a broader view of what constitutes the social sciences, even to amending its act in its phrase of "the other sciences"; and (3) a more adequate representation of social scientists on the National Science Board should be contemplated.

In conclusion, Congress has rightly seen fit to seek ways for better encouraging social science research. It is our position that such encouragement would best result in the long run from redirecting the efforts of the already existing National Science Foundation.

Let me repeat that I appreciate the opportunity to come here today and express these opinions. I would be delighted to answer any question the chairman and his colleagues care to pose.

(The attachments to Dr. Miller's statement follow:)

OFFICE OF EDUCATION

1. What use has your agency made of social science research in the past?

Until very recently the Office of Education has administered its research program almost exclusively in support of technically excellent but unsolicited proposals. Such proposals were required to demonstrate how they were building on previous research, but the obligation for identification of particular areas of concern was left largely to the initiative of the research community. As a consequence, it is only in the past few months that the research program has begun to modify its administration to the extent that *it* would begin to ask questions about what might be useful in terms of social science research to education broadly conceived, and then, on the basis of the answers derived from that administrative questioning, proceed to develop planned programs of research to provide the answers.

2. What types of unclassified social science research has your agency supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories, who has done this research for you?

The U.S. Office of Education has supported research in the behavioral and social sciences in such areas as the psychology of learning; the relationship of

socio-economic factors to learning, school achievement, and community support for education; the financing of public education; and the sociology of education.

None of the research supported by the Office of Education is classified, and all of it is done extramurally. Virtually all of the research in the social sciences relating to education has been done in universities or colleges, but in recent months a small amount has been contracted for with non-profit research corporations.

3. What has been the experience of your agency concerning the relevance of social science research which you've funded to the mission of your agency?

We refer back to the answer to the first question. The objective of the research program until very recently has been the support of technically excellent unsolicited proposals, and therefore the relationship to the mission of the agency has been primarily whether or not the research related to educational issues of significance to the Nation's schools. It is only very recently that we have begun interpreting our mission as involving the establishment of priorities for research that would help the Office of Education, State educational agencies, and local agencies in the administration of American education. This process is only just beginning. We have, however, recently supported one new R&D Center on a beginning basis provided that it spent the first year researching problems relating to school desegregation, and new planning procedures have recently resulted in increased attention on the part of the research effort to the needs and interests of the other Bureaus and staff offices of the Office of Education.

One of the most interesting pieces of extramural research conducted under the authority of Title IV of the Civil Rights Act was the Equal Educational Opportunity Survey, now come to be known as the Coleman Report. While the findings of that report are of considerable significance, the implications in terms of policy for the Office of Education is a hotly debated matter, both in and outside of the agency. What *can* be said with assurance, however, is that studies of this variety provide data and opportunities for analysis which have not existed before, and therefore offer a base for discussion of a substance previously not available.

4. What has been the magnitude of your support of social science research in the last five years? What are your plans for future support of social science research?

The only figures available handily are for the past three years. During that time we obligated for project research under our various research authorizations something over $.6 million in FY 1965, $1.4 million in FY 1966, and so far in FY 1967, slightly over $1 million for social science research undertaken primarily for the purpose of understanding *group* behavior. During this fiscal year we estimate that the Research and Development Centers, under programmatic support, are conducting approximately $800,000 worth of such research.

Plans to conduct more social science research include pilot studies in FY 1967 designed to test the feasibility of supporting centers for the study of educational policy. If they do prove feasible, we plan to support two on an expanded, programmatic basis. Further plans to support social science research will depend on current deliberations. No decrease in support is contemplated at present. Increases, if any, will depend upon appropriations and the outcomes of the planning efforts now underway.

Social Security Administration

1. What use has your agency made of social science research in the past?

The Social Security Administration has, throughout the years since 1935, made extensive use of social science research for program evaluation and planning. Successive extensions of social security coverage to additional population groups, the inclusion of additional risks such as disability and health insurance, increases in benefit levels and other modifications of the program have all been preceded by lengthy studies and analyses of the existing programs, of gaps and problem areas and of the costs and benefits of alternative changes. The results of research have been used in the formulation of policy and in the decision-making process by the program administrators, by Advisory Councils, by other parts of the Executive establishment, and by members of Congress. The research findings have also been published and made available to the academic community and to other interested groups, thus promoting informed public discussion of program objectives, achievements and problems.

2. What types of unclassified social science research has your agency supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories, who has done this research for you?

All research carried on or supported by the SSA is unclassified. The major part of the research has been carried on in-house. Some of the research draws on confidential social security record data. All is related to program concerns and most requires a close familiarity with the details of the existing program structure even when the scope of the research is broadly concerned with overall issues of income maintenance or social welfare.

Major types of research carried on by the SSA have included: economic analyses of the effect of the social security program on income distribution, social security financing in relation to general economic and fiscal policy, measures of program adequacy including the relation of retirement and pre-retirement income for different groups, conceptual and statistical studies of alternative definitions of poverty and low income; the relation of income and expenditures and related issues; economic and social surveys of beneficiaries and groups at risk such as aged persons, disabled adults, families with children—drawing on the disciplines of economics, sociology, anthropology, social psychology, political science; studies of the characteristics and experience of particular groups such as early retirees, women workers, widows without children; research relating to medical care expenditures, the financing of health services and analyses of health insurance for the aged, including utilization and charges under the program, the impact on hospital financing, medical costs and charges, private health insurance and total health expenditures, gaps in benefits, etc.; studies of aggregate social welfare expenditures and of the relation of public and private income-maintenance programs.

Extramural research supported by the SSA has been of two major types: (1) contract research on projects initiated by the SSA. The major projects have been in one of two fields. A number of medico-social studies designed to provide better guidelines for disability determinations have been funded, all carried out by university groups. The second area, which is expected to be of growing importance, is studies related to health insurance (Medicare). A major before and after study of health service utilization and costs is being carried out by the Columbia University School of Public Health, and several contracts for methodological research and a survey of hospital financing have recently been entered into. (2) research grants—The SSA participates with the Welfare Administration in the Cooperative Research Grant Program authorized by Section 1110 of the Social Security Act. Grants are made to universities and other nonprofit agencies for research projects in the broad field of interest of the SSA, on recommendations of an Advisory Panel of experts.

3. What has been the experience of your agency concerning the relevance of social science research which you've funded to the mission of your agency?

As indicated in response to question 1 above, the social science research carried out by the SSA has been of direct relevance to the mission of the agency and has been used for policy purposes. The research grants have deliberately been opened to types of research less directly related to program issues. Since the research grant program is new and the amounts available to the SSA have been very small, there is limited experience on which to base an evaluation. Nevertheless, we can point to a number of projects of great relevance that are either completed or well along towards completion—such as a study of the effects of pensions on saving, an analysis of the effect of income on medical expenditures and use of health services, a study of the economic costs of long-term care in different types of institutions, research on problems of old age and poverty, and several studies of early retirement.

4. What has been the magnitude of your support of social science research in the last five years? What are your plans for future support of social science research?

Total funds used by the SSA for the support of social science research since 1963 are estimated as follows: data relate to obligations for social research as defined by the National Science Foundation:

[Amounts in thousands]

Source of funds	Fiscal years				
	1963 [1]	1964	1965	1966	1967
SSA budget, total [2]	$3,022	$2,471	$1,895	$3,301	$3,531
Intramural research	2,916	2,136	1,875	2,936	3,191
Extramural research	106	335	20	365	340
Research grants: [3] Sec. 1110	397	441	408	699	750
Total including research grants	3,419	2,912	2,303	4,000	4,281
Percent extramural	15	27	19	27	25

[1] Amounts for units in SSA after reorganization of January 1963.
[2] Includes costs of data collection for research studies.
[3] Shown as WA obligations in budget documents and in annual reports to the National Science Foundation.

WELFARE ADMINISTRATION

1. What use has your agency made of social science research in the past?

The Welfare Administration has supported applied social science research dealing with the social and economic aspects of the program it administers. For the most part, the research has been supported through the research grant programs for studies of economic dependency, child welfare, and the organization and administration of social welfare services.

2. What types of unclassified social science research has your agency supported? What portion is classified? What portion is contracted for; what portion done in-house; and, by broad categories, who has done this research for you?

None of the social science research of WA is classified. Research has been supported in economics, sociology, and social psychology. In fiscal year 1966, about 8 percent of the obligations for social science research was for intramural research, the remainder was for grants or contracts. Only a very small portion of social science research has been done under contractual arrangements, but this proportion will increase in the future. Most of the extramural social science research is done by universities.

3. What has been the experience of your agency concerning the relevance of social science research which you've funded to the mission of your agency?

One of the criteria for funding social science research is that the project have relevance for the programs of the Welfare Adiministration. Beginning in fiscal year 1967, the Welfare Administration began to make greater use of the authority to enter into research contracts as well as to make research grants. Contracts are used when the research is of primary interest to the Government and where specifications for the research are detailed by the Government.

4. What has been the magnitude of your support of social science research in the last five years? What are your plans for future support of social science research?

From fiscal year 1964, when WA was established, through fiscal year 1967, an estimated $24.9 million has been obligated for social science research, including extramural and intramural projects. The Welfare Administration plans to strengthen and expand its support of social science research. The obligations for social science research for fiscal year 1968 are estimated to be about $9.0 million.

Senator HARRIS. Thank you very much, Dr. Miller, for your presence and the presence of your associates.

We are glad to welcome to the hearing Senator Montoya, a valued member of this subcommittee and of the parent committee.

I note in your testimony Dr. Miller at the bottom of the first page, you say:

Over the last several years the charge has been made that the Federal Government, indeed, the entire Nation, has given too little attention to the social sciences.

Then you go on to say on page 2 that "there is little doubt that a disparity does exist * * *" in dollar support between the natural and social science fields, and you point out in the second paragraph on page 2 that basic research in the natural and physical sciences totaled, in 1964, $1.6 billion, and in the social sciences only $34 million or that the social sciences received 2.1 percent of the total.

Then you go on to say let us not change any of the basic organization, which it seems to me is rather inconsistent. You say things are in pretty poor shape, but let us not change anything basic. You do not even recommend that social scientists be included in greater numbers on the National Science Foundation Board. You just say that that ought to be contemplated.

Does that seem inconsistent to you?

Dr. MILLER. Mr. Chairman, with reference to the last point that, under the terms of the suggestions which we are making in this testimony, they suggest more than contemplation. We feel it is within the purpose of the Congress to work this out, but certainly under the scheme of elements which are presented in these remarks, consideration should be given to restructuring the organization of the National Science Board.

Senator HARRIS. In other words, we are at a crossroads within the Congress now as to how we are going to reorganize the NSF. It will take some changes if we are to do what must be done in the social sciences.

Dr. MILLER. In this we would agree with you.

Senator HARRIS. So if it is going to take some change in structure, I presume you agree that Congress ought to look at not just one possibility, which is restructuring the National Science Foundation, but the possibility also of creating a new Foundation, the National Social Science Foundation. You would agree that that is an alternative?

Dr. MILLER. I think in the interest of advancing the promise of social sciences in general and in research activities, the subcommittee is to be congratulated on looking at all of the options. We, too, have tried to weigh the pros and cons, the merits of the various alternatives. We have tried, Mr. Chairman, to go back over the history. I have looked at some of the substantive claims and references and analyses of the social science community over a number of years, and on balance, we feel that we would elect a reorganization or a redirection of the National Science Foundation in this instance.

Senator HARRIS. Now, then, do you agree with me and with some others that one of our problems—perhaps not the major thing, but one of our problems—in getting the kind of interdisciplinary effort you say we need, and I agree with you, is that natural and physical scientists have tended to feel that social and behavioral sciences are not sciences at all but are something else, engaged in some kind of art, but not really on the same footing with those involved in the more exact sciences?

Dr. MILLER. I would say over the history of the sciences, and as we have expressed them in this country, some of the strains and roots

of the social science disciplines, their historical relationship in part to the humanistic disciplines, the problems of expendng scientific observation by instruments, as has been true of the natural sciences, have all led to some uncertainty on the part of the natural scientists with reference to the rigor of the social sciences. But I would say, Mr. Chairman, that as the years have gone on, as the social sciences have perfected additional instruments of observation, that this feeling on the part of the somewhat more exact historical backgrounds of the natural sciences has given way and my conclusion has been, as a social scientist, that this feeling has dissipated as time has gone by.

I would daresay that this has related in recent years to the beginning support for the social sciences in a way that had not been before, that this is in part a reflection of a more universal comprehension on the part of scientists, both those in the natural and the social sciences.

Senator HARRIS. What is your own discipline? What is your background?

Dr. MILLER. My degree is in sociology and anthropology.

Senator HARRIS. Would you not agree that the reason we have not gotten across the potential importance of social sciences in some of other fields—for example, agriculture and pollution, I believe you mentioned—is that we have not paid enough attention to the behavioral and social science aspects of those problems? It is not that there has not been a clamor to do so on the part of the social sciences. Would you agree with that? It has not been the social scientists who have failed to push for that kind of interdisciplinary effort and investigation, would you say?

Dr. MILLER. No, I think they have been pushing for this. But this is not to say, from my point of view, that the social sciences have met with formidable and countervailing resistance on the part of natural scientists. I would say that in the past 30 years in the United States the social scientists, the particular disciplines, each in their own way, often with different routes and intellectual traditions, have been moving, maturing, extending their tools of observation, their theoretical frameworks, their methodological tools. These have been growing together within the sciences, and I would say in the past 30 years what we have been seeing is a growing sophistication on the part of the social sciences to make their voices prevail in the kinds of problems we face today.

Senator HARRIS. Would you not say it is just as reasonable to conclude, at least, that if we had a National Social Science Foundation which gave new and added dignity, attention, visibility, and support to the social sciences that No. 1, you in the Department of Health, Education, and Welfare would not automatically stop the interdisciplinary efforts you have going on; and No. 2, even within the National Social Science Foundation, as a matter of fact, interdisciplinary effort would be helped because of separate identity for the social sciences? Is that not just as reasonable as the conclusion you have drawn?

You do not for a minute think that in your own department the fact that a National Social Science Foundation was created would make you people suddenly say, "Well, we are just going to have to stop our interdisciplinary effort"?

Dr. MILLER. No, this would be unfortunate. It seems to me that the issue before us and the consideration of the respective alternatives is how we can advance the strength and the support and the encouragement of the social sciences.

Senator HARRIS. Precisely.

Dr. MILLER. I would simply say, within the spirit of this testimony, Mr. Chairman, that I am inclined to believe and, as the testimony attempts to say, that the organizational arrangement for this is not as crucial as the stance of the country as a whole in encourging and by giving increased support.

Senator HARRIS. Well, it does not follow automatically, does it, that with the creation of a National Social Science Foundation, you would thereby cut down the interdisciplinary work between the natural and the social sciences?

Dr. MILLER. This does not necessarily obtain.

Senator HARRIS. It might, as a matter of fact, be the other way, would you not agree?

Dr. MILLER. No, I think the risks are far greater with the proliferation of agencies.

Senator HARRIS. Why is that? What makes you feel that way? Will not the same investigators who are bringing in applications now in those fields still bring in applications?

Your answer to that is yes.

Would it not be just as reasonable to say that they may be listened to with a good deal more interest by those in the natural and physical sciences if they had the strength and the visibility of a separate foundation, in addition to present programs?

Dr. MILLER. It would be an unfortunate kind of direction, Senator, if——

Senator HARRIS. I understand what your viewpoint is, but I am just exploring with you, in addition to what you have said.

Dr. MILLER. It would be unfortunate if investigators came in with their proposals to find the only center of interest for their work.

Senator HARRIS. You have just made a presumption that nobody else has made yet; that is, you have used the word "only" center of warmth. What makes you think this would be exclusive?

Dr. MILLER. Of course, my concern is what happens to the natural and the biological and the physical sciences. Does this mean that there is a detente here, that they lose their concern with an embracing view of the intellectual community?

Senator HARRIS. Just explore that on the facts, then. Who has made the decision in the National Science Foundation to go into these areas now? That agency is governed by the natural and physical scientists.

Dr. MILLER. Our suggestion is, sir, that it does not have to be that way.

Senator HARRIS. You are missing my point. It is precisely those people who have made the decision to go into those areas now. What makes you think that those same people would decide not to if we had a National Social Science Foundation?

Dr. MILLER. I suppose we are both conjecturing about the possible future of these alternatives. I think the National Science Foundation, which is central to our suggestions to your committee, stands respon-

sive to the Congress, stands responsive to the nature of the developments in the academic and the intellectual community. I find it difficult to conclude that by redirecting, by a certain earmarking of funds, by a reorientation of the National Science Board, that the tradition and experience over 15 or more years of the National Science Foundation cannot also be accommodated to the kinds of mutual interests that we have.

Senator HARRIS. Well, can we agree to this, then? I think our hearings and our interests of last year and this year are going to result in greater support for the social sciences, and I think you and I would agree on that. We just disagree as to methodology.

There is something else I want to touch on here, and then I shall defer to my colleagues here.

One thing that concerns me is your apparent feeling that, when we say applied research and basic research, they are the same thing. And I am not sure that is true. I am not sure we can make in any field of science and particularly in the social and behavioral science field, such a clear distinction between basic and applied research, as well.

Dr. MILLER. I agree with that.

Senator HARRIS. It seems to me, for example, that if we were able to understand why it is that under HEW, we have an Indian Public Health Service, which is the only health service for a particular minority in the country—and yet Indians rank at the very lowest in health—if we were able to understand why that is so—and I think we are dealing here primarily with attitudes and self-image and so on—that would be policy-oriented research. But, what we learn would not just apply to the Indian Public Health Service, but to a lot of other operations as well. So I do not think you can say that policy-oriented research ought not to be under a separate agency for that reason, because whatever we learn is going to be policy-oriented in one way or another.

Do you have any additional comments on that?

Dr. MILLER. I agree with the tenor and the substance of your remarks, Mr. Chairman. I think, in fact, in all of science and certainly in the social sciences, one can be bogged down in a hurry by the usefulness, short term or long term, of what we mean by applied and basic research. It seems to me that whatever the organizational model, it is not proposed that it would respond to opportunities for social science research which are related directly to mission-oriented problems of respective agencies of Government.

Senator HARRIS. I do not think anyone contemplates that, and you are going to continue, of course, the mission-oriented research you are doing now whether or not there is a National Social Science Foundation.

Dr. MILLER. Precisely.

Senator HARRIS. This last point. Some natural and physical scientists have said, and I think with some justification, that their problem with the social and behavioral sciences is that since they deal with people and constituents and voters, they are liable to get into areas that are so controversial that it will disturb their regular budget. The National Science Foundation has a budget of around $500 million, only 10 percent of which could be said, at the most, to involve

social and behavioral science research. I think that with modern problems, we need to be innovative and original and therefore controversial. It seems to me that so long as that kind of effort is housed totally within the National Science Foundation, you would run the risk that those in charge of the total NSF program, would be very lerey of spending money that would be controversial and jeopardize their total budget. Does that make sense to you?

Dr. MILLER. I would respond to it this way. I think by the very subject matter of social science research, Mr. Chairman, as we well know of its history, dealing as it does with the organizing principles of people, criticism and discipline are to be expected.

My feeling is simply a kind of judgment at this point that one could be equally concerned, and I would be more concerned, about a separate social science foundation being the target of those who would somehow charge that what it was doing——

Senator HARRIS. Is that not hiding behind the natural and physical sciences and not really owning up to the fact that social and behavioral sciences are such a contributing factor toward good in this country that they can be justified on their own?

Dr. MILLER. I agree that they can be justified on their own. They can also be justified on their own, Senator, within a larger scientific framework. I think that what we are talking about here can take place; they can stand on their feet, the social sciences, within this larger framework of science.

Senator HARRIS. But you do admit that that statement is prospective, that it can be done?

Dr. MILLER. Yes.

May I say about our interaction, on our discussion here, Mr. Chairman, that we have talked about the failure of some scientists to be receptive to the activities of other and all the rest. I have a feeling that there have been forces in this that far outweigh the burdens which scientists must assure in terms of receptivity to the various disciplines. I think our whole society must take most of the burden here: the appropriating bodies, the attitude of the public in general to a systematic and rigorous approach to an understanding of ourselves and our environment.

Senator HARRIS. I think that can best be done by changing something because it has not been done very well up to now. If the social sciences have their own foundation, I think we could do a better job of selling it to the people. But that is only a judgment.

Senator Mundt.

Senator MUNDT. Thank you, Mr. Chairman.

I found your statement, Dr. Miller, to be very constructive and interesting. I shall want to study your three recommendations in depth, because I do think there is merit in this alternative approach and we want to weigh it against the proposals contained in the bill.

You say you are in moderate disagreement. In this business, you cannot be in moderate disagreement. You are finally down to the place where you have one monosyllabic word you have to use or the other: that is, yes, or no. By moderate disagreement, do you mean that this is a tentative disagreement on your part, that you are not sure how you would vote on this particular legislation, or that you would be against it?

Dr. MILLER. I think we ought to clear this one up. I think the testimony stands on the basis of being in disagreement. The word "moderate," comes into it in view of our affirmation of the work of this subcommittee and its genuine concern to do something constructive to support the advanced interests of the social scientists. The word "moderate" means that we want to encourage you in what you are doing, at the same time raising questions about the option contained in the bill.

Senator MUNDT. In other words, you support the goal but you prefer a different approach?

Dr. MILLER. I would say that would summarize it.

Senator MUNDT. Will you dilate a little bit on what you mean—I think I know, but I would like to have it in the record—on page 7 you say:

> For example, air pollution is as much a concern of political scientists as it is of chemists, as much a concern of sociologists as it is of physicists.

Will you dilate on what you have in mind?

Dr. MILLER. Well, I think when one takes the problem area of air pollution, one is dealing with the interaction of large sectors in this country—the private industry sector, the public sector, matters of political organization are crucial to it, while the nature of various kinds of devices to reduce the pollutants in air pollution have their basis in the biological and the physical sciences. Increasingly, one cannot look at air pollution, not grasping it in all of its ramifications—economical, political, and rooted in the mechanical, biological sciences, and applied technologies.

Senator MUNDT. It seems to me that what you have just said and the nature of your statement is relevant to the colloquy you had with the chairman about the differences which exist sometimes between social scientists and physical scientists. As a former college teacher of social sciences, I am well aware of this running debate which has been going on for a long time. To my way of thinking, it is not essential for us to prove as social scientists that we are scientists of precisely the same nature as a physical scientist or a natural scientist in order to justify the importance of the work or the existence of the needs, because I think we have to recognize there is a difference. Your air pollution example, I think, is illustrative. I think very conceivably, given a decade or given a year from now, natural scientists can find a complete and total process for eliminating air pollution so they can have pure air emanating from the smokestacks that used to contaminate the air. So you have an answer there.

Then you run into this thing of the political sciences. There it is not as clear cut. You have an answer and it is confronted with alternatives, any one of which might do the job but no one of which is susceptible to the same definite proof as a physical scientist would have to say, "Come take a look at this air; we have purified it." You might do it through the situation that you would induce the industry to put in its own purification; you might do it by a State law or a municipal law which would simply make it prohibitive for a firm to continue to pollute the air; you might do it by a grant-in-aid program. There are a lot of ways, and it is an endless argument to find out just what

political process is the optimum one in order to give meaning and put into operation what is established as a complete and total correction of air pollution.

So I think we waste a lot of time in futile argument when we try to say that social scientists can come up with as clean-cut and demonstrable answers as the physical scientists. I do not think it has any great importance or relevance. I think the social and behavorial scientists can stand on their own feet and justify their existence without constantly insisting that we have the same degree of "science" as a physical scientist.

Would you care to comment on that?

Dr. MILLER. I would agree with you, Senator, that that argument is a fruitless one, it seems to me. I wholly concur. I would say, though, that when one speaks of science, I do not think that I would rate as important the precision of its measurements and its ability to predict and conclude the accuracy as making it different in a scientific sense. Social scientists and natural scientists are both trying to observe by various extensions of our powers, as human beings to observe, to record these observations in logical ways, to find out what kinds of general principles or law seem to pertain in what we observe, so that others can replicate this and study and verify. Even in the natural sciences, if I read the history of the physical sciences in the past several years, there have been substantial revolutions in the theoretical understanding of the nuclear field, for instance, complete revelations and changes leading to conclusions that earlier formulations were generalizations which were imprecise if not incorrect. So it seems to me that all science keeps struggling into the future, attempting to observe in such ways as to make its observations available so others can make the same observations, but always trying to come to more systematic understanding of the phenomena which are being observed.

Senator MUNDT. I simply make the point because I would dislike to see our subcommittee or our Congress have to assume an unnecessary burden in trying to justify the importance of greater effort being devoted to the social sciences. We are always going to labor in fields which are more debatable than those of the physical sciences. It is true, they never get the optimum answer, or seldom get the optimum answer, which is not subject to change as they learn more about the ingredients with which they work. But I think we can justify what we are trying to do, either our way or your way, without assuming the burden of trying to define the final answer to a debate which has been running in this country for decades and is going to continue. I do not think it is relevant to our particular task by saying that there is more work to be done by social scientists or there are more problems to be solved. The answers are not going to be at any one particular stage as definitive and as definite and as nondebatable as they are going to be when they come up with an answer provided by a physical scientist.

But I do not think that in any way minimizes the importance of what is to be done in the social scientist field.

What would you do, Dr. Miller, if you suddenly had $200,000 more under your jurisdiction in social sciences?

Dr. MILLER. What would I do if I had $200,000? Could you give me a little more?

Senator MUNDT. I know you would ask for that, but that is Parkinson's law. We have to start some place. Would you rather start with $300,000?

Dr. MILLER. What you are asking essentially is what do I consider as a really top-priority item vis-a-vis the importance here of the social sciences as we are agreed here?

Senator MUNDT. Surely.

Dr. MILLER. I think we are at the point in American history when we are much better at conceiving and initiating new organizations than we are at adapting and accommodating and changing those which we have. Much of our society reminds me, at least, of the ship encrusted with barnacles. We do not know exactly how to get the barnacles rearranged and scraped.

I think one of the great contributions of the next few years of social scientists will be, Mr. Senator, to envision the kinds of concepts that go into the urban life, of our society, and drawing, may I say, with particular reference to your interests that I know about, on what we have learned out of the changes in agrarian development. I do not think we are learning from the experience of what we have gone through, in terms of large-scale organization, how to effect change properly. I would like to see social science work more on conceptual model building in our society so that the various problems of poverty and delinquency and dislocation might have a more intelligent kind of framework in which to be acted out.

Senator MUNDT. Might that include some study and some discoveries, perhaps, in the direction that big cities need not necessarily continue to be magnets to draw people out of small communities so that they constantly get larger so that your problems continue to outrun your capacity to solve them; that perhaps the migration into the city might start moving the other way by providing the right kind of opportunity system?

Dr. MILLER. I would include in this kind of program which I am responding with to your questions certainly how we spatially, in an ecological sense, conceive of the community of the future. We certainly are not making the urban community work, and we are developing it by attrition. I think that conceptual thought of our top social scientists is going to be needed in the years ahead to conceive of entirely different kinds of spatial or ecologically arranged communities.

Having just come to this job shortly from the State of West Virginia, I have a feeling for what you are talking about.

Senator MUNDT. Good.

One other question. In attachment 1 you say that virtually all of the research in the social sciences relating to education has been done in universities or colleges, but in recent months, a small amount has been contracted for with nonprofit research corporations.

Could you talk about that as to the nature of the nonprofit research corporation and as to the nature of the solution?

Dr. MILLER. I would be pleased to speak to this, but since my colleagues have not really been able to work here, I would like to call on Dr. Halperin to comment, if he would.

Senator MUNDT. Good.

Dr. HALPERIN. We will have to supply a memo with the detailed authorizations. We have had the authority to contract with proprie-

tary organizations only since April of 1965. It is my understanding that only about half a dozen contracts have been let since then. Appropriations, by the way, were not available until about October of 1965. I do believe we have a contract with Xerox, a contract with North American Aviation. These are contracts having to do with the education of American Indians, and studies of vocational education. I know just generally what we have been doing, but I would like to supply a detailed memo with regard to this.

Senator MUNDT. I am not too much concerned about the details at this particular juncture. Let us take the contract with regard to the education of the American Indians, because both the chairman and I, and also the ranking Democratic member, all come from Indian country. This is something we are very much interested in. Is your contract with Xerox involved with the American Indian?

Dr. HALPERIN. I believe it is, sir.

Senator MUNDT. Just to sketch in roughly what a contract like that involves. What kind of contract have you given?

Dr. HALPERIN. I am afraid I would have to supply that information. I am not knowledgeable about it.

Senator MONTOYA. Do you know, Dr. Miller?

Dr. MILLER. Not in specific enough terms but I think it would be useful here. I would like to see that the subcommittee gets this information.

Senator MUNDT. What I am trying to get at is whether or not, when you issue a contract, you simply say, "Here are so many dollars, you have so much time; take a look at the Indian education problem and come up with some ideas"? Or do you give them some guidelines or do you raise some specific problems or do you create some specific targets? What kind of contract are we talking about?

Dr. HALPERN. I believe, sir, that, in general, our negotiations with proprietary organizations are similar to those with universities and State departments of education and the other principal performers of research; that is to say, there is a problem that is of interest to the researcher.

Generally, we do not solicit projects. The researcher hits upon something that is of interest to him, comes up with a methodological framework for pursuing the project, and submits it to us. There are discussions. The project applications are reviewed by panels of scholars, usually nongovernment scholars. There is also an in-house review of the applicant's ability to carry out the work. There may be some negotiation about money levels and the like. But it is my general understanding that there is no basic difference between working with a proprietary organization and with a university.

The initial contract between the corporation and the Office of Education in this case would come as the result of the interest of the corporation.

Senator MUNDT. Can you recall from memory how Xerox, which has a wonderful reputation in many fields, has suddenly got an interest in Indians, or has come to you and said, "Now, we have made a wonderful copier machine; we have this stock which has this most spectacular record on the big board in the last generation; we want to know something about Indians, too, and we would like to make our talents available"?

I have the greatest respect for the Xerox Co., but I am trying to find out how this organization, which is so far removed from Indian country that it has to travel a long distance to find one, even became interested in Indian education.

Dr. HALPERIN. I cannot answer that, sir. I am sorry.

Senator MUNDT. But the approach came from them.

Dr. HALPERIN. I believe so.

Senator MUNDT. Also, from North American Aviation.

We will have to ask you to supply details of contracts with whatever corporations you have, or nonprofit research corporations. I do not believe Xerox is exactly a nonprofit operation. They have made a fantastic display on the big board that indicates otherwise.

Is that what you mean by a nonprofit corporation, Xerox?

Dr. HALPERIN. No, sir, I picked up the——

Senator MUNDT. They would deny that.

Dr. HALPERIN. I erroneously picked up the proprietary part, sir. We do, of course, have very significant new relations building in the so-called regional and national educational laboratories, which were authorized by the Congress, again in April 1965, as an amendment to the Cooperative Research Act. This is title IV of the Elementary and Secondary Education Act. We have at the present time about 20 nonprofit operations set up in various parts of the United States to carry on a vast variety of educational research projects. We are in the process of evaluating the work of these corporations to consider how they are to be funded in the future. We have a study that we are expecting in the very near future from Dr. Francis Chase of the University of Chicago.

Again, I could make materials available on that program and what has been done.

Senator MUNDT. Let us just limit the request to supply the contracts and all the information you can provide with those corporations such as Xerox and North American and any others dealing with problems involving the American Indian. That will give us a picture of what you are trying to do in that area and our Appropriations Committee, on which I also serve, will have a chance to go into detail about the whole picture. But this will give us a pattern to study and probably answer the questions which I am interested in. If you will do that, I will be satisfied.

Dr. HALPERIN. Thank you.

(The material requested follows:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., February 21, 1967.

Mr. FRED MANSBRIDGE,
Minority Staff Member, U.S. Senate Subcommittee on Government Research, Washington, D.C.

DEAR MR. MANSBRIDGE: In view of the interest of Senator Mundt and the request made by him to me at the recent hearings of Senator Harris' Subcommittee, I am taking the liberty of sending directly to you a copy of the materials requested by Senator Mundt.

To date, the Office of Education's Bureau of Research has concluded 6 contracts with profitmaking organizations. The contract with Xerox Education Division—Basic Systems, a Xerox subsidiary, does not pertain to the education of American Indians but, rather, is entitled "A Communication Study of the American School System." Following the Senator's request I am enclosing the entire contract and the proposal submitted by the Xerox Corporation.

In connection with my statement about the education of American Indians as a research interest of the Xerox Corp., I understand that Xerox is now participating in discussions with the Bureau of Indian Affairs, U.S. Office of Education and the Arrow Foundation concerning the overall area of Indian education and the application of new educational technology to meeting specific problems in this area. I was, therefore, incorrect in my statement before the Subcommittee that the Office of Education had already concluded a secific contract with Xerox on this subject.

If I may be of further assistance, please contact me at Code 13, Extension 34158.

Sincerely yours,

SAMUEL HALPERIN,
Deputy Assistant Secretary for Legislation.

U.S. OFFICE OF EDUCATION, BUREAU OF RESEARCH

Contracts with profitmaking organizations:

Xerox Corporation, Education Division, 600 Madison Avenue, New York, N.Y., fiscal year 1967	$102,348
North American Aviation, Inc., Anaheim, Calif.:	
Fiscal year 1966	177,570
Fiscal year 1967	161,092
Bell & Howell, Co., Cleveland, Ohio:	
Fiscal year 1966	24,750
Fiscal year 1967	49,750
Arthur D. Little, Inc., Cambridge, Mass., fiscal year 1967	68,455
Education & Training Consultants, Los Angeles, Calif., fiscal year 1967	19,241
Westinghouse Electric Corp., Washington, D.C., fiscal year 1967	109,083

North American Aviation Corp.—Indexing and abstracting all Bureau of Research projects.

Bell and Howell—Service contract to provide document reproduction service for the ERIC system primarily in the form of microfilm (micro-fiche) and provides, at cost, to the public hard copies of all documents.

PROJECT SUMMARY—6–1500, CONTRACT NO. OEC–1–7–061500–0328

Title: Research on the Characteristics of Selected School Systems as They Relate to the Need for, Appraisal, Acceptance, and Use of Innovations.

Principal investigator: Edward E. Furash.

Institution: Arthur D. Little, Inc., Cambridge, Mass.

Federal funds requested: $68,455.

Duration: Beginning October 1, 1966, and Ending June 30, 1967.

Objectives:

1. To research the characteristics of K–12 school systems of different sizes and in various parts of the country as they relate to the needs for, appraisal, acceptance and use of innovations.

2. To explore the influence patterns and impact of local school boards, professional associations, lay groups, universities and schools of education, state boards, state departments of education, state legislatures, foundations, the Congress, the U.S. Office of Education, and other agencies as they affect attitudes and acceptance and implemenation of tested innovations on the part of teachers, staff, and administrators, of K–12 systems.

3. To enhance the ability of innovations to gain acceptance for tested innovations by identifying the influences which can be brought to bear upon sensitive elements in the system which will result in higher rates of objective appraisal, acceptance, and implementation of innovations.

Procedures:

1. Developing a hypothetical K–12 system in order to identify the critical elements and to serve as a unifying framework for subsequent research on real systems.

2. Selecting a sample of twenty-seven K–12 school systems which vary in size, per pupil expenditure, and geographical location.

3. Selecting four different types of innovations which can be studied in terms of the course and pattern of their appraisal, acceptance, and imple-

mentation in systematically varied environments in the twenty-seven K–12 school systems. (Examples of innovations which might be studied are: non-graded classes, teaching machines, the new math curriculum, and elementary school adjustment counselors.)

4. Examining the organizational processes and procedures for identifying needs, for evaluating alternatives, for allocating funds, and for adopting new techniques.

5. Locating and identifying the principal decision makers and analyzing the several interacting influences which impinge upon them.

6. Identifying trends in the acceptance and use of the selected innovations and of the classes of products, services, or techniques of which the selected items are representative.

7. Preparing a final report which will indicate what kind of stimuli and what degree of influence might be applied to what areas of the public education system of the United States in order to increase the rate of acceptance and the effectiveness of utilization of innovations in education.

PROJECT SUMMARY—NO. 6-1544, OEG-4-7-061544-1601

Title: Determine the Feasibilty of Developing a Model to Examine Feedback Signal Paths into the Secondary/Vocational Technical School.

Principal investigator: Dr. Leonard D. Silvern, principal scientist.

Institution: Education and Training Consultants Co., Los Angeles, Calif.

Federal funds requested: $19,241.

Duration: Beginning, December 1, 1966, and ending, June 30, 1967.

Objectives:

1. Verify preliminary listing of the major information sources and flows between and among secondary vocational technical schools, employers, industry-labor advisory committees, State departments of education, professional societies, licensing agencies, government statistical agencies, and publishers of text books or other classroom materials.

2. Determine possible and desirable modifications in existing information systems.

3. Appraise feasibility and desirability of a full scale investigation and evaluation of such systems.

4. Discuss applications of the model by non-specialists in systems analysis.

Procedures: Analysis of technical literature and data obtained by personal interview.

ABSTRACT PROPOSAL NO. 6-1530

Title: A Feasibility Study of the Effective Value of the Contingency Management System to Motivate Low-achieving Adolescents to Learn When Utilized by Skilled Teachers.

Principal Investigator: Dr. Lloyd E. Homme.

Contracting Agency: Westinghouse Electric Corp., 1625 K Street, NW., Washington, D.C.

Federal Funds Requested: $109,083.

Duration: 12 months.

1. Purpose: A proposal having dual objectives of: (1) teacher education in the effective values and skillful utilization of a computer-based instructional and motivational program known as the Contingency Management System; and (2) motivation of student learning, particularly among low-achieving adolescents.

2. Procedure: Workshop training will be offered in cooperation with a nearby university, perhaps the University of New Mexico. Qualified teachers chosen to attend workshops will be awarded fellowships. Training courses will include not only theoretical methodology but practical and immediate application of knowledge.

3. End-Product: Normal classroom settings will be established by recruiting students from special education classes in the Albuquerque Schools and from the nearby San Felipe Indian Reservation. Recruits will not be restricted to the educationally handicapped even though the major concern may be to provide remedial instruction for the slow achiever and the potential drop out.

On the basis of continuing field tests and evaluations the system will be modified before inclusion in a final instructors manual. Proposal contains references to tests of the system already conducted with children having speech and hearing disorders; of schizophrenics; and with pre-school children from the San Felipe Peublo Indian Reservation in cooperation with village teachers. Results showed significant changes in social behavior and in English literacy. The concept, based on well known psychological techniques, should appeal to the researcher and the non-researcher as well because of its promise for innovation in the educational community interested in improved educational practice.

PROPOSAL ABSTRACT [1]—A COMMUNICATION STUDY OF THE AMERICAN SCHOOL SYSTEM

This is a proposal to study the processes by which American School Systems obtain, digest and disseminate information, allocate resources, make plans, and arrive at decisions. The focus of attention will be on public schools, grades K–12. A selective survey procedure designed to permit study of both the "typical" and "atypical" cases at representative points in a sample space of school systems is proposed. This survey model is intended to be a tool for *continuing* review and analysis of communication patterns in American education for use by policy makers at all levels. The essential parameters in the model will adress: definition, authority and impact of decision/action processes; identification of groups and persons involved (formally or informally) in these processes; classifications of total system subsets on the basis of environmental differences; and sub-classifications of total system content based upon education building blocks—i.e. curriculum, facilities, etc. In addition to a survey model, it is our intention to produce a tentative set of four predictive trade-off models that emphasize possible program planning, budgeting, and effectiveness analysis methodologies. These models shall be accompanied by suggested simulation routines and testing, refinement and use procedures.

The proposed effort is divided into four overlapping phases covering a ten-month period. The phases are: *Research Design; Research* (Field, Literature, Experts, etc.); *Data Analysis and Evaluation;* and *Preparation of Findings and Models.*

Close coordination with USOE is planned during all phases and especially during the formulation of the research and survey procedure.

Senator HARRIS. Senator Montoya?

Senator MONTOYA. Dr. Miller, I take it as the gist of your testimony that you have made an absolute statement, or you implied that the social sciences have been relegated to a second-rate, stepchild position. I assume from this the conclusion that you have reached in your mind, that the natural sciences have a higher dignity by way of contribution than the social sciences. Is that correct?

Dr. MILLER. I am not sure I would agree with that, Mr. Senator. But in some fashion certainly the will of the American people with reference to fostering science has been deferential with reference to the physical and biological sciences as compared with the social sciences.

Senator MONTOYA. Do I understand you to say that, in the minds of most people, the natural sciences celebrate a higher dignity of contribution toward humanity than the social sciences?

Dr. MILLER. I would not call it dignity, but I would say that people generally see the applications through technology in every walk of life—in our industrial development, in human health. These touch very particularly and cleanly to the lives of our individual citizens. I do not quite say I would put this measurement in terms of the con-

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[1] Pertains to Feb. 10, 1966, submission by Basic Systems Inc., to the Bureau of Research, U.S. Office of Education.

cept of dignity, but I would say usefulness. They have seen this in a way they have not been able to view the social sciences. In short, there are more consumers day by day by day.

But I think now, however, we are to the point where the basis for this is beginning to change substantially.

Senator MONTOYA. And it is your contention that the legislation before us today will not undertake to do the very thing that it is intended to do; namely, to give the social sciences more impetus from Government research and Government direction than presently exists?

Dr. MILLER. Certainly a social science foundation, Senator Montoya, would visibly say that the time had come that we are to somehow recognize the social sciences more than we have within the affairs of our society. But our argument is that the same kind of visibility and support, given certain suggestions of amendment and change of our present structure, can achieve the same thing. Senator Montoya and other members of the committee, one must look at the matter in terms of the short-term benefits and the long-term consequences. I think that the visibility and the feeling of encouragement of social sciences can be achieved by a distinct social science foundation. But again, it is a judgment implicit in this paper that years down the road, this will be an institutionalization separately which will not be responsive to the nature of science itself as it is unfolding in our society.

Senator MONTOYA. I have read your paper very carefully, Dr. Miller. In fact, I read it last night. I like the logic that you present to the committee. I am not saying that I agree with it or disagree with it. As more testimony will probably unfold, I will make up my mind on this. But do you not feel that the natural sciences have a stronger position in the world today because they are better organized and they have better sponsorship, not only from Government but also from within the private sector, so to speak, than the social sciences do?

Dr. MILLER. One would have to say "Yes" to this for no other reason than to cite again the figures and the statistics of the great differential in the level of support which occurs between the two.

Obviously, this gets back, when you put the emphasis within the National Science Foundation, as the chairman was saying, to a half billion dollars allocated to science generally of basic research and 10 percent or less of the social sciences. However, this is not due altogether to the whimsical decision of the sciences. This ultimately roots in the interests, the responses of all walks of life in our society.

Senator MONTOYA. But the great moving force to bring about that end was the organization of the physical and natural sciences. Is that not correct?

Dr. MILLER. I am afraid I did not follow the question, sir.

Senator MONTOYA. The greatest moving force to bring about this fine organization of the natural and physical science community into greater effort was the fact that they were properly organized, that it was properly organized.

Dr. MILLER. I would say this is one of the factors, but this is not to say that the social sciences have not been organized either. All of the disciplines in science have their own problems of organization, both intellectually and in terms of their total group concerns.

I would still be tenacious and say that the results of the physical and the biological sciences that have been capable of being translated quickly and clearly into consumer items, by the citizens. There has been a faith and concern for science and an understanding of what it can mean in our society. But the consequences of this represent the other half of the coin. The results of rapid technological impact are probably the best grounds which your subcommittee and all of us have now to say we have to go over on the other side of the coin and start worrying about the consequences of the ready consumptive appetite of the American people for physical and biological sciences.

Senator MONTOYA. I believe you mentioned in your testimony a few minutes ago that the social scientists had many jurisdictions or many areas of activity, and that is why the social scientists had not been able to organize into a common objective such as the natural and physical sciences have. Now, can you expound on that?

Dr. MILLER. The respective disciplines of social scientists—let me start on that side first—as is true, I think, in the others, have certain historical roots which gave them somewhat of a different kind of beginning.

There were, in an earlier day in this country, much stronger ties of the social sciences to the humanistic disciplines. Even to this day, how we look at history, from the standpoint of a humanistic vantage point or from the standpoint of the social sciences, is a matter of substantial discussion in the spectrum of thought that we call history. Some of the background of sociology in this country had a very strong humanistic flavor. These disciplines have evolved in different ways. As another example, anthropology in this country has had a substantially different kind of origin than that in Europe and in England. In recent years, they have been moving—been moving more together.

I am simply saying this is a rather dynamic situation, the disciplines, and the social sciences, have been involved in this. This is not to say that the same kind of matters do not happen in the physical and biological sciences. Today, as in the university community from which I have just come, you find more talk about biophysics as a cross between biology and physics, and biochemistry, more known to all of us, as a cross between biology and chemistry. You will find in the biological and physical sciences these movements taking place, the barriers between the standing disciplines falling down, interpenetrations occurring. I simply say that this is good and healthy. But there has been this convergence going on across the whole spectrum of science.

Senator MONTOYA. Within the divisions, so to speak, of the natural and physical sciences, there has been an interrelationship which has more or less induced or stimulated getting together on common objectives, whereas in the social sciences, there are many roads or many ramifications which have deterred against the unity of this particular fraternity. Would you not say that that is right?

Dr. MILLER. All I could say here is that the social sciences, many of them, as disciplines of thought have been advanced in this country in ways that have not always responded to the roots in the European tradition. This is not something that can be said quite in the same way of the natural and physical sciences. However, there is

much debate, sometimes in the claims for funds, hostility among the disciplines representing the various biological and natural sciences as there is in the social sciences.

Senator MONTOYA. I hear and we all hear that the natural and physical scientist in America has made great strides in the last few years, but you never hear anything about what the accomplishments of the social sciences might be. Why would you think that this disparity of opinion with respect to both sciences exists in America, or in the world, for that matter?

Dr. MILLER. I think I would only have to repeat what I said earlier, that the fruits of the natural sciences have been translated into all kinds of technological achievements; they have made readily available the endless number of consumer products which we consume every day. It touches human health. It has to do with all of our visible physical works. In a sense, the fruits of social science have to do to a great extent with what Senator Mundt was getting at: the kinds of knowledges and disciplines in which people are called upon to weigh alternatives and to make choices and to gain action and succeed from those. I would say that the sort of intervening processes which mankind goes through in the using of social sciences is somewhat different than the more immediate kinds of translation into artifacts of the natural science, and it has been out of this, this consumptive mentality, that I think is at the root of it.

Senator MONTOYA. Would you say, then, that the natural and physical sciences have fulfilled their maximum role with respect to mankind?

Dr. MILLER. The natural and physical sciences?

Senator MONTOYA. Yes.

Dr. MILLER. By no means.

Senator MONTOYA. Would you say they have made strides in trying to fulfill this maximum role?

Dr. MILLER. If you are speaking of the natural and the physical and the biological sciences—I would say within all the limits which they have had as support, and in the frailties of being human, I think that the natural science achievements of our world, and especially of the Western World and of our country, have been remarkable.

Senator MONTOYA. And we have made great strides, say, in the last 15 years, have we not?

Dr. MILLER. Yes.

Senator MONTOYA. Now, do you feel that the social sciences have made any great strides in the same period?

Dr. MILLER. Yes.

Senator MONTOYA. Do you feel that the strides in social science have been comparable, with respect to its different field, with the progress made by the natural and physical sciences?

Dr. MILLER. I think this is a question which begs only the most qualitative kind of guess. I would not want to respond to that kind of question, Senator Montoya, except to say I do know what the relative movements have been of these. But I must say that in the social sciences, we have had absolutely incredible achievements in terms of the theories and the methodologies of social science research which science must go through if it is going to be productive. I do not know what the relative developments would be. I just do not think anyone can respond to that question.

But I would say that social science has had many, many breakthroughs in terms of theory, conception, and extension of man's ability to observe through methodological tools.

Senator MONTOYA. Have the social sciences had the kind of direction and impetus that the natural sciences have had in unfolding activity and benefit to mankind?

Dr. MILLER. No; I would say on balance that they have not.

Senator MONTOYA. Where is the vacuum? Where does it exist?

Dr. MILLER. The vacuum is that the people as a whole, society as a whole, and the structures which make it up, just have not yet been able to see the utilities of social science in the day-by-day practice of our lives.

Senator MONTOYA. When you say the people, you also mean government, do you not?

Dr. MILLER. I do.

Senator MONTOYA. In other words, this confirms your statement that the social sciences have been relegated to a stepchild position?

Dr. MILLER. Well, that is drawing the point a little tersely, but I think for the moment we can agree.

Senator MONTOYA. How are you going to fill this vacuum?

Dr. MILLER. Well, I think the vacuum is going to be filled by the kind of leadership which this subcommittee is giving to an overall examination of the role of the social sciences in the present and the future of our country and the world. I think that organization invention has to come there as well as anywhere, and that is what we are speaking to here, taking a look at the organizations. We have submitted one point of view. The bill contains another.

But I do not think that all of the organization techniques are in themselves what will fill the vacuum. What will fill the vacuum is that the Congress of the United States is willing to see that we have now, after a century of development and the utility of the natural sciences, that we have inherited an endless number of consequences by this halfway solution. When the leaders of the country and when the scientific community itself is determined that we look at the consequences of all of this for man and his life and the quality of our life the social science will bloom. This means more money. I do not believe that organizational technique can possibly be a substitute for more support growing over the years.

Senator MONTOYA. In your statement you indicate that the solution, or, rather, not the solution but the best approach to what is contemplated in this bill, would be to try to place more impetus for the basic sciences or the social sciences within the orbit of National Science Foundation. Do you feel that a congressional edict in this direction would be sufficient in view of the fact that the National Science Foundation administration is dominated by those who more or less are oriented toward the natural and physical sciences? Would you be back where you started?

Dr. MILLER. No; I believe that—and as we tried to express in the testimony, the case rests on an attempt by the interest of the Congress and the responsiveness of the National Science Foundation—that there is a great possibility for attempting to redirect the National Science Foundation, broaden its definitions of the social sciences, look at its governing policy, group and reconstitute it in terms of greater background of interest in the social sciences. We believe this stands on

a basis of justification and possibility within an organization which has had more than 15 years of growing up in America, of worrying about the problems of science, a certain kind of maturity about it, with the social science division already there, and with at least a beginning concern developing for social science, forgetting what we have been through for 15 or more years in the National Science Foundation and saying, "That can go on its way; we'll try the social science route by setting up something entirely new."

I submit again that one of the issues of our society is that, as a people, we find it somehow easier always to set up a new structure and cut loose and forget the old.

We think it is worth while for the Congress and the leaders of science to work together to properly amend the National Science Foundation and to permit the social sciences to increase in emphasis within a larger community of science.

Senator MONTOYA. What do you think is the greatest challenge facing the social scientist today?

Dr. MILLER. The greatest challenge? That is like Senator Mundt's $200,000 question.

I think the challenge of the social scientist is the challenge of all scientists, but with some more particular emphasis in social science. I think for social scientists there is the whole question of theoretical development, the nature of methodological tools which can lead to more precision in measurement. The coming in recent years of the computer, the exploration of mathematical models of research—all of that area, it seems to me, is always the never-ending need of all science.

I think that the interpenetration between respective disciplines of social science needs to continue, and many mergers and interpenetrations of the fields may be expected to take place. Political science and sociology have, in many aspects, grown much together with a common interest in decisionmaking theory. This all needs to be carried out and explored if the fruits of their research, short term or long term, are useful to the development of our society.

Senator MONTOYA. Thank, you, Dr. Miller.

Senator HARRIS. Thank you, Senator Montoya.

Doctor, just a couple of additional questions.

Would not the same objections that you have raised to the establishment of a National Social Science Foundation have applied equally well to the establishment of a National Arts and Humanities Foundation?

Dr. MILLER. I think one could have made the same arguments at the time. Perhaps they were made. I am delighted by the concept of the National Foundation on the Arts and the Humanities, where the arts and humanities at least rest together, which has pertinence to our discussion here. I feel that both the arts and the humanities rest in intellectual traditions, impressionistic analysis and interpretation, which have a way of thought somewhat different than what we call scientific thought.

I would always hope, however, that there would be the closest kind of correspondence here, and I am sure one could also argue—and I am anticipating a question—that a separate social science foundation could collaborate with the other two in its own way.

Senator HARRIS. You anticipate very well.

Dr. MILLER. One would hope, if a separate foundation did emerge, that this kind of relationship would pertain. But I would see by the nature of the thought that is involved there is a stronger case for the Foundation on the Arts and the Humanities than there would be for the Social Science Foundation.

But I would also hope that the social sciences would not lose their ties to the humanities.

Senator HARRIS. I think that is a very interesting point, because you have said something about the only center of warmth for the social sciences in the National Social Science Foundation. You have intimated that those areas of interdisciplinary research might be given less importance and less funding, and you have indicated that that is a concern. You have also talked about duplication and the proliferation of agencies, and so forth.

I think it is well that—you mentioned the word "conjecture" awhile ago, and I think there is a great deal of that here in your testimony—it is well that we look at the factual situation, which it seems to me is rather analogous.

Let us take, for example, the field of archeology, a field which lends itself very well to interdisciplinary effort because of the geology and paleonthology and some other sciences that are involved. The National Science Foundation Director, Dr. Haworth, testified that, in fiscal 1966, the Foundation spent $3,911,130 in a field they generally group together under the heading of "Anthropology." I am just guessing, looking down through here, that 50 percent or more of that $2 million or more is in archeology, which is indicated by such items listed as Catoan archeology, Nubian prehistory and geology, archeological salvage in the Aswan Reservoir area, and so forth. It is interesting to me to look at that expenditure of $2 million plus, and to learn from Dr. Haworth's testimony that this year they expect to do more in that field than they did last year, and they expect to do more in the succeeding years than they have done.

Then, look at the act, Public Law 89–209, which created the National Foundation on the Arts and the Humanities, which lists as one of its definitions of this jurisdiction the word, "archeology." So I would say, at least in this instance, we have not cut down on that interdisciplinary effort supported by NSF. As a matter of fact, according to Dr. Haworth's testimony, despite the creation of the Arts and Humanities Foundation, their effort in that field has, and will, continue to increase.

That is not just an isolated example, because another field where they are both doing some work is linguistics—a very exciting new area in the field of linguistics, computer technology and linguistics. They have been doing some work in that field as well as in the more traditional field of linguistics over in NSF. Dr. Haworth testified that their interest is going to increase, not decrease. Linguistics is also a part of the defined jurisdiction of the National Foundation on the Arts and the Humanities.

Now, there is an example which is exactly contrary to some of your testimony. Can you think of an example presently which is in line with your testimony?

Dr. MILLER. An example of what?

Senator HARRIS. Here is an example which contradicts what you fear.

Dr. MILLER. About the separation?

Senator HARRIS. Yes. Though we have separated some of these things, the efforts in NSF are funded with increasing amounts, according to Dr. Haworth's testimony, despite the fact that we created a separate Arts and Humanities Foundation which has jurisdiction in some of these same fields. That seems to contradict some of your testimony, it seems to me.

I just wonder if you know of any situation which confirms your fear that you would reduce the support for the interdisciplinary efforts by the creation of a National Social Science Foundation.

Dr. MILLER. Speaking to your examples, to have, let us say, archeology listed in both of the Foundations is not enough for me. I would like to be able to take a look of the nature of the work in archeology going on in the two. Because I am quite sure, Mr. Chairman, that the move over the years of the National Science Foundation into archeology was, in a sense, a step forward out of their background of interest in the natural sciences, because archeology lends itself to many of the methods in more precise kinds of methodological developments, as does the natural sciences.

Senator HARRIS. Yes, and the fact is that interdisciplinary efforts are funded with increasing amounts by NSF, despite the fact that another agency has been created which gives its attention particularly to archeology, among some seven or eight listed disciplines.

Dr. MILLER. I am simply saying that because the noun of archeology appears in the programs of both organizations is a long way from saying that there is an interdisciplinary collaboration going on here. I daresay that archeology within the National Foundation on the Arts and the Humanities stands out as a matter from a different point of view entirely, and that is as it should be.

Senator HARRIS. Exactly. Why would that not be true with the creation of a National Social Science Foundation? That is exactly my argument. Their interest is a little different in some social science fields. This is a listing by Dr. Haworth of what he considers to be within the framework of social and behavioral science research ex-expenditures.

Dr. MILLER. Well, I see the line and the partial logic, at least, of your reasoning, Mr. Chairman. But the assertion that I want to make here is that there is nothing in our testimony which says that the social sciences should not be made more visible, or that the social sciences should not be supported, or that whatever particular fidelity there is about the social sciences should not be honored. We are simply saying that we think this can be done within the community of science which we have gained experience with, to which the academic community has made a substantial and affirmative response.

Senator HARRIS. All right.

Now, to get back to your testimony. You are against the establishment of a National Social Science Foundation. If I understood your reasoning, it was that that would hinder, not help, interdisciplinary effort between the two kinds of fields.

Is that not what you said?

Dr. MILLER. Yes; I think that in the nature of our pluralistic society, a separately incorporated, organized, free-standing Social Science

Foundation removes it just that much more from the dynamic interplay which we believe can take place within the corporate structure of the other group.

Senator HARRIS. I recognize that as a serious concern. But it seems to me that if there are analogous situations that we can draw some conclusions from, which either support or refute your position, then we ought to look at them closely. But it seems to me we have one in the National Foundation on the Arts and the Humanities. It includes linguistics and archeology. It has been established by the Congress as a separate foundation. Nonetheless, the National Science Foundation has not decreased its efforts in those fields but, as a matter of fact, has increased its support and Dr. Haworth says they intend to continue to do so.

Dr. MILLER. I am happy that they will, Mr. Chairman, but at the level which we have seen fit to fund the National Foundation on the Arts and the Humanities as a separate entity, I am delighted that archeology will be continued in the NSF, because certainly the separation of the National Foundation on the Arts and the Humanities on its own grounds has not won for it more than a modicum of support at the level of tokenism.

Senator HARRIS. My point exactly. We are talking about added support for the social sciences, not exclusive support. And we are talking about a very, very modest budget, I think, of $20 million for the National Social Science Foundation. We have again an analogous situation with the Arts and Humanities Foundation and the NSF. NSF is asking for more money in these fields, spending more money than it did last year, despite a new agency which overlaps, to some degree, their jurisdiction.

Dr. MILLER. Well, I think just as one person's viewpoint reflecting on this dialog, that on balance the references to archeology or linquistics do not constitute a vast example of interdisciplinary communication. It is simply more money for the field of archeology, and I am delighted with that.

Senator HARRIS. There are other fields we might talk about. For example, history is a field in the jurisdiction of the Arts and Humanities Foundation in its enabling legislation. History and philosophy of science is an item which carried an expenditure by NSF in fiscal 1966 of $1,013,920. And Dr. Haworth indicated that was going to go up, not down.

He also indicated in some of these other areas, the interaction of science and technology with society, they will be spending $1.1 million in NSF during fiscal 1967. So I think while we are conjecturing about the things we may fear from a new situation, we ought to take into account analogous situations which tend either to prove or disprove our fears.

I would also say to you as a social scientist, as I have to others, that those who count themselves social scientists ought to have learned to live with the idea of change, ought not to be so fearful of it when it applies to the social sciences directly. I think that is a part of this situation.

There is another thing interesting to me about your testimony. The whole field of international affairs as an academic discipline is, it seems to me, one of tremendous interest, how we interact as nations

and how do developing countries develop political institutions to bring about social action and reform, and so forth. That is, it seems to me, a very critical area in modern life, and one of great interest to us all and to our Government, and a proper field of interest for our Government. It seems to me, therefore, that under the burden of your testimony it was rather poor reasoning to fragment that effort and establish the international education program under the Department of Health, Education, and Welfare.

Rather, you should have come here and suggested to the Congress that that effort be expanded in the National Science Foundation, it seems.

Dr. MILLER. I will not comment on that, Mr. Chairman. That was another day. The International Education Act passed the 89th Congress, as you referred to it——

Senator HARRIS. About 6 months ago. Is it not true that part of the law, of the International Education Act, was to foster research and scholarship in the field of international affairs?

Dr. MILLER. But not limited to the social sciences or natural sciences, but the whole spectrum of international topics that might pertain. In this spectrum, this is a bill which relates only to U.S. colleges and universities, to improve their capability in this field.

Senator HARRIS. Is not that directive really overlapping with the function of NSF to build additional research, research manpower and scholarship in our universities and colleges?

Dr. MILLER. I would dare say that in one sense, it is overlapping. But the major center of international research in the area and language centers of the NDEA program was incorporated in HEW, in the Office of Education. Perhaps the strongest root in recent years of research on language and areas in American universities has come out of HEW.

The International Education Act responds to that.

Senator HARRIS. There has been some talk that one reason why the Office of Education is opposed to this bill is that it is felt it will take away somewhat from its jurisdiction under the International Education Act. Is there any plausibility to that?

Dr. MILLER. The development of the International Education Act comes under my immediate responsibility in the Department. This has no relationship to it at all. We are trying to extend our natural concern with education which HEW has to an international dimension, which is not unlike the social sciences need of much more development and cultivation in our educational community.

Senator HARRIS. I would agree with this: I think we are going to have better organization within the Federal Government to coordinate our total Federal effort that has to do particularly with universities and colleges because now it is not just between your agency and NSF, but almost every agency and department of the Federal Government is involved to some degree in building additional scholarship in various fields, and in building additional strength and excellence in our institutions of higher education generally. That is rather fragmented now and each pretty much operates without concern for what the others are doing.

It seems to me to put additional attention on the social sciences through a separate agency is not going to materially affect what is already a very fragmented effort, as indicated by your statements about

the National Arts and Humanities Foundation or the International Education Act. So I do not think we can say as a general principle that we are just against proliferation, because there are two areas of proliferation that you are not against. It is only this area of proliferation that you seem to be against. So I do not think it is the general principle that is involved here, do you?

Dr. MILLER. Well, regardless of the organization and model for the handling of this, and the subject of our discussion this morning, though I think the distinction between applied research and basic research are indistinct, quite, whatever the organization model turns out to be, Senator Harris, I am assuming and would hope that the various agencies and departments of Government will continue their support of social science research.

I would hope that there would be no retrenchment, indeed that the departments and agencies in programatic research could perhaps do even more of this if whatever the model turns out to be would support more basic work.

I do feel, and again, the intent of our testimony is that we need in the Government much larger support for the social sciences. We need to have more sustained support. We need to have research that is utterly unclassified, that has the promise of sustained, enduring growth and dependability and development in this country, regardless of the model.

We really stand very enthusiastic for this and delighted that you are having the hearings.

Senator HARRIS. I agree with what you have said, and I thank you for your comments and for your presence. I would say that I think we can be rather confident that existing agencies will continue and will increase rather than decrease their efforts in the social and behavorial sciences. Parkinson's second law continuing to operate, I do not think that they are going to decrease, and I think we will be induced to add to that effort.

Thank you very much for your presence and your testimony, and for the presence of your associates.

Dr. MILLER. We were delighted to come, sir.

(The following material requested by the chairman was subsequently received for the record:)

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
OFFICE OF THE SECRETARY,
Washington, D.C., March 20, 1967.

Hon. FRED R. HARRIS,
Chairman, Subcommittee on Government Research,
Committee on Government Operations,
U.S. Senate, Washington, D.C.

DEAR SENATOR HARRIS: Enclosed are the more complete analyses I promised to provide in response to your questions to Secretary Gardner on January 12th. These analyses were prepared by the Office of Education, Social Security Administration, and Welfare Administration as answers to the questions posed in attachment 1.

As you will see, there have been difficulties in precise definition of "social science research." I believe that they will still provide a reasonably good picture of our social science research in these agencies. We will be happy to try to answer any further questions you may have.

This information is also being sent to Mr. Reuss' Research and Technical Programs Subcommittee of the House Committee on Government Operations.

Best wishes,

PAUL A. MILLER,
Assistant Secretary for Education.

[Attachment 1]

APPENDIX 9

AGENCY SOCIAL SCIENCE RESEARCH PROGRAM

1. Outline the principal themes of your agency's social science research programs.[1] Discuss the principal questions under investigation in the major areas in which extramural social science research is being supported (or will be supported) by your agency. (Include discussion of major intramural research projects in so far as these are closely related to extramural projects.)

2. In each of these major areas of social science research, estimate the total amount expxended in your agency in fiscal years 1966 and 1967. In each area, estimate the amount of such support to educational institutions, to other nonprofit organizations, and to profit-making organizations.

3. List your 10–20 most successful and most relevant extramural social science research projects over the past five years. For each such project, list the cost of the project and the name and affiliation of the principal investigator, and discuss the questions investigated, the principal findings, the quality of the research, and the actual or anticipated impact of the findings on the agency, Department, and country.

4. Discuss the principal objectives of your agency's social science research programs and the degree to which these programs are achieving the objectives. Give an overall assessment of the relevance of these programs to Department and agency policy decisions.

[Attachment 1 to Attachment 1]

OFFICE OF EDUCATION

AGENCY SOCIAL SCIENCE RESEARCH PROGRAM

1. Outline the principal themes of your agency's social science research program. Discuss the principal questions under investigation in the major areas in which extramural social science research is being supported (or will be supported) by your agency. (Include discussion of major intramural research projects in so far as these are closely related to extramural projects.)

The social science research being supported by the Office of Education deals with issues and questions related to significant problems and concerns of the Nation's schools. Because the theory and methodology of the social and behavioral sciences are the basic tools of research in the field of education, most of the Bureau of Research's programs and projects have significant implications for social research.

The major themes of the Bureau's program which meet the criterion of being "undertaken primarily for the purpose of understanding group behavior" involve studies of diverse aspects of the behavior of various population groups defined in different ways according to the specific concern being researched. Thus, a large portion of OE's research effort is concerned with learning more about the characteristics and behavior of populations ranging from the culturally disadvantaged, the handicapped, pre-school children, adult populations, adolescents, college dropouts, and vocational and technical students, to school principals, teacher trainees, guidance counselors and superintendents. The range of populations being studied is as diverse as the gamut of concerns which educators face.

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[1] Research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior.

A second major thrust of the Bureau's social science research relates to the study of social and political processes which affect learning, behavior, the role of education, and the operation of our schools. Research on socio-economic factors, sociological and cultural factors relating to learning and socialization, the community power structure, fiscal policy, political structures, leadership patterns, administrative behavior and organization constitute principal themes and provide major questions for study.

Another dominant theme involves research into specific problems which appear to be impeding educational progress for certain groups or preventing education in general from operating more productively. Studies of the complex problems surrounding integration, the mechanisms involved in public support for education, the organization of school districts and local governments, the barriers to equal educational opportunity, and the factors relating to unemployability are examples of particular areas of concern which have been subject to substantial investigation.

Cross-cultural research on educational systems, processes, values, and outcomes of learning furnishes still another theme of OE's social research program, and is providing increased information about the historical, social, and psychological forces which shape the character of the schools and the development of societies.

Exploration of the relationship between the school and the community, changing values, social institutions, social and economic factors which influence employment and the educational changes needed to improve employement opportunities, and the problems that beset education of the disadvantaged are among the chief targets of social research. In all the areas which have been highlighted research efforts are directed to more thorough description of behavior, processes, and problems, more accurate identification and analysis of problems, isolation of factors that appear to lead to productive change and creative strategies for improving education.

2. In each of these major areas of social science research, estimate the total amount expended in your agency in fiscal years 1966 and 1967. In each area, estimate the amount of such support to educational institutions, to other nonprofit oganizations, and to profit-making organizations.

In fiscal year 1966 an estimated total of $8,352,135 was expended for research in the social and behavioral sciences. An estimated total of $3,806,929 was expended in fiscal year 1967.

Virtually all of the research in the social sciences relating to education has been done in universities or colleges, but in recent months a small amount has been contracted for with non-profit research corporations. The major exception to this pattern of extra-mural support for social research, The Equality of Educational Opportunity survey, will be discussed under section 3.

A listing of all Extra-Mural Research in Social and Behavioral Sciences, Including Economics, Sociology, Social Psychology, and Work in Other Disciplines Undertaken Primarily for the Purpose of Understanding Group Behavior follows.

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior

No.	Title	Institution	Total	1966	1967
EP 000027	Authority, rules and aggression: A cross-national study of socialization into compliance systems.	University of Chicago	$300,000	$105,052	$96,436
EP 000033	Relationship between socioeconomic factors, educational leadership patterns, and elements of community power structure and local school fiscal policy.	University of Florida (Gainesville)	221,673	80,120	70,795
EP 000034	The interaction between education and society in Chicago	University of Chicago	80,393	27,558	27,558
EP 000035	A study of community factors related to turnover of superintendents	Cornell University	83,013	59,097	15,588
EP 000038	Attitudes and perceptions of desirable traits and behaviors of teachers	New York University	63,390	21,618	20,784
EP 000040	The school board as an agency for resolving conflict	University of Wisconsin	137,916	34,350	28,098
EP 000047	Retardation in intellectual development of lower-class Puerto Rican children in New York.	New York University	111,613	63,481	
EP 000066	Patterns of disturbed classroom behavior	Deveroux Schools, Devon, Pa	57,510	28,384	
EP 000069	Psychological and educational studies in spina bifida children	New York University	52,420	27,460	
EP 000071	A developmental study of perceptual, conceptual, motivational, and self-concept differences between and within hyperactive and normal groups of preadolescent boys.	State Education Department, Albany, N.Y	382,918	146,521	70,629
EP 000093	Decision-making in the school integration controversies of New York City.	Sarah Lawrence College	213,378	65,976	74,841
EP 000098	Investigation of fiscally independent and dependent city school districts	City University of New York Research Foundation.	73,058	73,058	
EP 000106	Effects of preschool stimulation upon subsequent school performance among the culturally disadvantaged.	San Jose State College	118,419		
EP 000109	Development of a social competency scale for preschool children	San Francisco State College	54,414	21,300	16,557
EP 000111	A study of inquiry patterns of students in teacher training programs	Michigan State University	78,310	30,900	33,882
EP 000116	Social class differences in the role of linguistic structures in paired-associate learning.	University of California (Berkeley)	44,274	29,182	10,398
EP 000117	Project talent 5-year follow-up studies	University of Pittsburgh	2,337,951	447,754	491,658
EP 000153	Effects of educational innovations for the culturally deprived on citizen support for the schools.	University of Oregon	200,988	51,001	60,674
EP 000159	Effect upon the behavior and attitudes of student teachers of training in the use of interaction analysis as a classroom obersvational technique.	Temple University	149,700	65,276	51,662
EP 000162	Functional relationships of Junior College environments and selected characteristics of faculties, students, the administration and the community.	U.C.L.A	41,523	17,796	23,727
EP 000166	The educational experience of the intern	Brandeis University	74,430	35,094	
EP 000177	A cross-cultural study of adolescent societies	Harvard University	92,513	25,175	9,071
EP 000183	Personality, teacher education, and teaching behavior	University of Texas	199,785	50,170	34,715
EP 000184	A comparison between students from 2 and 4-year colleges	State Education Department, Albany, N.Y	86,454	9,115	7,955
EP 000187	College enrollment projections to 1975 and 1980 on the basis of a new Census Bureau survey.	Columbia University	129,322	98,532	11,340
EP 000188	Changing role concepts of college students	University of Massachusetts	41,894	20,726	21,168

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
EP 000189	The effects of college environments on students' decisions to attend graduate school.	Vanderbilt University	$58,259	$19,434	$18,802
EP 000190	A comparison of 2 groups of elementary teacher-trainees whose professional experiences differ in organization, scope, and sequence.	Grambling College (Louisiana)	90,881	26,332	33,248
EP 000193	Individual differences in the problem-solving process of college students	Carnegie Institute of Technology	33,755	6,745	21,755
EP 000196	The Soviet educational system: Its role in the political development of the U.S.S.R.	University of Chicago	68,050	14,122	37,073
EP 000204	Demographic and ecological analysis of college student migration	University of Washington	71,109	28,953	35,980
EP 000223	Prediction of dropouts among urban Negro high school boys	Texas Southern University	95,046	33,318	21,648
EP 000224	Children's relationships with younger and older peers	University of Michigan	71,480	24,102	24,370
EP 000225	Traits of school achievers from a deprived background	City University of New York, City College	91,949	36,997	17,342
EP 000227	The schooling careers of military dependents: A sociocultural study	Harvard University	260,756	89,957	81,739
EP 000229	Changing classroom peer relations and standards in grades 4, 5, and 6	University of Michigan	76,859	25,336	25,952
EP 000232	The job satisfaction, career satisfaction, and level of aspiration of school principals.	Harvard University	107,794	50,326	
EP 000236	Motivational factors influencing academic achievement of 11th grade Puerto Rican high school students.	University of Puerto Rico	60,460	26,921	11,033
EP 000237	do	Michigan State University	74,025	27,677	31,639
EP 000260	A comparison between the commuting and noncommuting student	do	7,475	2,990	995
EP 000274	A study of integration in racially imbalanced urban public schools	Syracuse University	104,336	34,000	
EP 000276	Characteristics of freshman college students in need of and receptive to counseling.	Utah State University of Agriculture & Applied Sciences.	8,999	4,524	3,546
EP 000288	The relationships of attitudes among student teachers, college supervisors, and cooperating teachers.	University of Texas	6,715	6,715	
EP 000290	The development and testing of a scale to identify male dropouts at liberal arts colleges.	Boston College	7,439	7,439	
EP 000293	An analysis of upper mobility in low-income families	Syracuse University	9,000	9,000	
EP 000294	The relationship between the principal and his professional staff in the public school.	Auburn University	4,986	4,986	
EP 000296	A study of different cultural values held for physical activity	University of Wisconsin	8,949	8,949	
EP 000299	A study of children's behavior while reading orally	Wayne State	8,988	8,988	
EP 000305	Problem-solving processes used by elementary school boys	Loyola University	98,337	25,197	21,300
EP 000325	Size factors and nondollar costs of secondary schools, phase 1	University of Wisconsin	76,007	76,007	
EP 000327	The nonreturning foreign student, the Israeli case	Columbia University	56,232	56,232	
EP 000334	School desegregation via compulsory pupil transfer—Its effects on elementary school pupils.	Ann Arbor Public Schools	73,966	73,966	
EP 000335	The interaction of the adult and the child in the preschool setting	New York University	215,915	56,004	53,911
EP 000338	Curiosity behavior in educable mentally retarded adolescents—Characteristics, modifiability and effects on training.	Yeshiva University	24,854	24,854	
EP 000358	The effects of community structure on school decisions	University of Connecticut	182,715	61,879	109,087
EP 000363	Study of school integration	Harvard University	202,908	96,908	86,000

EP 000372	Educational achievement and life styles in a traditional society (Old Order Amish).	Temple University	101,871	39,400	
EP 000410	Issues and problems in contemporary educational administration	University of Oregon	56,233	56,233	
EP 000434	Work orientations, college performance, and occupation choice	University of Wisconsin	232,224		52,336
EP 000466	Vocational development of mentally retarded adolescents	Michigan State University	46,803	13,083	6,975
EP 000472	A study of the effects of different kinds of ability grouping on personal relationships among high school pupils.	Utah State University	8,995		
EP 000481	A sociological case study of the formation of the St. Louis City-County Junior College District.	Washington University (St. Louis)	7,292	7,292	
EP 000492	Attrition among full-time students in community colleges	Office of State Superintendent (Wash.)	8,994		
EP 000496	An exploratory study of collectlve values and conflicts among college Professors.	Washington University (St. Louis)	7,312	7,312	
EP 000499	Conference to explore the factors involved in conducting a survey of young people's attitudes toward American liberties.	Columbia University	23,900	23,900	
EP 000504	A study of the position of State departments of public instruction, accrediting agencies and selected national professional organizations concerncerning experimentation and innovation in public secondary schools.	Indiana University	8,021	8,021	
EP 000505	Environmental factors affecting the intellectual development of Mexican-American children.	University of Arizona	7,480	7,480	
EP 000506	A study of the changes in numbers of Negro teachers and students in the various primary and secondary schools of the State of Missouri.	University of Missouri	3,136	3,136	
EP 000510	Relationship of school administrators with teachers' unions	Michigan State University	5,462	5,462	
EP 000539	Taiwanese education under Japanese rule (1895–1945), Japanese policies and the reaction of Taiwanese intellectuals.	University of Wisconsin	5,461	5,461	
EP 000540	A measurement of college instructor behavior	University of Pittsburgh	7,117	7,117	
EP 000541	The nature and range of school counselor subroles	Ohio State University	6,036	6,036	
EP 000545	Test response patterns which differentiate between two levels of behavior of mentally retarded children.	University of Utah	7,495	7,495	
EP 000548	Adaptation to school settings, a study of children's attitudes and classroom behavior.	University of Chicago	8,567	8,567	
EP 000549	Differing values among parents of academically successful and unsuccessful children.	University of Southern California	9,000	9,000	
EP 000551	Sociological influences upon the achievement of lower class Negro children.	University of Chicago	7,331	7,331	
EP 000553	Barriers to employability of nonwhite workers—An experimental and developmental proposal.	University of Wisconsin	99,863	99,863	
EP 000555	Educational restrictions to agricultural success and the relationship of education to income among farmers.	University of Minnesota	62,206	30,736	
EP 000556	Post high school migration and vocational choice patterns of students from an economically depressed area.	Cornell University	6,156	6,156	
EP 000558	A comparison of drawing characteristics of culturally advantaged and disadvantaged children.	Stanford University	17,135	17,135	
EP 000564	Relationship between school-community coordinating procedures and educational motivation and behavior of schoolchildren.	University of Michigan	87,440	8,192	
EP 000565	Development of behavior dimensions for emotionally disturbed children	Vanderbilt	189,713	59,922	100,470
EP 000566	Family and school influence on the educational aspirations of working class and middle class 9th grade boys.	Stanford	106,678	47,345	59,090
EP 000568	Academic administrators and university goals, a study in conflict and cooperation.	University of Minnesota	128,508	50,514	

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
EP 000569	A study of university teachers of Great Britain	Berkeley	$27,386	$12,886	$5,776
EP 000570	Developing taxonomies of organizational behavior in education	New York University	114,304	79,982	
EP 000572	Dynamics of personality development during the college years	Stanford	202,760	37,098	8,038
EP 000573	30-year followup of male college students	Yale	37,606		
EP 000574	Factors associated with various patterns of college attendance	Berkeley	84,709		
EP 000575	Attrition in the liberal arts college	MacMurray College (Illinois)	40,523		
EP 000576	A study of the bases of legislative decisions on educational policy	Berkeley	115,763	45,799	39,960
EP 000577	Characteristics of professional personnel in college and university libraries.	University of Illinois	22,445	22,445	
EP 000584	Patterns of teacher-pupil communication with culturally deprived children.	University of Chicago	122,603	47,687	26,230
EP 000598	Analysis of patterns of student teaching	Washington University	7,828		
EP 000601	Testing for creative traits of college students	Southern Connecticut State College	7,726	7,726	
EP 000604	A study of the attitudes toward education among various national groups.	Michigan State	9,000	9,000	
EP 000603	Factors involved in determining the relationship between teachers and pupils attitudes.	University of Texas	9,000	9,000	
EP 000609	Anxiety related to school adjustment among high school males	do	8,172	8,172	
EP 000627	A national survey—High school and student characteristics, and their relationship to the occupational and post-high-school educational experiences of T. & I. vocational course graduates.	American Institute for Research in Behavioral Science.	99,354	99,354	
EP 000639	Cross-cultutal study of the relationship between the social desirability variable and personality variables.	University of Vermont, St. Agr., College	3,642		3,642
EP 000640	Some personal characteristics of campus student leaders—A comparison of social-political action leaders with 4 other categories of student leaders	Indiana University	4,089	4,089	
EP 000650	Development of moral attitudes and the influence of ethnic group membership, socioeconomic status, and intelligence.	Teachers College, Columbia University	7,862		7,862
EP 000653	Parental and peer group pressures toward deviant student behavior	Columbia University	8,994		8,994
EP 000660	Divergent thinking in blind children	University of Kentucky	6,688	6,688	
EP 000697	The development of a receptive communication scale for deaf children	Illinois School for Deaf	9,984	2,274	
EP 000698	Community support for the public schools in a large metropolitan area	Eastern Mich. University	136,674	53,543	16,906
EP 000701	Staff conflicts in the public schools	Ohio State University	73,661	28,220	12,178
EP 000707	The identification and evaluation of characteristics of kindergarten children that foretell early learning problems.	University of Southern California	8,842		
EP 000709	Attitudes toward civil liberties among high school seniors	Reed College	7,440		
EP 000715	Communication patterns in integrated classrooms and preintegration subject variables as they affect the academic achievement and self-concept of previously segregated children.	City University of New York	6,848	6,848	
EP 000716	Educational values of low-income rural communities	Kansas State University	7,500	7,500	

EP 000724	A study of the relationships between speech and language abilities, learning abilities, hearing ability and social and economic factors of kindergarten children.	State Department of Public Instruction, Lansing, Mich.	6,545	6,545	
EP 000728	The relationship of art quality to sociological, motivational, and economic factors.	Ball State University, Muncie, Ind	8,885	8,885	
EP 000735	Characteristics of Negro students attending previously all-white schools	University of Michigan	8,890	8,890	
EP 000737	Logical operations and concepts of conservation of preschool children	Merrill Palmer Institute	8,964	8,964	
EP 000740	Sensory development and concept formation in early childhood	University of Texas	5,678	5,678	
EP 000742	Prejudices and other interracial attitudes of Negro youth	Harvard University	7,500	7,500	
EP 000758	American Indians in rural and urban schools	University of Kansas	105,754	35,740	70,010
EP 000786	Effective interaction between older and younger pupils in an elementary elementary school "Peace Corps" project.	City University of New York Research Foundation.	7,500	7,500	
EP 000787	A comparison of graduates from 2 types of high school programs for the mentally handicapped.	Dearborn Public Schools, Michigan	7,450		7,450
EP 000792	A study of the conditions of "dependence" and "independence" with reference to the adolescent peer culture in the American secondary school.	University of Washington	6,921	6,921	
EP 000805	The role of the arts in meeting the social and educational needs of the disadvantaged.	Brooklyn Museum	34,105		34,105
EP 010013	A study of the aspirations of married women college graduates	Northwestern University	19,980	19,980	
EP 010023	Undergraduate social research training problems of educational administration in small consolidated school districts.	Grinnel College	21,800	17,300	4,500
EP 010029	Graduate research training program in education, behavioral sciences, and social sciences.	University of Tennessee	120,000	120,000	
EP 010046	Graduate research training program in sociology of education	Western Michigan University Center for Sociological Research.	24,000	24,000	
EP 010055	The fiscal implications of dependent and independent school systems	Syracuse University	5,573	5,573	
EP 010075	The effects of overtraining on a learning task in normal and retarded children.	Oklahoma City University	5,190	5,190	
EP 010079	Role of school counselors and clergymen in helping parents and adolescents achieve educational goals through group work.	University of Rochester	6,648	6,648	
EP 010080	The relationship of poverty to educational deprivation	University of Pittsburgh	72,603	35,844	36,759
EP 010098	The process of integrating white faculty members into a predominantly Negro college.	Tuskegee Institute	9,000	9,000	
EP 010115	Improved opportunities for disadvantaged youth through vocationally oriented education.	University of Illinois	224,123		40,000
EP 010116	A cross-cultural study of adolescent subculture in vocational education programs.	Harvard University	99,874	35,795	20,560
EP 010118	Influence of the father's job and social status on the occupational and social goals of youth.	University of Wisconsin	49,290	26,864	
EP 010122	A study of characteristics of vocational students	University of California, Berkeley	98,108	98,108	
EP 010123	Characteristics of noncollege vocationally oriented school leavers and graduates.	Western Michigan University	42,030	30,490	11,540
EP 010127	Study of factors related to educational and occupational aspirations of early adolescent males from culturally deprived families.	Florida State University	85,420	23,626	24,600
EP 010128	Characteristics of full-time students in post-secondary trade courses	University of Michigan	494,282		
EP 010130	Vocational development and vocational education in adolescence	University of Iowa	125,791	40,218	45,355
EP 010131	An exploratory analysis of the roles and role conflicts of vocational teachers in Oklahoma.	Oklahoma State University of Agriculture and Applied Science.	80,145		25,567

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
EP 010137	An economic study of the investment effects of education in agriculture	University of Minnesota	$64,331	$64,331	
EP 010141	Socioeconomic background and occupational achievement	University of Michigan	85,218	39,870	
EP 010145	Work-motivation and problem-solving style: A cross-national study of achievement in school children.	University of Texas	825,197	206,431	$254,392
EP 010146	Changing teacher morale—An experiment in feedback of identified problems to teachers and principals.	Purdue University	86,166	42,408	43,758
EP 010148	Study of youth in high school, at work, and unemployed	University of Michigan	719,717	220,640	350,000
EP 010150	Identification of common behavioral factors as bases for preentry preparation of workers for gainful employment.	Colorado State University	78,534	78,534	
EP 010151	Family and achievement: A proposal to study the effect of family socialization on achievement orientation and performance among urban Negro Americans.	University of Michigan, Institute for Social Research.	174,298	55,702	118,590
EP 010152	Interest and ability pattern comparison of successful and unsuccessful male college students in discepant technical and associate degree programs.	Ferris State College	53,392	20,017	33,375
EP 010156	A study of intellectual growth and vocational development	Educational Testing Service, Princeton	79,374	79,374	
EP 010169	Attention-directing techniques used by teachers	Colorado State University	8,440	8,440	
EP 010170	Factors related to educative participation by non-college-bound young adults.	Columbia University Teachers College	219,880	53,720	101,750
EP 010171	Prediction of adult educators attitudes toward changes in university policies.	University of Chicago, Graduate School of Education.	8,046	8,046	
EP 010192	Vocational interests of nonprofessional women	University of Minnesota	46,594	46,594	
EP 010193	Factors associated with successful adaptation to the secretarial-stenographic role.	Wayne State University	92,609	55,565	
EP 010238	Relationship between educational and national goals	Princeton University	96,344	96,344	
EP 010247	A study of behavioral components of stuttered speech	University of Michigan	16,326	16,326	
EP 010249	An evaluation of the impact of the union leadership academy on the occupational and citizenship roles of unionists.	Penn State University	48,650	27,905	
EP 010255	Cross-national study of educational attainment—Secondary school science, civics, mother tongue, and foreign language.	University of Chicago	450,752	450,752	
EP 010260	An analytical study of State legislation for handicapped children	NEA, Washington, D.C	58,563	40,595	17,968
EP 010263	A nationwide study of the administration of vocational-technical education at the State level.	University of California, Berkeley	554,368	554,368	
EP 010264	The social status of pupils and the social composition of schools—Their independent and joint effects on pupil behavior.	Florida State University	50,000	50,000	
EP 010266	The effect of sibling characteristics on creative interests and achievement	University of California, Berkeley	8,889	8,889	
EP 010267	Differences in selected administrative behaviors among administrators in innovative and noninnovative public school systems.	State department of public instruction, Lansing	6,200	6,200	
EP 010274	A study of certain personality correlates of occupational aspirations of Negro and white college students.	Howard University	9,622		9,622

EP 010294	Cultural and sociological factors relating to learning development	New York University	9,000		9,000
EP 010300	A comparative study of the most creative and least creative students in grades 4 to 8 at the Boston School for the Deaf.	Boston College	9,220	9,220	
EP 010302	Teacher mobility, teacher dropout, and the expectations of family and friends.	Western Michigan University	9,230		9,230
EP 010308	Cost analysis of automated scheduling	State University of New York, Research Foundation.	6,800	6,800	
EP 010309	Characteristic of Negro and white high school students prior to desegregation.	University of Delaware	8,968		8,968
EP 010313	A comparison of academic achievement of secondary students of the United States and British Isles.	Indiana University Foundation	117,363		40,182
EP 010315	Research development seminar in comparative education—The changing European secondary schools.	Kent State University	47,540		21,492
EP 010340	Center for the study of social organization of schools and the learning process.	Johns Hopkins University	172,717		172,717
S–170	Cultural transmission in a rural German community	Stanford	9,000		
S–199	Attitudes toward de facto segregation in a northern city	Berkeley	6,482		
S–032	Social class origins and occupational attitudes of public school teachers	do	6,213		
S–110	Personality characteristics of college dropouts	do	7,500		
2972	A study of the university teachers of Great Britain	do	8,724		
2123	State school support and municipal government costs	do	23,455		
S–150	Effect of personality type upon teacher-principal relationships	do	8,810		
V–001	Conference on a longitudinal study of expressive behavior in the arts	do	12,597		
S–204	Effects of environment upon classroom interaction	University of California, Davis	7,445		
S–111	Self-presentations in relation to interpersonal and intrapersonal perceptions.	San Francisco State College	6,661		
348	Personality changes associated with a college education	San Jose State	1,788		
8646	The psychological impact of the public 2-year college on ceratin nonintellectual functions.	do	5,282		
2615	An investigation of attitudinal and creativity factors related to achievement of culturally disadvantaged youth.	University of Southern California	19,979		
S–044	Family and school socialization	do	8,836		
S–353	Identification and evaluation of characteristics of kindergarten children that foretell early learning problems.	do	8,842		
F–028	Talented women and the American college: Needed research and able women in honors programs, college and society.	University of Colorado	16,400		
S–019	Law and the nonpublic school	University of Denver	6,102		
S–287	Study of the effects of 1st year of training on 3- and 4-year-old Spanish-American children from lower class families.	Colorado State	9,000		
S–112	Development of a storage-retrieval system for social science generalizations.	University of Delaware	4,272		
2610	Identification of the psychological correlates of dialectolalia	Howard University	63,583		
S–368	An investigation of the procedures and practices employed in the preparation of the annual budget in selected private, predominantly Negro colleges in the United States.	do	7,865		
814	The relationship of child perceptions to achievement and behavior in the early school years.	University of Florida	10,407		
EP 010291	Creative behavior of the elementary school from different socioeconomic backgrounds.	American University	8,340		8,340

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
1717	Relationships between personality variables and classroom behavior of teaching interns.	American University	$25,684		
S-027	The role and effects of literacy in a Guatemalan Latin peasant community.	University of Southern Florida	8,918		
S-395	Associational patterns of college freshmen as they affect academic performance at a State university.	University of Georgia	9,000		
S-099	Dropout of American Indians at the secondary level	Emory University	7,795		
2109	Followup studies of the determinants of educational-vocational choices	University of Hawaii	16,664		
2971	Self-control in children	Southern Illinois University	5,538		
2361	Attrition in the liberal arts college	MacMurray College	40,523		
1745	Influence of identity processes on student behavior and occupational choice.	Northwestern	42,788		
2440	Educational decisionmaking in suburban communities	do	12,493		
E-030	Pilot studies of decisionmaking in urban educational systems	University of Chicago	90,068		
S-008	Education in relation to social and economic change in Mexico	do	4,847		
S-047	Social functions of the Turkish lise	do	7,446		
S-100	Students, teachers, and opportunity perceptions in Kenya	do	8,880		
S-104	Personal and organizational variables related to the adoption of educational innovations in liberal arts colleges.	do	2,036		
S-130	Study of college dropouts	University of Chicago	8,194		
S-135	Comparison of American and Norwegian nursery school children on independence behavior and training.	do	3,360		
S-186	How urban high school teachers look at their jobs	do	4,118		
S-214	Social mobility and the English language in Puerto Rico: Influences on motivation and outlook of 9th grade pupils.	do	5,832		
S-239	Values and postcollege career change	do	8,827		
2444	Collective action by public school teachers	do	84,419		
2947	Cross-cultural study of how children adapt to their society	do	45,773		
S-228	Why women participate in voluntary associations	do	960		
S-247	Social effects of education on children of suburban blue collar workers	do	9,000		
S-283	Effect of certain rewards for task performance among lower class boys	do	6,387		
S-101	Communicating about students in high school faculties	do	4,787		
965	Productive thinking of gifted children	do	44,218		
2942	The analysis and synthesis of problem solving behavior	do	5,569		
S-335	Comparative costs of centralized and noncentralized library processing in public libraries.	do	7,578		
S-023	Behavior patterns of normal children	Indiana University	7,694		
S-038	University freshman dropouts	do	7,656		

S-240	Doctoral graduates in education: An inquiry into their motives, aspirations, and perceptions of the program.	do	8,933		
2579	Differential association of elementary school teacher characteristics with school system types.	do	21,903		
S-318	The social education of Bulgarian elementary school children	Purdue University	9,000		
S-221	Communication between counselors and secondary school students	do	3,055		
1537	Vocational development in adolescence	State University of Iowa	42,606		
2453	The classroom behavior setting: Its nature and relation to student behavior.	University of Kansas	35,202		
S-176	Factors related to faculty desegregation in public schools	University of Kentucky	6,716		
1700	Influence of classroom group cohesiveness on learning and adherence to standards.	do	12,151		
S-029	Community participation in urban school government	Johns Hopkins University	6,038		
S-129	Reactions of students to receiving grades	do	6,757		
C-04	Center for the study of individual and cultural differences in education	Harvard University	381,579		
S-085	Urbanization and the extension of formal education in Massachusetts 1830–65.	do	4,728		
S-106	Relationship of the social and economic status of city schools to the background, attitude and behavior of their principals and teachers.	do	8,998		
G-020	Negro self-concept: Implications for school and citizenship	Tufts University	5,460		
S-034	Education and the Victorian mind of England	Wheelock College	3,210		
2885	The influence of individual versus group instruction upon spatial abilities of preschool age children.	Boston College	4,852		
S-031	An interregional study of student and faculty racial composition in American high schools.	Michigan State University	8,124		
1412	Relationship between high school group structures and the development of orientations toward public affairs.	do	2,233		
2595	Educational goals of Negro and Caucasian youth in segregated and	Michigan State University	75,710		
1455	Impact of a high-demand college in a large university on working class youth.	Wayne State University	124,303		
2394	Effect of socioeconomic setting and organizational climate on problems brought to elementary school offices.	do	36,830		
2780	Teacher-pupil interaction in elementary urban schools	do	24,840		
S-102	Social class factors in the college adjustment of married students	Western Michigan University	8,918		
S-072	Cheating as related to the social system in a university	do	6,988		
2494	Intervention in the cognitive development of the culturally deprived and functionally retarded Negro preschool child.	State department of public instruction	15,894		
F-031	Research conference on social science methods and student residences	University of Michigan	8,205		
K-004	Interuniversity cooperation in the development of social science research in race relations.	do	16,560		
S-136	Student aggressiveness in the classroom	do	8,086		
1903	Comparison of the reading, writing, and spelling achievement among groups of English, Scottish, and American children.	do	33,509		
2483	Educational and vocational motivations of students in Negro colleges, and some of their institutional and subcultural determinants.	do	89,296		
2620	Relationship between socioeconomic development and educational requirements in a technically underdeveloped society.	do	45,294		
2798	Reeducation of the culturally deprived school dropout	do	60,912		
S-307	The english middle class and the evolution of modern secondary education in the era of the industrial revolution.	do	8,847		

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
S-387	Social influence and adolescent decisionmaking	University of Minnesota	$5,744		
S-048	Teacher decision making in an urban classroom	Washington University	6,649		
S-212	A preliminary analysis of the changing conceptions of the superintendency in public education 1865 to 1964.	do	8,553		
S-223	Social psychological aspects of school building design	do	8,880		
E-025	The social psychology of education	University of Nevada	23,777		
S-198	Socioeconomic variables in the acculturation process: A pilot study of 2 Washo Indian communities.	do	7,947		
S-093	Assessment of the intellectual-social-cultural environment which is characteristic of a private junior college for women.	Colby Junior College	767		
S-013	A follow-up of male college dropouts	Princeton University	3,544		
S-016	An analysis of the crosscultural study of children's social behavior	Cornell University	6,996		
2891	A study of community factors related to turnover of superintendents	do	8,328		
S-362	Social backgrounds, attitudes, and outlooks of optometric practitioners in New York State.	N.Y. State Department of Education	7,338		
S-191	Structures in classroom interaction	do	9,000		
S-333	An interview study of teachers who leave the profession	City University of N.Y.	8,972		
S-332	Certain characteristics of student teachers who stay in teaching	do	8,101		
S-296	Influences of cultural patterns on the thinking of children in certain ethnic groups.	Long Island University	8,998		
S-311	Effects of class and racial bias on teacher evaluation of pupils	do	8,996		
S-079	Community conflict related to school district reorganization	Ohio State University	7,730		
S-272	A study of administrative arrangements in different types of school districts.	do	5,431		
2518	Characteristics of teacher education students in the British Isles and the United States.	University of Toledo	109,602		
2832	Interpersonal communication behavior analysis: Normative date project	Oregon College of Education	36,905		
C-02	The social context of school organization and educational administration	University of Oregon	1,042,355		
S-015	Civil attitudes of Jamaican High School students	do	9,000		
2455	Factors affecting career choices of adolescents: A cross-cultural study of cognitive structures used in organizing possibilities.	do	20,794		
S-021	Personality factors and conformity behavior	Penn State University	6,571		
S-149	Group norms in classrooms of contrasting socioeconomic status and differing racial composition.	George Peabody College for Teachers	815		
1217	Relationships between teacher characteristics and student behavior	University of Utah	18,543		
2096	Relationships between teacher characteristics and student behavior: Part II.	do	12,234		
2628	Relationships between teacher characteristics and student behavior: Part III.	do	23,124		
S-159	Study of human interaction variables in successful and unsuccessful teacher teams.	Utah State University	8,772		

S-322	Characteristics of freshman college students in need of and receptive to counseling.	do	330		
S-025	Cross-cultural study of personality characteristics of young adults	University of Vermont	2,903		
S-146	Interrelationships among teacher's experimental attitude, pupils' experimental attitude, creativeness, sociometric structure, and their school attitudes.	University of Wisconsin	7,482		
1094	Educational, vocational and social performance of counseled and uncounseled youth 10 years after high school.	do	11,000		
2965	The teaching profession in Puerto Rico: Attitudes and motivations of public school teachers.	University of Puerto Rico	1,122		
2389	The determinants of educational expenditures in the large cities of the United States.	Stanford University	146,068		
BR-5-0507	Development of basic attitudes and values toward government and citizenship during the elementary school years.	University of Chicago	146,124		
BR-5-0436	The effects of value-oriented education	do	56,018		
BR-6-2657	The culture of schools	New school for social research	95,217		
BR-5-0703	Supportive intervention for higher education among students of disadvantaged backgrounds.	Oberlin College	118,334		
BR-5-0352	Community understanding as a factor in the financial support of public education.	Stanford University	581,430		
012	A sociopsychological study of conformity and deviation among adolescents.	Vanderbilt University	31,999		
015	Refinement of a nonverbal group measure of delinquency proneness that can be used with nonreaders, slow learners, and mentally retarded children.	Boston University	20,750		
025	Talented behavior in junior high schools	University of Texas	115,836		
026	A comparative investigation of the learning and adjustment of trainable children in public school facilities, segregated community centers, and State residential centers.	do	42,941		
037	Why capable high school students do not continue their schooling	Indiana University	9,860		
091	Comparative studies of some learning characteristics in mentally retarded and normal children of the same mental age: (1) learning, recognition, recall, and savings; (2) proactive and retroactive inhibition; (3) generalization; (4) reasoning.	Syracuse University	38,118		
092	Social behavior of mentally retarded children in public school and institution environments.	do	18,598		
098	Varieties of giftedness in the classroom: Studies of cognitive and psychosociological functioning in adolescents.	University of Chicago	50,658		
099	Effects of children's social power and intelligence on their interpersonal relations.	University of Michigan	10,350		
120	Social structures and social climates in high schools	University of Chicago	40,093		
152	Motor characteristics of the mentally retarded	University of Wisconsin	8,127		
160	The dropout problem in Iowa high schools	Iowa State Department of Public Instruction	13,065		
166	Factors related to application, admission, registration, and persistence in college.	USOE	2,300		
171	An exploratory study of educational, social, and emotional factors in the education of mentally retarded children in the Goergia public schools.	University of Georgia	33,217		
178	Study of social adequacy and of social failure of mentally retarded youth in Wayne City, Mich.	Wayne State University	88,791		

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
179	Sociological and educational factors in the etiology of juvenile delinquency.	Syracuse University	$38,328		
181	A sociopsychological study of school vandalism	do	38,744		
200	Motivation of youth for leaving school	University of Chicago	21,922		
214	Dimensions of administrative performance	Columbia University	216,000		
217	Personality factors in the development of communication and leadership skills.	Harvard University	55,063		
247	A statewide inquiry into the decisions of youth about education beyond high school.	University of Wisconsin	27,230		
259A	The investigation and measurement of the social values governing interpersonal relations among adolescent youth and their teachers.	Syracuse University	86,896		
259B	do	Ohio State University	37,808		
275	The Indian research study, secs. I and II	University of New Mexico	65,545		
297	The identification and classroom behavior of elementary school children gifted in 5 different mental characteristics.	Hunter College	24,201		
308	Communities and their schools; voters and their schools	Stanford University	143,098		
309	Population trends on educational change in the State of Washington	University of Washington	19,915		
330	Sources of professionalism: A study of high school teachers	University of Michigan	8,242		
341	Development of fiscal relationships of State departments of education	American University	10,120		
352	Characteristics of teacher behavior related to the achievement of children in several elementary grades.	Brooklyn College	32,200		
371	Role of the teacher and occupational choice	University of Kansas City	41,100		
379	A study of some social and psychological factors influencing educational achievement levels.	University of California (Berkeley)	47,546		
401	The social problems of migrant farm laborers: Effect of migrant farm labor on the education of children.	Southern Illinois University	4,830		
444	Measured needs of teachers and their behavior in the classroom	University of Utah	58,142		
473	A study of observed classroom behaviors of elementary student teachers, predictors of these behaviors, and ratings by supervisors.	University of Minnesota	32,013		
492	The behavioral and academic implications of hearing loss among elementary school children.	Purdue University	19,238		
507	A psydesociological study of adolescents' conformity and deviation	State University of Iowa	16,497		
532	How legislators view the problem of school needs	Michigan State University	14,597		
574	Characteristics of men who have left and remained in teaching	Columbia University	6,282		
624	A study of teacher behavior in relation to children differing in anxiety level.	Yale University	32,996		
648	Prediction of teacher performance and emotional stability: a psychological study of female student teachers.	U.C.L.A.	18,179		
697	A study of leadership in school-age children	Hope College	39,503		
708	Contributions by parents toward the cost of higher education	University of Michigan	40,020		
714	Role of the elementary, junior high and senior high school principal (No. 853).	Harvard University	56,326		

722	Occupational choice and mobility in the urbanizing piedmont of North Carolina.	University of North Carolina	12,650		
736	Measurement and evaluation of change in college women	Vassar College	34,500		
748	Leisure-time activity—Interests of teen-age youth in the Washington metropolitan area.	University of Maryland	34,250		
753	A study of school classroom behavior from diverse evaluative frameworks: Developmental, mental health, substantive learning, and group process.	University of Michigan	21,210		
757	A study of values and determinants of educational-vocational choices in Hawaii.	University of Hawaii	12,421		
803	School revenue systems in 5 States	Stanford University	28,577		
876	Mass communications and popular conceptions of education: A cross-cultural study.	University of Illinois	48,087		
878	Alaskan native secondary school dropouts	University of Alaska	36,627		
906	The school teacher: Social values, community role, and professional self-image.	University of North Carolina	84,870		
929	Teacher perceptions of administrative behavior	Washington University	13,763		
961	Educational achievement and aspirations of undergraduate married students as compared to undergraduate unmarried students, with analyses of certain associated variables.	Syracuse University	17,755		
975	Education for innovative behavior in executives	University of Chicago	77,970		
1017	Attitudes toward adult education by social class	Berkeley	107,099		
1018	Social consequences of the school project: Recruitment and values of students in the University of Puerto Rico	University of Puerto Rico	27,278		
1020	Characteristics of teachers which affect students' learning	University of Minnesota	51,840		
1032	Education as an instrument of national policy in selected Asian nations	Stanford University	56,810		
1039	Structure and process of school-community relations	do	581,430		
1044	Resistances to reorganization of school districts and local governments in metropolitan areas.	Brown University	165,331		
1045	Spillover of public education costs and benefits	U.C.L.A.	17,497		
1143	Group aspirations and group coping behavior	University of Michigan	87,774		
1146	Factors related to attrition among doctoral students	Michigan State University	59,765		
1168	Social factors in educational achievement and aspirations among Negro adolescents.	University of North Carolina	102,370		
1182	The measurement of social relations of mentally retarted and young elementary school children using a modification of the Syracuse scales of social relations.	University of Kansas	37,536		
1241	Wealth, expenditures and decisionmaking	Stanford University	65,343		
1269	Social and economic characteristics of the college population and others with some college training.	Columbia University	$61,631		
1286	Dimensions of children's social and psychological development related to school achievement.	University of Michigan	95,210		
1324	Informal county leadership structure and controls affecting education policy decisionmaking.	University of Florida	54,490		
1328	Characteristics and backgrounds of high school graduates and their subsequent personal and educational development.	Berkeley	220,024		
1346	25-year followup of educational vocational counseling	University of Minnesota	65,587		
1353	Critical factors in adolescence: Intrafamily relationships and differential school adjustment.	U.C.L.A.	58,940		

Extramural research in social and behavioral sciences, including economics, sociology, social psychology, as well as work in other disciplines undertaken primarily for the purpose of understanding group behavior—Continued

No.	Title	Institution	Total	1966	1967
1359	Legal problems in the administration of education by educational and noneducational government agencies.	University of Arizona	$37,636		
1361	Formal education in an American Indian community	Emory University	48,843		
1393	Floundering and trial after high school	Columbia University	98,418		
1401	Patterns of mastery and conflict resolution at the elementary school level	Bank Street College	76,178		
1414	The teacher as an agent of sociocultural change in a technically underdeveloped society.	University of Michigan	99,085		
1495	Economic impact of State support models on educational finance	University of Wisconsin	86,900		
1511	Personal and social variables differentiating children with high and low curiosity.	University of Delaware	37,817		
1592	Relationships between the self-concepts of Negro elementary school children and their academic achievement, intelligence, interest, and manifest anxiety.	Southern University	17,569		
1635	Mental abilities of children in different social and cultural groups	Hunter College	55,163		
1672	Student dishonesty and its control in college	Columbia University	35,974		
1683	Education and marginality in the communal society of the Hutterites	Pennsylvania State University	74,829		
1701	Historical developments affecting American educational processes	University of Louisville	30,119		
1765	Educational decision making in the local community	University of Oregon	68,750		
1781	Personality, teacher education and teaching behavior	University of Texas	199,785		
1796	Relationship between school-community coordinating procedures and educational motivation and behavior of school children.	University of Michigan	87,440		
1828	Community structure and the support of public schools	Eastern Michigan University	38,634		
1846	30-year followup of male college students	Yale University	37,606		
1853	Financial analysis of current operations of colleges and universities	University of Michigan	222,417		
1854	Cross national study of educational attainment: Secondary school mathematics.	University of Chicago	450,945		
1866	Work, play, competence, and occupational conceptions of secondary school students.	University of Michigan	20,156		
1926	Deviant subcultures on a college campus	Bennington College	7,050		
1928	Education, social class, and intergroup activites	Princeton University	13,966		
1934	The development of an instrument for examining staff conflicts in the public schools.	Ohio State University	19,993		

1935	Social class background of 8th-grade pupils: Social class composition of their schools, their academic aspirations, and school adjustment.	Stanford University	29,548		
1944	Comparison of students from 2 and 4 year colleges	New York State Educational Department	86,454		
1999	Sources of educational climates in high schools	Johns Hopkins University	122,234		
2021	Creative thinking abilities and peer conformity in 5th-grade children	Kent State University	23,794		
2065	A study of education and the social structure	Florida State University	107,056		
2071	Social and cultural factors related to school achievement	Rutgers University	99,184		
2107	Communication barriers to the culturally deprived	University of Chicago	43,763		
2139	A cross-cultural study of adolescent societies	Hunter College	92,513		
2152	Characteristics of high school seniors as related to college attendance	West Virginia University	54,570		
2160	A study of college freshmen—25 year later	University of Minnesota	24,564		
2177	A comparative study of the academic achievements of elementary age students of the United States and the British Isles.	University of Toledo	40,226		
2250	The relationship of creativity to social class	University of Florida	30,480		
2258	Family factors and the dropout: 1920–60	University of Michigan	48,367		
2266	Foreign students and their American friends	Indiana University	24,846		
2288	Development of taxonomy for the classification of teacher classroom behavior.	Ohio State University	91,722		
2321	The educational status of children in a district without public schools	Michigan State University	75,372		
2333	Project talent data analysis and followup studies	University of Pittsburgh	845,000		
2341	Independent study in the psychological foundation of education	Western Washington State College	64,779		
1–1	The job performance of school administrators A research development project.	Columbia University	9,200		
1–017	Historical and social determinants of public education policy in the United States.	Indiana University	27,850		
1–1	Strategies for behavioral research in mental retardation	University of Wisconsin	19,510		
–007	Research seminar on community decisionmaking and change and their influence on education.	University of Illinois	22,291		
–015	Development of cross-national research on the education of children and adolescents.	University of Chicago	20,312		
–020	Negro self-concept: Implications for school and citizenship	Tufts University	5,460		
498	The educational status of children during the first school year following 4 years of little or no schooling.	Michigan State University	61,570		
78	The development of basic attitudes and values toward government and citizenship during the elementary school years.	University of Chicago	146,124		
5	Long-term study of educational effectiveness of newly formed centralized school districts in rural areas, part I and part II.	University of Wisconsin	80,685	$60,243	
18					

3. List your 10–20 most successful and most relevant extramural social science research projects over the past five years. For each such project, list the cost of the project and the name and affiliation of the principal investigator, and discuss the questions investigated, the principal findings, the quality of the research, and the actual or anticipated impact of the findings on the agency, Department, and country.

The studies which are cited are largely ongoing projects, except where it is indicated that a study or a portion of a study has been completed.

These studies have been selected because in the judgment of those monitoring the projects the quality of research and potential significance of findings are especially noteworthy.

The topics of these exemplary studies are representative, in many cases, of numerous studies in a given area which provide alternative approaches or more detailed views of specific aspects of a question.

EQUALITY OF EDUCATIONAL OPPORTUNITY

(Completed; data subject to ongoing analysis $2 million)

James S. Coleman, Johns Hopkins University and
Ernest Q. Campbell, Vanderbilt University
Carol J. Hobson, USOE
James McPartland, USOE
Alexander M. Mood, USOE
Frederic D. Weinfeld, USOE
Robert L. York, USOE

This highly significant project is cited as an exception to the pattern of extramural research on questions of major social significance. The survey was carried out by the National Center for Educational Statistics of the USOE. However, in addition to its own staff the Center used the services of outside consultants and contractors.

The Equal Educational Opportunities survey was conducted in response to Section 402 of the Civil Rights Act of 1964:

> SEC. 402. The Commissioner shall conduct a survey and make a report to the President and the Congress, within two years of the enactment of this title, concerning the lack of availability of equal educational opportunities for individuals by reason of race, color, religion, or national origin in public educational institutions at all levels in the United States, its territories and possessions, and the District of Columbia.

In carrying out the survey, attention was paid to six racial and ethnic groups: Negroes, American Indians, Oriental Americans, Puerto Ricans living in the continental United States, Mexican Americans, and "majority" Whites. These terms of identification were not used in the anthropological sense, but reflect social categories by which people in the United States identify themselves and are identified by others.

In broadest terms, the survey addressed itself to four major questions. The first is the extent to which the racial and ethnic groups are segregated from one another in the public schools. The second question is whether the schools offer equal educational opportunities in terms of a number of other criteria which are indicators of educational quality, e.g., numbers of laboratories, textbooks, libraries, types of curriculum offered, academic practices such as "tracking" by presumed ability, characteristics of teachers and student bodies. By looking at these kinds of characteristics, which might be termed the schools' input, only partial information about equality or inequality of opportunity can be obtained for this reason the third major question was addressed to how much the students learn as measured by their performance on standardized achievement tests. Fourth was the attempt to discern possible relationships between students' achievement and the kinds of schools they attend.

Findings

(1) The great majority of American children attend schools that are largely segregated. Among minority groups, Negroes are by far the most segregated. Taking all groups, however, white children are most segregated—almost 80% of all white pupils in 1st and 12th grade attend schools that are from 90 to 100 percent white. In its desegregation decision of 1954, the Supreme Court held

that separate schools for Negro and white children are inherently unequal. This survey found that, when measured by that yardstick, American public education remains largely unequal in most regions of the country, including all those where Negroes from any significant proportion of the population.

(2) Great collections of data on the school environment, offerings, and other characteristics must be interpreted with care and are still under study to discover more from the data. However, patterns that emerge from study of the data reveal that minority groups tend to have less access to physical facilities that seem to be related to academic achievement and to curricular and extracurricular programs that would seem to have such a relationship. The average Negro pupil attends a school where a greater percentage of the teachers appears to be somewhat less able, as measured by indicators of teacher quality, than those in the schools attended by the average white student.

(3) For most minority groups, and most particularly the Negro, schools provide little opportunity for them to overcome initial deficiences that result from nonschool factors; in fact that fall farther behind the white majority in the development of several skills which are critical to making a living and participating fully in modern society. Whatever may be the combination of factors which put minority children at a disadvantage in verbal and nonverbal skills when they enter the first grade, the fact is the schools have not overcome it.

(4) In attempting to identify the school characteristics that are most related to achievement the survey found that the quality of teachers shows a stronger relationship to pupil achievement than variations in facilities and curriculums. The most significant finding pointed to the strong relationship between a pupil's achievement and the educational backgrounds and aspirations of the other students in the school. This effect is less for white pupils, but if a minority pupil from a home without much educational strength is put with schoolmates with strong educational backgrounds, his achievement is likely to increase. The importance of this finding for equal educational opportunity is inestimable. The principal way in which the school environments of Negroes and whites differ is in the composition of their student bodies, and it turns out that the composition of the student bodies has the strongest relationship to the achievement of Negro and other minority pupils.

Impact

The issues involved in affecting integration are complex, however, this study has provided powerful empirical support for the view that integration is educationally beneficial. No research had been done on this question prior to this survey. Until now supporters of integration have taken it as a matter of faith that de facto segregation is harmful to the Negro pupils and have had no evidence to prove that school integration is more than an act of brotherhood but rather an educational necessity. This massive research project, finding the racial balance of the school to be one of the few factors within the school system's control which improved the student's educational achievement, gives the education profession, the public, and policy-makers at all levels proof of the proposition that school intergration is one simple way to improve the school achievement of Negro pupils.

Another factor that stands out as important for greater achievement for school children is the socio-economic status of his family. Already this finding is being used as the point of departure for proposals to solve employment and income problems of minority groups.

The Culture of Schools—$95,217

Stanley Diamond
New School for Social Research
BR–6–2657

This project is studying schools from a unique point of view—as social systems. A secondary purpose is to involve experienced anthropologists and other behavioral scientists in educational research. While this project is still ongoing, and the results are not yet compiled, the interest generated has resulted in a number of proposals being submitted to the Office of Education by competent anthropologists.

This project will provide a basis for theories of the cultural base of educational systems and will suggest new points of departure for social science research in the field of education.

Resistences to Reorganization of School Districts and Local Governments in Metropolitan Areas—$165,331

Basil G. Zimmer
Brown University
#1044

The purpose of this study is to explore the factors involved in the resistance to reorganization of administrative units in metropolitan areas, including school districts and local governments. The research is being conducted in states having the township form of government in metropolitan areas and comparable legislation regarding school district and governmental reorganization. Interviews are being conducted with random samples of residents, and some 600 school and municipal officials.

Study of School Integration—$202,908

Thomas F. Pettigrew
Harvard University
EP 000 363

In this study an attempt is being made to develop empirically-derived models of school integration proceses in both the South and the urban North. These social-psychological models, combining ecological and demographic census materials with opinion survey results, are expected to lead to a better understanding of the integration patterns of schools within the wider perspective of structural and opinion change in American race relations. The general design of the research involves the accumulation, organization, and formulation of a computer data system to process a vast array of both ecological and opinion data. The operational system will be used to test rival theories which attempt to explain diverse approaches to the alleviation of racial segregation, to answer specific and practical questions relating to integration procedures, and to feed in new data relevant to the integration process. All counties which had 200 or more Negroes in 1960 are the units of analysis for the South; voting precincts within cities of over 25,000 people are the units of analysis for the urban North.

This project is making significant advances in developing a theoretical model of changes in public attitudes toward segregation. The researchers expect to be able to identify the effects of government policies and sudden vs. slow efforts to integrate on attitude change and phenomena such as the "white backlash." They are moving toward developing techniques for predicting the impact of pace and style of integration procedures on the awakening of public resistance. This research is going to be of major interest to all concerned with integration and public policy.

Family and Achievement: A Proposal to Study the Effect of Family Socialization on Achievement and Performance Among Urban Negro Americans—$177,234

Edgar G. Epps
University of Michigan, Institute for Social Research
EP 010 151

This study is examining the effects of socioeconomic status, socialization, family structure, and community pressures on the development of achievement motives and values in Northern and Southern Negro subcultures. Another aspect of the study is concerned with negative motives which prevent students from developing acceptable levels of performance. This involves studying self-defeating reaction patterns among Negro youngsters which aggravate problems of low motivation and aspiration. A combination of survey and experimental methods are being used.

At this stage of the study a large body of data has been collected and is ready to be interpreted. As the analysis of the data progresses a more meaningful picture than now exists of the impact of social factors on the achievement and performance of urban Negroes is likely to emerge. Such substantive data on the causes of negative motivation, low aspiration, and other problems associated with academic failure and difficulty is becoming a part of the larger society is crucial as we attempt to find solutions to these problems.

Barriers to Employability of Non-White Workers—$99,863

Lawrence C. Howard
Institute of Human Relations, University of Wisconsin
EP 000 553

It is expected that this project will yield a comprehensive picture of factors associated with employment of non-white workers. Attention is being focused primarily on cultural barrier effects, but information is being gathered on use of training facilities, job preparation, overt and subtle discrimination practices, values, and patterns.

This study is accumulating information which is essential in order to identify more completely the problems hindering fuller utilization of portions of the work force in the large urban labor market and to move toward expanding employment opportunities.

Relationship Between Socioeconomic Factors, Educational Leadership Patterns, and Elements of Community Power Structure and Local School Fiscal Policy—$221,673

R. L. Johns and Ralph B. Kimbrough
University of Florida, Gainesville
EP 000 033

This project is designed to study through time and in depth critical factors affecting local decision-making on school fiscal policy. It brings together in one design a method for investigating the interrelationships of socioeconomic factors, educational leadership, community power structure, and the relationship of these factors to elasticity of local demand for education and for local financial effort in relation to financial ability.

For policy-makers at all levels it is important that information be available on the relative significance of all elements to be considered in the decision-making process. This research has produced a significant measurement technique for evaluating the interrelationships of factors affecting fiscal policy.

Long-Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas, Part I (completed), Part II (ongoing)—$80,685 (I); $60,243 (II)

Burton W. Kreitlow
University of Wisconsin
#375 (I); #1318 (II)

Part I of this project involved an attempt to determine whether the type of school district organization in rural communities is related to the outcomes of the school. Ten Wisconsin communities were studied, five with reorganized and five with nonreorganized school districts. The communities were matched on the basis of such factors as wealth, population, topography, type of farming, propinquity to urban areas, size, and density of population. The findings revealed that opportunities are greater in reorganized school communities, where both teachers and classrooms are better equipped to provide advantages to youngsters, than in nonreorganized school communities. No major differences were found in expenditure for instruction.

Part II continues this study and adds the comparison of changes in community and neighborhood social structure and processes in reorganized and nonreorganized rural school districts.

The implications of such research findings are significant in terms of political change and reform, and should be a stimulus to change where it is not already being contemplated.

Investigation of Fiscally Independent and Dependent City School Districts—$73,058

T. E. Hollander
City University of New York
EP 000 098

The purpose of this study is to determine the best means (in terms of efficiency, flexibility, and economic viability) of administering a city school district, whether through a independent school board with its own taxing and debt-incurring powers, as a dependent unit of a single municipal government, or as a municipal unit with a semi-independent status. Data on measures of financial resources, expenditure levels, and political involvements in the school systems are being collected through survey questionnaires, newspaper item analysis, and secondary sources for a sample of 1200 school districts differing in size and degree of fiscal and administrative dependence.

77-334—67—pt. 1——14

To date findings suggest that the greater the school board autonomy in levying power, the greater the resources expended for education. Studies of this kind are significant in their contribution to understanding differences in political, administrative, and fiscal controls as they affect key policy decisions.

The Determinants of Educational Expenditures in the Large Cities of the United States—$146,068

H. Thomas James
Stanford University
#2389

Work previously completed by this investigator established that a large part of the variations in school expenditures among states can be explained by factors of demand and ability, and the residuals can be explained by locally relating them to known variations in governmental arrangements for decision-making. This study is attempting to apply the rationale to large city data, and to incorporate this third cluster of variables into its analysis.

The implications of this study for public policy are particularly promising; in addition to providing a basis for predicting educational expenditures under varying social, economic, and political conditions, the study should provide new insights into the consequences of alternative arrangements for decision-making in school finance. Some surprising findings have emerged from the current work, suggesting that although the expenditures per pupil are rising in metropolitan areas on the whole and in the suburbs, the educational expenditures per pupil have been declining somewhat in the inner city.

School Desegregation via Compulsory Pupil Transfer—Its Effects on Elementary School Pupils—$73,966

Patricia M. Carrigan
Ann Arbor Public Schools, Michigan
EP 000 334

A systematic investigation of the consequences for both Negro and white children of compulsory transfer of the population of a predominantly Negro elementary school to a predominantly white school is being conducted. The effects of the transfer on achievement characteristics of the transferred pupils and their receiving school classmates are being explored. This study is also undertaking an analysis of the impact of transfer on motivational, emotional, and social characteristics of the pupils involved. Factors which underlie pupil success or failure in the desegregated classroom will be identified.

To further our goals of providing equal educational opportunities for every child and of alleviating de facto segregation patterns a small number of solutions are available. As schools attempt to cope with such problems it is essential the alternative solutions be evaluated in terms of the actual consequences for the children involved. This study promises to provide important data on the effects of pupil transfer.

Socioeconomic Background and Occupational Achievement: Extension of a Basic Model—$85,218

Otis D. Duncan
University of Michigan
EP 010 141

There are a number of factors which have been shown to be related to occupational achievement. These factors include: education, first job status, father's education, father's occupational status, and other factors referred to simply as residual factors. The objective of this project is to determine the relationships that exist between these factors and such social and psychological factors as ability, motivation, aspirations, primary-group and peer-group interactions, and ethnic and environmental factors which govern access to opportunities.

The evaluation of the role of social-psychological and social-structural variables in the total process of occupational achievement will make an important contribution to the body of data needed in order to plan more meaningful strategies for occupational development.

Authority, Rules, and Aggression: A Cross-National Study of Socialization into Compliance Systems—$300,000

Robert D. Hess
University of Chicago
EP 000 027

This project is examining relationships between agression toward peers and aggression toward adult authority in terms of social, cultural, and psychological variables. It is attempting to determine the ways in which children learn the rules and regulations of various value systems and develop behaviors through which they adapt to the systems. The project includes elementary school age children of grades four, six, and eight from cities in the United States, Italy, Greece, Denmark, India, and Japan. In each country a research group is drawn from both middle and working class socioeconomic levels.

This study will help us understand how children adapt to their society and the importance of school and home as supportive agents in the learning process. It will give us a better idea of how children perceive the origin of justice and the role of authority figures.

Cross-National Study of Educational Attainment—Secondary School Science, Civics, Mother Tongue, and Foreign Language—$450,752

Benjamin Bloom and others
University of Chicago
EP 010 255

This is an extension of an international study of mathematics achievement, to be completed in March, 1967, and in which a major finding points to the superiority of comprehensive high schools on the American model over selective secondary schools on the European model in serving the educational needs of populations.

In this expanded study of other areas of curriculum the results of achievement testing will be related to various aspects of the organization of secondary education, the selection and retention of the students, and educational needs and programs in the participating nations. This new data will substantially add to cross-national research.

Work-Motivation and Problem-Solving Style: A Cross-National Study of Achievement in School Children—$825,197

Robert Peck
University of Texas
EP 010 145

This study is identifying and developing ways of measuring methods of coping with work-related problems among children and youth in several subcultures in the United States and in some contrasting countries. The ultimate aim is to increase knowledge of the coping skills needed to achieve academic and vocational competence so that future policies and practices in Vocational Education can be wisely designed.

The three-stage investigation is studying: (1) The vocational goals and the problem-solving behavior of children who are competent and those who are not, (2) occupational values and the coping styles preferred by the children's teachers and by adults representing appropriate occupations, (3) the development and cross-validation of an assessment battery for measuring problem-solving skills.

Outcomes will include reports on the coping styles needed to achieve occupational success in the Latin-American, Negro, and Anglo-American subcultures in the United States, Brazil, England, Germany, Italy, Japan, Yugoslavia, and Mexico.

The Social Status of Pupils and the Social Composition of Schools: Their Independent and Joint Effects on Pupil Behavior—$50,000

Robert E. Herriott
Florida State University
EP 010 264

Data gathered in 1965 by the "Educational Opportunities Study" of $35,000 pupils is being analyzed to determine interactions between pupil social status and social composition of schools. This study involves a more sophisticated and detailed analysis of the data of the earlier study.

The significance of this research lies in its potential determination of the relative importance of personal background factors and the social organizational

characteristics of schools in the behavior of children. It will help identify the social composition of schools which is most conducive to effective education in conjunction with other school characteristics.

Supportive Intervention for High Education Among Students of Disadvantaged Backgrounds—$118,334

J. Milton Yinger
Oberlin College
BR–5–0703

This project is an example of how good social science research can be tied to a practical problem and program. The project seeks to contribute to both theory and practice in the area of extra-school and curricular supports for higher education among young people of disadvantaged backgrounds. A specific program of supportive interventions is being monitored on a long-term basis.

Evidence will be gathered as to the feasibility of expanding such programs in support of the college aspirations of lower class youngsters and will have direct implications for the potential role of colleges in the poverty program.

Community Understanding as a Factor in the Financial Support of Public Education—$581,430 (completed)

William R. Odell
Stanford University
BR–5–0352

This project sought to determine whether or not citizens would give adequate financial support to education if they were fully informed of the need, and whether current communications techniques are effective in sufficiently informing the public about school needs.

The study has produced a description of the flow of communication and the structure of school-community relations. More significantly, it has identified factors critical to selected aspects of organizational-community relations when increased support for schools is required.

4. Discuss the principal objectives of your agency's social science research program and the degree to which these programs are achieving the objectives. Give an overall assessment of the relevance of these programs to Department and agency policy decisions.

We propose to answer the question in two party by relating, first, what previous objectives of the program have in effect been and what our progress toward their achievement has been, and then second, the way we hope to shape them in the future.

Until very recently the objective of the Office of Education social science research effort has been the support of technically excellent but unsolicited proposals. Such proposals were required to demonstrate how they were building on previous research, but the obligation for identification of particular areas of concern was left largely to the initiative of the research community. As a consequence, it is only in the past few months that the research program has begun to modify its administration to the extent that *it* would begin to ask questions about what might be useful in terms of social science research to education broadly conceived, and then, on the basis of the answers derived from that administrative questioning, proceed to develop planned programs of research to provide the answers.

As the compendium of studies indicates this policy has been successful in both stimulating proposals and in accomplishing significant work.

Because of this policy the relationship to the mission agency has been primarily whether or not the research related to educational issues of significance to the Nation's schools. It is only very recently that we have begun interpreting our mission as involving the establishment of priorities for research that would help the Office of Education, State educational agencies, and local agencies in the administration of American education. This process is only just beginning. We have, however, recently supported one new R&D Center on a beginning basis provided that it spent the first year researching problems relating to school desegregation, and new planning procedures have recently resulted in increased attention on the part of the research effort to the needs and interests of the other Bureaus and staff offices of the Office of Education.

Plans to conduct more social science research include pilot studies in FY 1967 designed to test the feasibility of supporting centers for the study of educational

policy. If they do prove feasible, we plan to support two on an expanded, programmatic basis. Further plans to support social science research will depend on current deliberations. No decrease in support is contemplated at present. Increases, if any, will depend upon appropriations and the outcomes of the planning efforts now underway. We have attached the statement describing the purposes of the pilot center effort and of the full-scale policy research effort.

POLICY RESEARCH CENTER PROGRAM

Modern society is becoming increasingly complex and its various components are becoming more inter-related. The educational system is a case in point. Its relevance to numerous societal needs and populations is becoming more obvious; it is increasingly asked to carry the burdens of society and to solve its problems. In fact, it may be said that education is taking on a totally new role, one which goes far beyond the teaching of skills and includes the preparation for a changing world, the basis for national prestige, and the solution of a long standing racial problem. It is simultaneously faced with increased enrollments, rising costs, public discontent, and totally new instructional technologies.

It is clear that educators need information which will assist them in dealing with the merging new interfaces between education and society. The program discussed below is intended to provide such information.

The Bureau of Research intends to establish two or more policy research centers using an interdisciplinary systems approach. The primary task of these centers would be to analyze future educational needs and resources and, in light of these analyses, provide educational policy makers at all levels with relevant information and techniques for decision making. Thus, in Gabor's terms they will be "inventing" alternative futures and mapping out the paths necessary to reach them.

In general, the centers will address themselves to four major questions:

1. What will the social functions of the school be in the future and how might the school begin preparing for them now?
2. What ought the curricular objectives now and in the future be?
3. What technologies will be available to the school of the future and what are their implications for the school today?
4. What economic and political resources will the schools need in the future and how might that effect their planning at present?

Or, to put it in broader terms what are the policy implications of the revolutions in cybernetics, population growth, civil rights, urbanization, segregation, sex education, communication, information retrieval, industrial organization, automation, material abundance, nuclear weaponry, space exploration, interpersonal relations, etc?

Within this broad framework the centers will address themselves to a number of more specific subjects. For example, they might embark on studies of the educational policy implications of such topics as:

(1) The changing role of the teacher and professor.

(2) The emergence of new trades, professions, and occupations and the changing nature of existing ones.

(3) The probable demands on adult education, e.g., for leisure time "training," for occupational retraining and for continuing education.

(4) Advances in biophysical knowledge of factors related to intelligence and learning, (DNA–RNA synthesis, behavioral neuro-physiology, man-machine symbiosis, and other scientific-technical developments).

(5) The shape of the urban complex of the future—its physical, social, economic and political aspects.

(6) The impact of low-cost, rapid intra-urban transport on the neighborhood school concept.

(7) The place of the school system in urban planning.

(8) The role of education in the industrialization of developing nations.

(9) The prospects for international educational cooperation, e.g., in large-scale educational exchanges and live native language instruction via satellite communication links.

(10) Changes in the structure of the local tax base.

(11) The humanizing potential of education in a technology-based society.

(12) The growth of educational diversity in goals, methods, organization, personnel, and student populations.

(13) The influence of societal changes on individual ethics and philosophies.
(14) The current and future roles of the military and industry as potent educational forces.
(15) The continued existence of segregated slum areas and their educational needs.
(16) The outdoors "education" of completely urbanized student populations.
(17) The further development of the mass media and their implications for both formal and informal education.
(18) The role of the arts in leisure time activities.
(19) The growth of the human service occupations and their educational needs.
(20) The future role of the military in international affairs.
(21) The possibility and implications of Leonard Duhl's "educating society" or Robert Hutchin's "learning society."
(22) School administration in McLuhan's "electric age."
(23) Growing impact of Federal programs on local educational opportunities.
(24) The rate, or at least cognizance, of change at the individual, organizational, and societal levels.
(25) The increasing concern for the individual human being and the enhancement of his own unique potential.
(26) Political, legal, economic, and social factors affecting planning and change in metropolitan areas.
(27) Changing relationships between local, State, regional and national educational institutions.
(28) Implications of new educational, communication, and architectural technologies for school design and construction.

The foregoing list is merely illustrative of the types of questions which the operational centers would tackle. In actuality, the specific topics will be determined jointly by the centers and the Bureau on a 40%—30%—30% basis. That is, 40% of the center's time will be devoted to subjects suggested by the Bureau, 30% to subjects jointly agreed upon, and 30% to subjects initiated solely by the center. This will allow the centers freedom to determine the educational policy implications of any major new developments not clearly anticipated at present (e.g., lowering of the voting age to 18, implementation of a guaranteed annual income or negative income tax, and widespread use of sabbaticals in business and industry).

Program Initiation

Due to the dearth of relevant experience in this field the Bureau will first establish up to five pilot centers with nine-months grants of approximately $120,000 each. Their primary task will be to (1) undertake a limited number of policy studies and then, on the basis of that emerging experience, (2) design a model operational center. On the basis of their performance two or more pilot centers will be selected as operational centers, and will be awarded long-term contracts for operation on an expanded scale. The following schedule of events outlines the Bureau's review process in more detail.

Program Time Table

January, 1967 Contact institutions, discuss program and invite proposals.
April, 1967 Receive proposals (Deadline is April 3), make site visits if necessary, make final selection of up to five Pilot Centers.
May, 1967 Negotiate contracts.
June, 1967 Selected Pilot Centers will initiate work.
December, 1967 Progress reports due, conduct site visits if necessary, review of program and centers, select Operational Centers.
January, 1968 Negotiate contracts with selected Operational Centers.
March, 1968 Operational Centers initiate activities under new contracts: final reports due from Pilot Centers.

Criteria for Review of Pilot Center Proposals:

1. Quality of staff and facilities available.
2. Prior experience and quality of previous work in educational policy or related fields.
3. Economic efficiency.
4. Feasibility of proposed studies in light of available time, personnel and budget.

5. Adequacy of administrative personnel and procedures for the initiation and coordination of pilot center activities.

6. Existence of cooperaitve links between proposed center and relevant organization (e.g., local school system, university, State education agency, regional laboratory, education industry, military).

7. Availability of qualified consultants from diverse fields.

8. Obvious interest and enthusiasm for policy research.

Criteria for Review of Operational Center Proposals:

Formal criteria for the review of proposals for operational centers will be developed on the basis of our experience with pilot centers. However, the following process-oriented statements will give an indication of the type of environment which we now consider desirable. It is expected that each operational center would:

(1) Have an experienced and capable director . . . The Center director should have had prior experience in directing interdisciplinary research, knowledge relevant to educational policy studies, and proven administrative ability. He should also be able to assemble and coordinate the efforts of a highly talented interdisciplinary staff.

(2) Include an organizational structure and management system capable of promoting a highly productive interdisciplinary effort . . .

Truly interdisciplinary efforts are very difficult to create and maintain. However, recent experiences, e.g., in several aerospace corporations, point the way to policies and techniques which will help create an appropriate environment for meaningful group interaction. It is important that the centers reflect in their proposed organizational structure and management system an understanding of these new methods.

(3) Include an imaginative plan for the widespread dissemination of its findings . . .

One of the most important functions of the center will be the dissemination of its findings to all interested individuals, groups, organizations, etc. While this activity will not be significant during the initial years, it will rapidly grow in importance as the center starts producing relevant material. It is, therefore, important that the proposal recognize this responsibility at the outset and plan accordingly. Contact should be established with State education agencies, Regional Laboratories, professional organizations, publishers of educational material, educational TV stations, etc. The center should envision a wide range of techniques and approaches, e.g., public seminars, talks, debates, and conferences; magazines, books, pamphlets, and news releases; films, slides, displays, simulations, and videotapes; training sessions, briefings, and personnel exchanges. Where appropriate, these activities would be mounted in conjunction with the Bureau's dissemination program, ERIC, and the dissemination activities of the Regional Laboratories. So as not to interrupt the work of the research staff, centers should probably plan to organize a special full-time staff to handle dissemination activities.

(4) Involve a personnel policy which will allow for continual growth and self-renewal . . .

A future-oriented study of educational policy requires a high degree of openness and adaptability in an investigator. The center should thus have a personnel policy which encourages individual growth and development while at the same time ensuring a highly coordinated team effort.

(5) Provide appropriate facilities and necessary services . . .

The center should have an option on suitable facilities for the comfortable housing of a 15-man professional staff, with their assistants, secretaries, etc. It should be accessible by air and it should be convenient to educational, cultural, and recreational facilities, i.e., it should be capable of attracting top quality people. Requisite services and ancillary personnel should also be readily available, e.g., computer facilities or time, research assistants, libraries, and technical consultants.

(6) Be economically efficient . . .

The proposed operating costs should be reasonable and in line with the work to be performed.

(7) Show evidence of being able to attract a staff of high quality and diversity . . .

The initial staff of the center should be highly qualified and should show tangible evidence of being able to attract others of similar ability. The staff

should consist of approximately 15 full-time professionals, drawing on: educators; city planners, architects; physicians; scientists 'physical, biological, and social); journalists and writers; social critics; artists (used in a generic sense); engineer; representatives from foundations and government; technicians; students; businessmen and industrialists; community activists; politicians; etc. Some attention should also be paid to diversity in regard to sex, minority group membership, national origin, economic level, age, etc.

[Attachment 2 to Attachment 1]

SSA Social Science Research Program

A. RESEARCH GRANTS UNDER SECTION 1110

1. Both the intramural and extramural research programs of SSA are directed toward a broad range of issues concerning income maintenance programs and social welfare. Major themes of current research effort include:

—Analyses of methods of financing various types of income maintenance programs.

—Measures of program adequacy in relation to needs and expectations of the aged regarding timing of retirement and sources and levels of retirement income.

—Studies of the processes of adjustment and economic security of widows and surviving children of deceased workers.

—Analyses of adequacy and extent of income support in relation to needs of both long-term and short-term disabled workers.

—Assessment of public knowledge and attitudes concerning social security programs.

—Research relating to medical care costs, financing of health services and analyses of health insurance for the aged, including utilization and charges under the program, the impact on hospital financing, on private health insurance and total health expenditures.

—Studies of income distribution, labor mobility and patterns of life-time earnings and resulting implications for the administration, financing, and adequacy of social security programs.

—Examination of demographic factors affecting economic security and implications for income maintenance programs.

—Statistical studies of the definition of poverty, analyses of the impact of poverty upon attitudes and behavior of affected groups, and evaluation of programs for alleviation of poverty.

2. SSA administered funds under the Section 1110 program have been granted to educational institutions and non-profit organizations for research in each major area of program interest. The allocation of fiscal year 1966 and 1967 funds under Section 1110 is estimated on the following pages:

Areas of research	Fiscal 1966		Fiscal 1967	
	Educational institutions	Nonprofit organizations	Educational institutions	Nonprofit organizations
I. Financing income maintenance programs	$70,000	----------	$70,000	----------
II. Retirement and aging	199,000	----------	210,000	----------
III. Income support for survivors	----------	$49,000	----------	----------
IV. Income support for disabled	----------	----------	----------	----------
V. Public knowledge and attitudes toward social security programs	15,000	62,000	----------	----------
VI. Health care costs	77,000	----------	340,000	----------
VII. Lifetime earnings patterns	131,000	----------	70,000	----------
VIII. Demographic factors affecting economic security	44,000	----------	30,000	----------
IX. Poverty, low income, and economic dependency	51,000	16,000	15,000	----------
	572,000	127,000	750,000	----------
Total	699,000		750,000	

3. Summary of Selected Current or Completed Projects Supported by the Social Security Administration

(Section 1110, Social Security Act)

I. Financing Income Maintenance Programs—$140,000 established.

#288 Dan M. McGill
University of Pennsylvania

The basic purpose of this study is to assemble information which will serve as a basis for determining whether employers and labor unions are pursuing financial policies that offer reasonable assurance that the benefit expectations of pension plan participants will be realized. The central item of information being sought is the actuarial value of the accrued benefits of a representative sample of private pension plans classified according to various characteristics. These values, computed on the assumption that the plans are terminated as of a current date, would be compared to the respective asset accumulations to derive a "benefit security ratio" for each plan in the sample and for various categories of plans.

Data would be sought from eighteen life insurance companies and forty-three pension consulting firms which account for the bulk of the pension business. Investigation would be limited to plans covering twenty-five or more employees which have been in the process of funding for ten years or more.

The plans would be classified according to the industrial classifications of the employer or union, number of participants, type of benefits formula, type of funding instrument, scope of coverage, categories of employees covered, actuarial cost, method employed, and the number of years since inception. Information would also be elicited as to vesting provisions of the plan and the date of the last significant increase in benefits. The project will terminate in December 1967.

II. Retirement and Aging—$31,568

#037 Hiram Friedsam
North Texas State University
(completed)

The purpose of this study was to investigate the nature and the effects of the decision-making process which leads to institutionalization of the aged, based upon interviews with relatives, friends and doctors as well as aged residents in two private homes for the aged in a Southwestern metropolitan area.

Findings indicated that those residents who felt they had shared in the decision to enter the home adjusted most favorably—even better than those who had sole responsibility for the decision. The greatest difficulty in adjustment was reported by the aged who had played no part in the decision.

Because institutionalization was often viewed as a "last resort" by relatives as well as residents, the success of adjustment depended largely on how well the home met the needs of the aged at the time the decision was considered. Older persons, those in poorer health, and those with no relatives were more likely to have found institutional living most satisfactory for them. The aged who may not have required the facilities available in the institution and who had close family ties were likely to have found the home a less pleasing choice.

#058 George Katona—$145,503
University of Michigan
(completed)

This study was developed from personal interviews with about 2,000 family heads aged 35–64 with family incomes of $3,000 or more. Information was collected on workers' understanding of OASDI programs, attitudes and expectations about retirement, sources of retirement income and expectations of the relationship between current income and retirement income. One of the major findings of the study showed that coverage by private pension plans stimulate individual savings, rather than reduce voluntary savings by the amount of pension plan contributions. The study concludes that the expectation of

somewhat adequate income in retirement encourages persons to plan and save for the retirement period.

#269 Juanita M. Kreps, $11,600
Duke University
(completed)

This study compares the postwar experience of the United States with that of four European countries—West Germany, Switzerland, Sweden, and the United Kingdom—in terms of the growth of non-work time, its forms, and the related income maintenance programs. Of the five nations in 1950, the U.S. showed the lowest proportion of average life span involved in work activity. Between 1950 and 1963, the U.S. had the greatest decline in labor force activity of the elderly and ranked second only to Sweden in decline of youth activity in the labor force.

Comparisons of annual work and leisure time showed that the U.S. work week of 40 hours was shorter than any other nation except Sweden, but that U.S. workers averaged fewer paid vacations and holidays than most of the other nations.

An inverse relation between per capita income and work activity was demonstrated in the study. The substantially higher income levels in the U.S. coincide with greater leisure and higher unemployment levels, raising serious questions regarding the underlying philosophy and adequacy of income maintenance programs.

European countries with manpower shortages have income maintenance programs which encourage workers to continue working past normal retirement age, either by the absence of a retirement test or by offering benefit increments for later retirement. At the same time the average work year is being reduced. Conditions in the U.S. have differed markedly. The U.S. has experienced a much greater increase in population of labor force age, along with a faster pace of technology which has reduced the demand for labor per unit of output. The U.S. has adopted policies to reduce the number of workers rather than to shorten the number of hours or weeks per worker.

The investigator suggests that part of the downward pressure on the retirement age in the U.S. is explained by the absence of an adequate manpower program to provide retraining and relocation of older, unskilled workers.

Incentive for this type of manpower program has been low while unemployment remained relatively high in the U.S. With all conditions indicating an increasing growth in leisure in industrialized nations during the next decade, the investigator urges a critical assessment of the alternative forms that leisure might take in defining manpower policies and retirement age and income levels.

#158 Irving Rosow, $22,411
Western Reserve University
(completed)

This study, based upon a survey of 1,200 older residents of the Cleveland metropolitan area, investigated the extent to which older people compensate for limited contact with children by increased association with neighbors. It was found that emotional dependence upon children is a fairly stable psychological feature among aged parents and was independent of role loss associated with aging, i.e., retirement, widowhood, serious illness, living alone, or limited contact with children.

Findings negated the basic hypothesis by showing that there is no general principle of compensatory association whereby parents see friends specifically to counteract any limited contact with children. However, compensatory neighboring did occur under certain conditions. Parents whose children resided locally and who suffered high role loss, as well as parents with high emotional dependency upon distant children tended to display strong compensatory relations with neighbors. In addition, the opportunities for friendship inherent in residential density of the aged resulted in extremely strong compensatory associations in the working class, but had no general effect on compensation in middle class areas.

Although emotional dependency upon children did in certain types of situations stimulate compensatory associations with neighbors, such neighboring did not reduce emotional dependency. The investigator concludes that programs aimed at stimulating peer group association among the aged are not an adequate replacement for status loss due to old age.

#266 David and Harold Groves—$94,000 estimate
University of Wisconsin

A combination of income tax returns for residents of the State of Wisconsin and records of benefit payments are being used to study the timing of retirement from the labor force and the resulting changes in the level and sources of income. Collection and analysis of these data will serve to discover, using the combined income of husband and wife, the patterns that precipitate early retirement and patterns that are associated with continued labor force participation. Also the combined amount of social security benefit, pension, and other income contingent on retirement will be studied to determine the manner in which date of retirement is influenced by anticipated retirement income. This project will terminate by June of 1968.

#277 George Katona and James Morgan—$258,000 estimate
University of Michigan

The investigators plan to study the determinants of early retirement. A group of UAW members aged 58–59, who are currently making decisions about whether to take advantage of a new retirement plan, and a group of members aged 61, with "post-decision" or just deciding whether to take advantage of a combination of the UAW and Social Security early retirement provision would be included in the study. Because the ability to generalize from findings obtained with this special group *would* be limited, they intend to utilize a national sample to augment the study of the special group, and to determine similarities and differences in attitudes of various age groups toward retirement. The project ends in October 1967.

III. Income Support for Survivors—$116,227

#267 Thomas C. Barker
Michigan Health and Social Security Research Institute

The purpose of this study is to describe the economic consequences to survivors resulting from a worker's fatality, to describe the uses of the funds by survivors, and to determine if the existing "mix" of lump-sum payments and monthly benefits is such that utility is being maximized. The study would also determine some of the social consequences to survivors resulting from the fatality of a worker. It is scheduled for completion by the Spring of 1967.

IV. Income Support for the Disabled—$64,276

#135 Philip Booth
University of Michigan

This project examines the effects of temporary disability insurance protection of some 400,000 farm workers under the California Temporary Disability Insurance law. No other American social insurance program provides such inclusive protection for this group. The study will obtain information on the degree to which disability benefits meet the costs of medical care during periods of disability and the duration of protection for long-term disabled under both the State program and OASDHI. Data will be analyzed in relation to the policy questions regarding extension of temporary disability insurance protection to farm workers elsewhere. A final report is expected in the Spring of 1967.

V. Public Knowledge and Attitudes Toward Social Security Programs—$62,533

#289 Peter H. Rossi
National Opinion Research Center

This project is concerned with establishing trend lines describing changing attitudes and knowledge about social security in the American population, with special reference to income security and Federal income security programs,

and with a view toward the establishment of an historical and theoretical base line for the ultimate construction of a longitudinal series of sample surveys over the next six years.

An analysis of archival materials in the public opinion field touching on attitude and knowledge over the past several decades would be conducted. The end-product will be an interpretation of historical changes in public attitudes toward social security policy and a critical analysis of the salient dimensions of inquiry necessary for a meaningful continuing survey series in the future. The project terminates in November 1967.

VI. Health Care Costs—$90,452.

#132 Margaret Reid
University of Chicago

This is an intensive study of the use of medical services in a set of American cities using 1950 and 1960 data. Dr. Reid will examine the impact of varying levels of income on the consumption of medical services by different segments of the population. The change in expenditures from 1950 to 1960 will be analyzed and the findings will be compared with those of previous studies. A substantial preliminary report has already been submitted. The final report is due in the Fall of 1967.

#300 Donald Yett—$110,000 estimate.
University of Southern California

The purpose of this project is to determine and analyze comparative economic costs of long-term care provided in several organizational settings. They will develop a methodology for collecting comparable cost data from a range of different organizations which provide long-term care or services. With the development of a method of collecting reliable, comparable cost data, the second objective is to undertake a pilot study of facilities to determine the feasibility of enlarging the study to a national sample of different organizations providing long-term care. In addition, they will attempt to explain observed variations and assess economis advantages and disadvantages of the different kinds of facilities. This phase of the project will terminate in August 1968.

VII. Life-time Earnings Patterns—$149,224.

#085–#246 John B. Lansing and Eva Mueller
University of Michigan
(completed)

This study of geographic mobility as a process of adjustment in the economy is based upon a sample survey of U.S. adults living in private households. Findings showed that movers tended to give a more economic rationale for their moves than actually existed. When economic opportunities did guide mobility they did so largely for people who had relative advantages in the labor market in terms of skill levels and education.

It was found that low-levels of economic opportunity and income in an area did not stimulate out-migration; however, high opportunity levels attracted in-migration. Adjustments which occurred between low and high demand areas were largely attributed to younger, more educated and skilled groups in the population.

Although economic ties of home ownership caused some reluctance to move, other ties such as pension plan coverage, unemployment insurance rights and public assistance payments were not significant deterents to mobility.

Investigators suggest two methods to assist the labor force in depressed areas which suffer not only from prevailing economic conditions, but also from the loss of skilled manpower: 1) programs to make information about job opportunities elsewhere readily available to all levels of workers, 2) guidance, training, education and assistance to improve the quality and mobility potential of the labor force who remain in depressed areas.

#276 Lawrence Klein and Donald Katzner, $16,076
University of Pennsylvania

The aim of this project is to assess the economic costs of Negro unemployment. Studies on the level of employment at full capacity output or "potential GNP"

will be carried out within the framework of econometric model studies of the economy as a whole. In building econometric models of the economy, certain key variables have played a big role in the performance of the system—total output (GNP), capacity output, employment, full employment, and others. More information about the economy and more insight is gained by distinguishing between these variables by industry or by producing sector. In the present study they propose to examine unemployment by racial composition. A final report is due in March 1967.

#284 Betty G. Fishman, $30,000 estimated
University of West Virginia

This is an exploratory study that would use existing data to formulate certain tentative hypotheses about the economic effects of internal migration. The study will determine whether or not consumer units that move from one area to another have spending and saving patterns that differ from the consumer units that do not move. If there is a significant difference, any change in the proportion of consumer units from one area to another would tend to affect aggregate consumer spending and saving patterns for various geographic areas and for the entire U.S.

Using the BLS tape from the 1960–1961 Survey of Consumer Expenditures, Dr. Fishman will obtain data on income, expenditures and savings of families that move, changes in income, and changes in assets and liabilities. An analysis of these data should provide a basis for deciding whether a special survey is warranted and if so, what tentative hypotheses a special survey should be designed to test. The exploratory phase ends in October 1966. The report is due in August 1967.

#292 Arnold Katz, $23,400
Columbia University

The purpose of this project is to identify the factors accounting for differences in employment, unemployment and labor force participation over the life-cycle. Employment characteristics will be studied to determine relationships between changes in productivity and wages and age of worker.

A 1961 survey of the unemployed will be used to estimate the opportunity values to individual workers, the wage expectation of workers, the probability of recall by an employer, and the employment opportunities in the local labor market. The relative importance of income and wages on the entrance, re-entrance, withdrawal, and retirement from the labor force at different points in the life-cycle will be analyzed. Sources of data will also include the one-in-a-thousand sample from the 1960 Census of Population and Housing. The project terminates in May 1967.

VIII. Demographic Factors Affecting Economic Security—$45,698.

#107 Ronald Freedman
University of Michigan
(completed)

This study focuses on the patterns and dynamics of family composition and growth and how they are affected by both initial and shifting economic status. It was found that current family income was not related to expected or preferred family size. However, current income was directly related to the timing of certain demographic events. A couple's economic position was substantially better the longer the interval from the start of the marriage to the first birth and the last birth. Pregnancy at marriage is usually related to considerable economic disadvantage which continues past the birth of the fourth child.

Attitudes toward current income levels were related to demographic events apart from the level of income itself. Expectations of higher standards of living were positively correlated with family size expectations. Savings to provide for children's education and ownership of two or more family cars were related to expectations of fewer additional children.

Unemployment before the time of the study had no significant relation to the demographic events measured, but unemployment during the period of the study—especially short term unemployment—was related to higher fertility during the two year follow-up study.

IX. Poverty, Low Income and Economic Dependency—$23,252

#148 Robert A. Dentler
Columbia University
(completed)

This study of educational barriers to economic security focused upon the urban context of insecurity rather than upon individual or family characteristics associated with low educational attainment. Empirical analyses of 131 major U.S. cities supported the main hypothesis that variations in dropout and adult illiteracy rates are functions of differences in levels of poverty, occupational mix, economic opportunity and social mobility. Cities with expanding labor markets for highly skilled and educated workers were generally those with the lowest dropouts and illiteracy rates. The investigators concluded, that, "no doubt there are important psychological and educational determinants of withdrawal from high school, but in the aggregate withdrawal is associated more relevantly with the growth prospects present not in the student but in the city he inhabits."

A second hypothesis of the study suggested that deviations from expected dropout and illiteracy rates for a city, based upon population, employment and income characteristics, would be a function of municipal expenditures for health, education and welfare services. However, analyses showed that cities with higher dropout and illiteracy rates than contextual factors would indicate, were cities with above average expenditures for social services.

The investigators concluded that greater emphasis should be placed on contextual factors in coping with economic insecurity—that more programs to stimulate economic growth and more diversified programs of social insurance are needed to protect individuals against insecurity in low-opportunity areas.

4. The primary objective of the SSA research program is to study problems of economic insecurity and to assess contributions that can be made toward solution of these problems through social insurance and related income maintenance programs. As indicated in response to question 1 above, the major themes of current research effort are directly related to program evaluations and planning, and to basic issues of income distribution and related policies.

The objective of the Administration's social science research grants program is to seek new knowledge having both direct and indirect relevance to income maintenance policy. Large-scale studies of direct program significance have been supported, such as those relating to determinants of early retirement, studies of the effects of pensions on savings, analyses of the effects of income on medical expenditures and use of health services, and a study of the economic costs of long-term care in different types of institutions. In addition, projects have been supported to examine local variations in program effectiveness such as a study to determine the extent of OASDHI coverage for migrant workers in a midwestern State. Lastly, the grant program provides for smaller studies for the testing of new theoretical approaches to relevant social science research, such as a study to test the validity of an econometric model to determine the economic costs of discrimination and unemployment. In addition, the experience of certain grantees with small scale longitudinal studies have been of direct benefit to the intramural research staff in planning a nation-wide longitudinal retirement history study.

SECTION B—CONTRACT RESEARCH PROJECTS OF SSA

In fiscal 1966, the SSA spent $365,000 for contract research, almost entirely for a study of utilization and charges for hospital and medical services before and after Medicare. Data collection was carried out by the National Opinion Research Center, analysis will be done primarily by the Columbia University School of Public Health. ORS staff have participated in planning at all stages.

The initial stage of the study will provide baseline data describing the utilization of and costs incurred for various types of hospital and medical services by the aged during the year prior to the beginning of the Health In-

surance Program. The analysis of the data obtained from a national sample of approximately 6,000 aged persons with respect to their use of their hospital and medical services during the 12 months prior to April 1966 will be completed in 1967.

The second phase of the study will involve interviewing a similar sample in October 1967 with respect to their use of hospital and medical services during the preceding 12 months. The data obtained from the second series of interviews will be matched with information recorded for these same persons by the statistical system under the Health Insurance Program in order to validate the responses to both the first and the second interviews. This phase of the project will be caried out by ORS staff.

For Fiscal 1967, the budget allocation for contract research was $340,000. This was subsequently increased to provide for studies of the impact of Medicare on hospital financing requested by the Health Insurance Benefits Advisory Council. A contract for a feasibility study has been made with the Surveys and Research Corporation, and a contract with the American Hospital Association is under discussion.

Smaller amounts will also be used for the before and after Medicare study started in fiscal 1966 ($50,000), for a methodological study of diagnostic and procedural coding of Part B services ($84,000), and for payments to Brookings under the HEW-Brookings master contract.

The amounts listed above do not include payments to other Federal agencies for services such as field collection of data by the Census Bureau, special data relating to medical prices from the BLS or the costs of data linkages.

[Attachment 3 to Attachment 1]

EXTRAMURAL SOCIAL SCIENCE RESEARCH OF THE WELFARE ADMINISTRATION

1. The extra-mural social science research of the Welfare Administration is supported through research grants programs administered in the Children's Bureau and in the Office of the Commissioner.

The applied social science research supported under these programs has the same general goals—to provide valid and reliable information which may be used in the formulation, modification, and assessment of the programs for which WA has administrative responsibility. Research includes studies of economically or otherwise dependent population; of the organization and administration of social welfare services; of the effectiveness of social welfare intervention; of social welfare manpower resource needs and utilization; and of a broad range of questions related to programs dealing with the general welfare.

2. The total extra-mural social science obligations of the Welfare Administration are estimated at about $5.4 million in fiscal year 1966 and $7.2 million in fiscal year 1967. Obligations for social science research related to programs of the Children's Bureau are estimated at about $3.5 and $4.5 million respectively; research related to the other programs of the Welfare Administration are estimated at about $1.9 million and $3.5 million, respectively.

About two-thirds of the funds were to educational instructions. Because of legal provisions governing the grants programs, no funds can be obligated to profit-making organizations.

3. See lists attached.

4. Since an important criterion in the selection of projects for support is program relevance, all the research projects supported are relevant for the programs of WA. The role of the research in affecting policy decisions cannot be precisely specified but there is good reason to believe research detailing the disadvantaged position of economically dependent persons, pointing out the scope and extent of problems of child abuse, raising questions about the efficiency of traditional methods of social intervention, specifying clearly the problems faced by unmarried mothers and their children, and showing the socioeconomic differentials in effective use of contraception have influenced both policy decisions and legislative actions.

DIVISION OF RESEARCH
OFFICE OF THE COMMISSIONER
WELFARE ADMINISTRATION, DHEW

Cooperative research and demonstration grants program

[Social science research]

Project title	Project director	Grantee institution	Total estimated cost	Statement of questions investigated
Unmarried mothers who keep the first out-of-wedlock child.	Mignon Sauger	Community Council of Greater New York.	$101,233	To discover the characteristics and needs of unwed mothers with 1 out-of-wedlock child whom they do not plan to place for adoption; and to learn ways the community can deal more effectively with the social problems related to illegitimacy.
Socioeconomic factors affecting welfare department and low-income families.	G. A. Hample	North Dakota Public Welfare Board.	99,429	To describe the varieties of adjustment made by low-income families to their environment; to point up the major problems associated with their adjustment and some of the major public policy issues involved; and to provide comparative data on low-income families receiving, and not receiving, public assistance. A sample of 1,200 families in 4 regions of California were studied. ½ received aid to families with dependent children-unemployed parents (AFDC–UP) and ½ have received no assistance for the past 2 years.
Research demonstration with dependent multiproblem families.	David Wallace	Columbia University	97,562	To provide intensive casework in the Chemung County Department of Public Welfare, New York; to attempt to improve family functioning among a sample of 100 multiproblem families; to evaluate the effectiveness of intensive casework services; and to analyze factors associated with improvement.
Evaluation of the pilot project in the rehabilitation of dependent families.	Lawrence Schein	Community Services Council of Delaware.	20,733	The purpose of this project was to evaluate empirically the results of providing intensive rehabilitative casework services on a small caseload basis for AFDC families. Caseloads in the experimental and control samples were limited to 35 cases. The experimental and control samples included 105 families each. On the basis of previously collected data, the employment histories, patterns of assistance, and residential histories of the experimental and control cases were compared. Quantitative and judgmental data also will be developed for an analysis of changes in family functioning and in the health status and psychosocial problems of family members. Another important aspect of this investigation was the attempt to develop an evaluation of services requested from community agencies for the experimental families.
Unwed motherhood: Personal and social consequences.	Charles E. Bowerman	University of North Carolina.	8,980	The data were secured from interviews with over 1,000 white and Negro unwed mothers who gave birth to children in 1960 or 1961 in North Carolina. The data were analyzed to determine the prepregnancy relationship between the alleged father and the unwed mother, and the impact of the pregnancy on the relationship; the final disposition of the child, the reasons for this disposition, and the mother's satisfaction with the solution; the reactions of "significant others" to the illicit pregnancy, the mother's reactions to her child, and the impact of his birth on her life plans.

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DIVISION OF RESEARCH
CHILDREN'S BUREAU
WELFARE ADMINISTRATION, DHEW

Child welfare research and demonstration grants program

[Social science research]

Project title	Project director	Grantee institution	Total estimated cost	Statement of questions investigated
The role of the social worker in a child protective agency: A comparative analysis.	Andrew Billingsley	Massachusetts Society for Prevention of Cruelty to Children (Boston, Mass.)	$30,085	Aim of study: To describe the role orientations, role performance and job satisfactions of social caseworkers in a child protective agency.
Positional authority and delinquent behavior.	A. W. McEachern	Youth Studies Center University of Southern California (Los Angeles, Calif.).	48,684	This study was carried out in order to broaden our understanding of 1 aspect of the social environment of delinquents: the adults who surround them, train them, catch them if they misbehave, and ultimately must do something to help them when the "normal" socialization process seems on the verge of failing.
Social distance and illegitimacy. (Unmarried motherhood among Negroes.)	Deborah Shapiro	Columbia University School of Social Work (New York, N.Y.).	29,518	Study of attitudes toward illegitimately pregnant Negro girls, their parents, and the staff involved in serving them. In brief, the study was designed to answer the question: How far apart in their attitudes toward illegitimacy are persons most immediately involved in the problem, and to what extent are such differences associated with race and class?
Proposal for a coordinated research program in foster care.	Ralph W. Colvin	Child Welfare League of America (New York, N.Y.).	588,333	Development of a series of studies for the examination of current problems and practices in foster care services and the accretion of a body of knowledge to provide an overall framework for the appraisal and planning of foster care services.
Child welfare research program	David Fanshel	Columbia University (New York, N.Y.).	485,162	Research program involving a very extensive study of children referred for foster care. The study staff will be concerned with the task of developing an ongoing picture of the adjustment of some 750 children entering care, the nature of the family situations from which they derive, and the nature of the agency services rendered to them. The focus is on the child, the parents, and the agency. Areas of interest are the child's behavior attitudes, personal social adjustment and intellectual level, the response of the family to separation, and the rationale for separation.

DIVISION OF RESEARCH
CHILDREN'S BUREAU
WELFARE ADMINISTRATION, DHEW

Maternal and child health and crippled children's services research grants program

[Social science research]

Project title	Project director	Grantee institution	Total estimated cost	Statement of questions investigated
Family planning. (Fertility, attitudes relevant to fertility, and family structure in Metropolitan New Orleans.)	Joseph D. Beasley	Tulane University School of Medicine (New Orleans, La.).	$501,900	Purpose of the study is to interview 1,000 ever-married (including common-law) persons, and ever-pregnant women, who have not yet reached their 45th birthday. Analysis will focus on: The extent of knowledge about and attitudes toward fertility and family planning; to assess fertility and subfecundity; and to study the changing composition of the family over the lifetime of the respondent and to evaluate the reasons for and significance of changes.
Patterns of pediatric health care among low-income families.	Joel J. Alpert	Harvard University Medical School (Boston, Mass.).	226,088	In a selected sample of about 800 low-income urban families with children, this research attempts to: Describe the actual health status and patterns of utilization of medical services as they existed at time of first contact of families; introduce a change in health care by offering and delivering for 3 years a comprehensive pediatric care program to a randomly selected subsample; study the acceptance or rejection as well as utilization of this program, as to their forms, extent and correlates, by the families in the subsample; after delivering this comprehensive program make a comparative analysis of its effects as observable in morbidity, utilization of services health attitudes and knowledge.

Relationship of maternal health to family solidarity among low-income families in 23 Appalachian counties—Chronic maternal illness in Ohio Appalachian counties.	Ruth Deacon	Ohio State University Research Foundation (Columbus, Ohio).	52,088	To determine the impact that long-term or chronic illness has on financially depressed families. In addition, family adjustments to maternal illness will be examined in light of the community resources available to families in the Appalachian counties of Ohio. Finally, the effect that the family's concept of mother's competence to perform her role will have on the mother's desire to regain full productivity will be examined.
Community and personal factors in adoption and nonadoption of family planning services.	Donald J. Bogue	University of Chicago Community and Family Study Center (Chicago, Ill.).	76,928	A 3-year program of research aimed to provide information useful in accelerating adoption of fertility-limiting practices among low-literacy populations. Research is being done at 3 sites: Slums of Chicago, rural areas in eastern Kentucky, and rural areas in central Alabama.
Alternative birth rate projections to 1975 for maternal and child health planning.	Raymond D. Gastil	Hudson Institute, Inc. (Hudson, N.Y.).	44,221	In connection with its related work on projections of population growth and related indices. The Hudson Institute proposes to make an exploratory analysis of the implications of alternative projections of U.S. birth rates for some of the future requirements for maternal and child care. The first task will be to establish realistic limits for a range of projections of 1975 U.S. birth rates, and to explore some of the considerations which could lead to low or high projections of the national birth rate and of birth rates for particular classes, groups, or ages. This exploration will be especially concerned with the general and differential impacts of new birth control methods, changing patterns of use of older methods, and other relevant prospective social, cultural, and economic changes. The study will then explore the implications of selected alternative projections for planning requirements for future maternal and child health services.

Senator HARRIS. Our next witness is Dr. Donald M. MacArthur, Deputy Director for Research and Technology, Office of the Director of Defense Research and Engineering, Department of Defense.

While Dr. MacArthur and his colleagues are coming forward, I have a statement that I wish to make.

I was deeply disturbed and saddened to learn of the subsidization of the National Student's Association by the Central Intelligence Agency. If this is a proper function of our Government at all, it should have been carried out openly by a agency such as the State Department or the USIA.

I applaud the President's move to institute a complete review of this whole matter. The NSA–CIA matter is not directly within the jurisdiction of this subcommittee, since it does not involve research. It is of interest to us, however, in a collateral way because it may deepen the unjustified present suspicion in some foreign quarters of U.S.-financed social and behavioral science research in foreign countries.

This suspicion, largely growing out of such research projects as Camelot and Simpatico because of the military source of their funds, makes it increasingly difficult for our social scientists to do their research in foreign countries. This is, of course, a serious concern of our subcommittee.

It is my personal and individual view that this problem can best be approached by the establishment of a separate civilian agency for the Federal funding of such research in foreign countries now largely funded through the Defense Department.

Dr. MacArthur, I believe you have some associates with you. Would you present them, and then you may proceed.

TESTIMONY OF DR. DONALD M. MacARTHUR, DEPUTY DIRECTOR (RESEARCH AND TECHNOLOGY), OFFICE OF THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE; ACCOMPANIED BY DR. RICHARD TRUMBULL, DIRECTOR OF RESEARCH, OFFICE OF NAVAL RESEARCH; AND DR. E. KENNETH KARCHER, JR., DEPUTY CHIEF AND SCIENTIFIC ADVISER, SOCIAL SCIENCES RESEARCH DIVISION, ARMY RESEARCH OFFICE

Dr. MACARTHUR. Yes, Mr. Chairman. On my immediate right is Dr. Richard Trumbull. He is Director of Research at the Office of Naval Research and was formerly Director of the Psychological Sciences Division at ONR.

At my far right is Dr. Kenneth Karcher, who is Deputy Chief and Scientific Adviser, Social Sciences Research Division, Army Research Office.

Senator HARRIS. Thank you very much.

Do you want to proceed with your prepared statement?

Dr. MACARTHUR. Yes, sir. I can give you the total statement or cover the highlights.

Senator HARRIS. It would probably be better, since we are going to have to recess at around 12:30, if, without objection, we include the entire statement in the record and then you might highlight from it if you would, Doctor.

Dr. MacArthur. Very well, sir.

Mr. Chairman, I thank you for the opportunity to comment on the behavioral and social research program conducted by the Department of Defense and specifically on S. 3896, a bill to create a National Foundation for the Social Sciences. I recognize that this bill has been reintroduced as S. 836 in the 90th Congress.

I appreciate the seriousness with which this committee has explored the role of behavioral and social science research in the Federal Government.

The Department of Defense, as all of you know, has many responsibilities. We select and train military personnel, develop military hardware compatible with effective human use, contribute to national policy planning, train and advise foreign nationals, and contribute to civic action programs in foreign countries.

To do this, we use contributions from fields such as psychology, economics, anthropology, sociology, and the politico-military sciences.

Let us now take a somewhat broader look at this DOD mission for a moment. An important lesson which we are learning in Vietnam is that hardware—no matter how ingenious in design or effective in use—does not provide the entire solution to the problems of national security. Secretary McNamara in Montreal last May pointed out that—

> There is still among us an almost ineradicable tendency to think of our security problem as being exclusively a military problem—and to think of the military problem as being exclusively a weapon-system or hardware problem.

We know that our military mission to be most effective requires understanding of the political, social, and economic setting in which we fulfill our responsibilities. We know, too, that our systems developments are critically dependent upon our understanding of the ways in which men can use equipment.

Thus, from two rather different perspectives, the DOD has a requirement for behavioral and social science research. From the standpoint of our many jobs involving people, we must continue to improve our effectiveness and lower our costs—in training, in operating equipment, in the utilization of men, and in planning. From the standpoint of adequately understanding the fabric of national and international security, we need to examine the relationships between our military capability and other elements of national policy.

As a basic management tool, the Department of Defense uses, as you know, a planning-programing-budgeting system which includes, in effect, continuing relevance review. This continuous process supports the DOD mid- and long-range planning. Within this system, at least twice a year, we explicitly evaluate each project. We ask the hard, simple questions: What is the problem? Why do we need this work? Could we solve the problem another way? What impact will the results make? How long will the work take? Has this study been carried out competently so far? How much will it cost? This is our general approach to all our research programs, in all fields.

Another management technique involves the Defense Science Board. This group periodically conducts detailed analyses of certain DOD research and development areas. The DSB is now engaged in such a detailed review of DOD's behavioral and social sciences

research. This review is now assessing the short- and long-term relevance of each contract or grant. Through this DSB task force, we hope to achieve even a clearer focus in behavioral and social science research, and improved documentation so that any interested party can clearly grasp what we are doing and why we are doing it.

We cannot claim a perfect system. Yet we are trying to take account of deficiences and to orient all research in behavioral and social sciences to meet requirements clearly necessary to our mission.

The Department of Defense is conducting and supporting research in five broad areas of behavioral and social sciences. These five areas are:

Human performance.
Manpower selection and training.
Human factors engineering.
Cultural/social factors.
Policy planning.

Table I shows the magnitude of the Department of Defense effort in this area during the past 5 years. I have also shown our proposed fiscal year 1968 program. The total amount for the past 5 years has been $156.7 million.

Within the definition of this bill, the DOD support of these areas amounted to $34 million in fiscal year 1966.

Senator HARRIS. May I interrupt there? Camelot and Simpatico Operations, which were funded by the Department of the Army, do they fit up here in these five categories somewhere?

Dr. MACARTHUR. Yes, they are under cultural and social factors.

Senator HARRIS. Go ahead.

Dr. MACARTHUR. Thus, DOD support was about 10 percent of all federally sponsored research in this area. The Federal Government is supporting basic and applied behavioral and social science research at a level of about $380 million in fiscal year 1967. This overall Federal activity has grown rapidly in the last few years because of the expanded efforts of other agencies such as the HEW, OEO and the National Science Foundation.

The support of behavioral and social sciences by the Department of Defense probably will continue to increase slightly in the future. The advanced development program in education and training, for example, which was initiated this year to take advantage of technological advances such as programed and computer-aided instruction, is planned for accelerated support.

Table II shows the distribution of funds in terms of five broad functional areas. I will review each of these areas later.

Table III shows the distribution of research funds by functional areas in relation to the type of organization performing the research. During fiscal year 1966 about 24 percent of the $34 million effort in behavioral and social sciences was performed by in-house laboratories.

The following numbers of various organizations participate in our program: 17 in-house research laboratories; 26 nonprofit research organizations; 64 profitmaking organizations; 91 universities and colleges.

The criteria governing classification of research in this area are identical to those applied to the results of work in the physical, engineering, and biomedical sciences.

About 20 percent of the program is classified. The classification results from the normal consideration of political and military factors which affect national security. Cultural/social factors and policy planning study areas produce most of the classified work.

I should like to discuss the five basic areas: Research programs in human performance are involved with measuring individual human capabilities and limitations—physiological and psychological—related to performance in military operations.

Modern military operations have placed very severe demands on the individual. These demands arise in part because advanced technology has led to systems which require man to operate under severe environmental stresses, sometimes beyond tolerance limits. These stresses include high noise levels, extreme vibration, and isolation.

Research in this area is developing solutions to specific military problems such as—

(*a*) in psychophysiology—problems of visual perception in high-speed, low-level flying, and in the communications between personnel in underwater and high-noise environments;

(*b*) in psychological stress—the special problems of prolonged isolation and extended military operations; and

(*c*) in basic psychological traits—the sensory problems in vigilance and monitoring, and the human capabilities for information processing and decisionmaking.

The second broad area, research in manpower selection and training, concerns techniques to improve the selection, classification, training, and utilization of military personnel. Most enlisted personnel entering military service are unskilled. They must be properly matched with needed skills. They must be trained rapidly and effectively, at minimum costs and time for combat roles. A major problem is reliably predicting performance at the time of selection.

In addition to performance prediction, we are supporting work in areas such as:

(*a*) Evaluating and improving organizational effectiveness and the composition and interrelationship of teams and crews.

(*b*) Optimal utilization of advanced training techniques such as programed instruction, computer-aided instruction, and educational television—especially to reduce training time and cost, while increasing the performance levels of graduates.

(*c*) Improved personnel data storage and retrieval facilities in the military service to permit maintenance of up-to-date personnel skills inventories.

Human factors engineering is an interdisciplinary area involving engineers, behavioral scientists, computer specialists, and biological scientists. Traditionally, man designed machines without adequate references to the men who would operate and maintain them. We tended to rely on man's apparently limitless capacity to adapt. As engineering technology advanced, the complexities of equipment began to exceed the capabilities of the operator.

The "human engineer" must use engineering language to describe the human component in a man/machine system. He is now used in system development to (*a*) help determine the role that man should play in the system; (*b*) assist in designing the equipment; and (*c*) define the tasks which man will perform.

We are now becoming more sensitive to the possibility that an inadequate analysis of the manpower requirements for a major system may be very costly. We are now emphasizing studies of the "man in the system," that is, the quantity, quality, and cost of people to operate, maintain, and support the hardware. The new emphasis upon life cycle cost places a premium upon determining the best combination of human and machine capabilities.

I now turn to our research on cultural and social factors.

Worldwide U.S. commitments place military units in continuous contact with indigenous leaders and civilian populations. To do our well, we need a thorough understanding of the cultural settings which characterize these countries.

A systematic proven theory of cultural change is not available. We know very little about the processes of social change, about why groups behave the way they do. In this area, there is a lack of systematic field research; there is inadequate theory about the cultural change processes; and there has been too often a failure to recognize the advantages of interdisciplinary research on behavioral and social problems.

Even though these "information gaps" exist, the U.S. Government obviously must continue a very large array of international activities. For example, defense personnel participates in political representations and negotiations, serve as trainers and advisers, contribute to economic and social development programs, and participate in counterinsurgency operations at various levels in support of national policy.

I would like to give a few examples of this overseas involvement.

(*a*) In fiscal year 1967, the United States has military assistance programs—MAP—in 39 countries.

(*b*) In fiscal year 1967, MAP supports civic action programs—these are conducted by local military forces—in 27 countries.

(*c*) In fiscal year 1967, MAP is supporting the training of 16,800 foreign nationals.

All of the above activities are important. It may not be clear that these efforts directly require research to be carried out. But to do these jobs well, and to do them better, a thorough understanding of the cultural and social factors in each country is required.

First, because when we train foreign nationals, we must be sensitive to the environments to which they will return.

Second, because our training influences the capability of foreign military officers, who in turn influence interactions between governments.

And third, because the effectiveness of DOD personnel serving abroad is related to their individual understanding of the cultural environments to which they are assigned.

I want to try to be clear on a distinction that applies to our work in foreign area research both in cultural/social and policy studies. As in our other areas, there are studies which are relevant to our responsibilities, and studies which are uniquely related to our operational needs. Some of the work which we support would not be required if the information were available or were being developed outside the DOD. This category is relevant, but not necessarily unique, to DOD needs.

I am not able to give you a precise estimate of the fraction of our foreign-area-related effort which is relevant but not uniquely related to our mission. I believe it is a small amount. However, the DSB study to which I referred earlier will give us this answer. If other Federal agencies were able to take on some of the other work and expand it we would be pleased.

Policy planning studies concern strategic planning, with particular emphasis on the political, economic, and military trends throughout the world. The purpose of the program is to help insure that defense planning anticipates and is prepared to respond to the changing patterns of political and power alinements.

The emphasis of the studies is on analyses of national and international developments that will affect future defense planning, policies, forces, and weapon systems. Along with our investment in the research, technology, and engineering of new weapon systems, there must be a coordinate effort, in the social sciences, to learn more about the political and military context of our long-range planning.

Most of the studies in this area are classified. However, they generally involve thefollowing kinds of studies:

(*a*) Examination of alternative possible U.S. security programs for Europe and the Pacific.

(*b*) Evaluation of possible courses of U.S. policy toward the proliferation of nuclear weapons.

As we understand it, S. 836 would establish a National Foundation for the Social Sciences to encourage and support research in the social sciences independent of any mission-oriented department or agency of the Federal Government. The programs presumably would be complementary to those already existing in operating agencies, rather than a substitute for ongoing mission-related activities.

The Department of Defense believes that a strong social science research base is an increasingly important national resource. This base, along with biomedical, physical, and engineering science research, is a vital, national capability. Development of this resource is in the national interest to serve public agencies, private institutions, and individual citizens.

Therefore, the Department firmly supports the proposition that there will be a need for increasing Federal support of the social sciences.

We do not beileve that the establishment of an NSSF would effect the types and amount of social and behavioral science research conducted by this Department, with the possible exception of some basic research including foreign area work.

The establishment of a competitive source of Federal funding for social science research might make it more difficult in the short-term for DOD to attract the desired investigators. However, this would be acceptable if we could see important, long-term gains. Long-term funding at a higher level, for example, would create a greater scientific personnel base. A stronger base clearly would be in the Department's interest.

The Department of Defense has a strong interest in supporting research which involves interdisciplinary work between social and the natural scientists. Many of our research needs can only be solved by

an interdisciplinary approach. We should insure that any actions we take must promote rather than inhibit the growth of needed interdisciplinary relationships.

The Department of Defense supports the general objectives of the bill. However, we have reservations about various aspects of the NSSF as proposed.

The bill provides at section 7(b) that mission-oriented departments or agencies may request the Foundation to carry out programs on a reimbursable basis. This provision counteracts the basic need to assure total independence of the proposed Foundation. We believe that a Federal Foundation with responsibility for the social science research should: (*a*) fund or conduct only unclassified research, and (*b*) fund or conduct primarily basic—or fundamental—research. It should not undertake any program at the request of a policy, intelligence, or operating agency, or accept funds from such agencies. We do not propose a prohibition on true collaborative programs which might well be in the interest of the Government.

Under these conditions a foundation would be less vulnerable to the suspicion that the research it supports is controlled by the Government's policy or operating agencies. Nonetheless, Department of Defense believes that the potential for suspicion by foreign governments cannot be totally eliminated whenever foreign area research is, in fact, supported by Federal funds and institutions.

A stronger statement we feel is needed that the thrust of the program of such a foundation would be toward basic research. We believe that it is primarily through the development of theory and basic experimental programs that the social sciences will advance.

The bill has no specific provisions for assigning resonsibility for undergraduate and graduate education programs in social sciences. Such programs will be essential to provide the base required to achieve the purposes of this bill.

In relation to section 6(2) and 8, we believe it should be made clear that a major objective of any such foundation would be to develop the U.S. capabilities rather than to promote the development of foreign social scientists, although collaborative investigations with foreign scientists should be permitted and encouraged.

The bill states that:

> No individual formerly in the employment of the Federal Government shall be eligible to receive any grant or other assistance pursuant to this act * * * in the two-year period following the termination of such employment.

This would have a detrimental effect on recruiting Government personnel and appears to go beyond current policies. For example, this Department employs social scientists who might later desire to join a university faculty to participate in social science research potentially supportable by the proposed foundation. It may be in the best interest of the Government to encourage scarce scientific talent to participate in governmental social science activities without prejudicing their future.

In light of these comments, the Department of Defense is opposed to the enactment of the bill in its present form.

Mr. Chairman and members of the committee, this completes my statement.

I would be happy to answer any questions.

Senator HARRIS. Let me say, Dr. MacArthur, that I am sorry that our time does not permit discussion of the entire bill. Many of the points we would discuss in addition to your statement, we have already discussed in these hearings or in last year's hearings, and also you have anticipated in your paper many of the things that we would have asked.

Let me say that I agree with you and I note in your statement on page 16 with regard to social and behavioral science research not uniquely related to the mission of the Department of Defense, you say if other Federal agencies were able to take on some of the other work, we would be pleased, and particularly, if other agencies were prepared to expand this needed activity.

I also note your statement on page 19, which is one we have seen echoed again and again by agency testimony before this subcommittee, which says that therefore, the Department firmly supports the proposition that there will be a need for increasing Federal support of the social sciences. Let me say further that I appreciate your comments about how this bill might be strengthened, and improved, and that, together with your total testimony, I assure you, will be helpful to this committee in its deliberations.

I have no questions unless you have something further that you or those with you would like to add.

Dr. MACARTHUR. I do not have anything, sir.

Senator HARRIS. Thank you very much.

(The prepared statement of Dr. MacArthur follows:)

STATEMENT OF DR. DONALD M. MACARTHUR, DEPUTY DIRECTOR (RESEARCH AND TECHNOLOGY), OFFICE OF THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE, BEFORE THE SUBCOMMITTEE ON GOVERNMENT RESEARCH

INTRODUCTION

Mr. Chairman and members of the Committee, I thank you for the opportunity to comment on the behavioral and social science research program conducted by the Department of Defense and specifically on S. 3896, a bill to create a National Foundation for the Social Sciences. I appreciate the seriousness with which this Committee has explored the role of behavioral and social science research in the DOD;

The Department of Defense strongly endorses the premise of S. 3896: that there is a clear need for vigorous Federal support, at an increasing level, in this area. We foresee increasing needs for research in this area. But we are opposed to the enactment of S. 3896, 89th Congress, in its present form.

I would now like to:

(1) Review the general role and relevance of social and behavioral science research in the DOD;

(2) Analyze the range of programs in which we are engaged;

(3) Give you some illustrations of the ways in which past work has been directly relevant to fulfilling our mission; and

(4) Outline in detail our views on the proposed Foundation.

THE GENERAL ROLE AND RELEVANCE OF THE BEHAVIORAL AND SOCIAL SCIENCES IN THE DOD

The Department of Defense, as all of you know, has many responsibilities. We select and train military personnel, develop military hardware compatible with effective human use, contribute to national policy planning, train and advise foreign nationals, and contribute to civic action programs in foreign countries.

To do this, we use contributions from fields such as psychology, economics, anthropology, sociology, and the politico-military sciences. Psychology, for ex-

ample, improves our ability to select and train personnel and to assess the human factors in developing military systems. Economics helps to evaluate the cost and benefit of alternative weapon systems and alternative courses of action related to our national objectives. Econmics, sociology, anthropology, and politico-military sciences contribute to military policy planning and strategic studies. Sociology and anthropology improve our ability to understand military group performance, particularly where we are asked to assist other countries.

This, in quite simplified form, is why the Department of Defense supports research in the behavioral and social sciences. I will have detailed comments on each of these areas later. As you can see, our needs may require either basic or applied research. But in all cases the research is oriented to the Department of Defense mission.

Let's now take a somewhat broader look at this DOD mission for a moment. An important lesson which we are learning in Vietnam is that hardware—no matter how ingenious in design or effective in use—does not provide the entire solution to the problems of national security. Secretary McNamara in Montreal last May pointed out that: "There is still among us an almost ineradicable tendency to think of our *security* problem as being exclusively a *military* problem—and to think of the military problem as being exclusively a *weapons-system* or hardware problem." We know that our military mission to be most effective requires understanding of the political, social, and economic setting in which we fulfill our responsibilities. We know, too, that our systems developments are critically dependent upon our understanding of the ways in which men can use equipment.

Thus, from two rather different perspectives, the DOD has a requirement for behavioral and social science research. From the standpoint of our many jobs involving people, we must continue to improve our effectiveness and lower our costs—in training, in operating equipment, in the utilization of men, and in planning. From the standpoint of adequately understanding the fabric of national and international security, we need to examine the relationships between our military capability and other elements of national policy.

In question number three, Mr. Chairman, you asked for an evaluation of our general experience concerning the relevance of social science research to the Department's mission. On balance, we believe there can be no question about the relevance of this research area to the DOD mission.

As a basic management tool, the Department of Defense uses, as you know, a "planning-programming-budgetting system" which includes, in effect, continuing relevance review. This continuous process supports the DOD mid-range and long-range planning. Within this system, at least twice a year, we explicitly evaluate each project. We ask the hard, simple questions: What is the problem? Why do we need this work? Could we solve the problem another way? What impact will the results make? How long will the work take? Has this study been carried out competently so far? How much will it cost? This is our general approach to *all* our research programs, in all fields.

Another research and development management technique involves the Defense Science Board (DSB). This group periodically conducts detailed analyses of certain DOD research and development areas. The DSB is now engaged in such a detailed review of DOD's behavioral and social sciences research. This review is now assessing the short and long-term relevance of each project and will comment on the clarity and adequacy of the descriptions of each project in formal documents and reports. Through this DSB Task Force, we hope to achieve even a clearer focus in behavioral and social science research, and improved documentation so that any interested party can clearly grasp what we are doing and why we are doing it.

We cannot claim a perfect system. Yet we are trying to take account of deficiencies and to orient all research in behavioral and social sciences to meet requirements clearly necessary to our mission.

DOD INVOLVEMENT IN BEHAVIORAL AND SOCIAL SCIENCE RESEARCH

The Department of Defense is conducting and supporting research in five broad areas of behavioral and social sciences. These five areas are:

Human Performance.
Manpower Selection and Training.
Human Factors Engineering.
Cultural/Social Factors.
Policy Planning.

In response to your fourth question, Mr. Chairman, Table I shows the magnitude of the Department of Defense effort in this area supported with research and development funds during the past five years. I have also shown our proposed Fiscal Year 1968 program.

Within the definition of this bill, the DOD support of these areas amounted to $34 million in Fiscal year 1966. This means that DOD support amounted to about ten percent (10%) of all Federally sponsored research in this area. The Federal Government is supporting basic and applied behavioral and social science research at a level of about $380,000,000 in Fiscal Year 1967. This overall Federal activity has grown rapidly in the last few years because of the expanded efforts of other agencies such as the HEW, OEO and the National Science Foundation.

TABLE I.—*Department of Defense, R.D.T. & E. funding in behavioral and social science and related policy planning and manpower studies and analysis*

[In millions]

	Fiscal year 1963	Fiscal year 1964	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967	Fiscal year 1968
Army	7.7	9.3	11.2	8.9	10.6	10.7
Navy	5.5	6.7	7.5	8.6	10.0	10.1
Air Force	7.2	7.7	8.2	8.5	8.6	7.8
ARPA	1.6	2.0	3.4	5.2	7.1	7.1
OSD (ISA)		1.6	1.9	2.1	2.1	2.2
OSD (Systems Analysis)				0.7	1.3	1.5
OSD (Manpower)					1.5	1.5
Total	22.0	27.3	32.2	34.0	41.2	40.9

You also asked about our future plans. The support of behavioral and social sciences by the Department of Defense probably will continue to increase slightly in the future. The advanced development program in education and training, for example, which was initiated this year to take advantage of technological advances such as programmed and computer-aided instruction, is planned for accelerated support.

Table II shows the distribution of funds in terms of the five broad functional areas. I will review each of the areas later.

Table III shows the distribution of research funds by functional areas in relation to the type of organization performing the research. During FY 1966 about twenty-four (24) percent of the $34.0 million effort in behavioral and social sciences was performed by in-house laboratories. Thus, about seventy-six (76) percent was performed through contracts and grants.

According to a recent analysis by the Defense Documentation Center—which may be incomplete because our data bank is being developed—the following numbers of various organizations participate in our program:

17—In-House Research Laoratories.
26—Non-Profit Research Organizations.
64—Profit Making Organizations.
91—Universities and Colleges.

TABLE II.—*Department of defense funding by research area, fiscal year 1966*

[In millions]

Human performance	Manpower selection and training	Human factors engineering	Cultural/social factors	Policy planning studies	Total
5.9	8.8	5.0	6.7	7.6	34.0

TABLE III.—*Department of Defense, distribution of RDT&E funds by functional area in behavioral and social science research and related policy planning studies and analysis, fiscal year 1966*

[In millions]

	Human performance	Manpower selection and training	Human factors engineering	Cultural/social factors	Policy planning studies	Total
In-house research laboratories	1.9	3.6	2.5	----------	----------	8.0
University	3.1	3.8	0.9	5.1	0.2	13.1
Nonprofit	0.5	0.2	0.2	0.3	6.8	8.0
Profit	0.4	1.2	1.4	1.3	0.6	4.9
Total	5.9	8.8	5.0	6.7	7.6	34.0

In question number two, Mr. Chairman, you also specifically asked what portions of our research are unclassified and classified.

The criteria governing classification of research in this area are identical to those applied to the results of work in the physical, engineering, and biomedical sciences. All of the basic and much of the applied behavioral and social science research conducted by the Department of Defense is unclassified. This unclassified research spans essentially all fields of behavioral and social science important to defense.

We estimate that roughly 20 percent of the program is classified. The classification results from the normal consideration of political and military factors which affect national security. In general, it is the cultural/social factors and policy planning study areas which produce most of the classified work in this research category.

USES OF BEHAVIORAL AND SOCIAL SCIENCE RESEARCH

To respond to your first question—how we have used social science research in the past—I would like to discuss each of the five basic areas and provide illustrations of relevant research outputs. The five areas again are:

Human Performance.
Manpower Selection and Training.
Human Factors Engineering.
Cultural/Social Factors.
Policy Planning Studies.

Research programs in *Human Performance* are involved with measuring individual human capabilities and limitations—physiological and psychological—related to performance in military operations.

Modern military operations have placed very severe demands on the individual. These demands arise in part because advanced technology has led to systems which require man to operate under severe environmental stresses, sometimes beyond tolerance limits. These stresses include high noise levels, extreme vibrations, and isolation.

Research in this area is developing solutions to specific military problems such as—

(*a*) in psychophysiology—Problems of visual perception in high speed, low level flying, and in the communications between personnel in underwater and high noise environments;

(*b*) in psychological stress—the special problems of prolonged isolation and extended military operations; and

(*c*) in basic psychological traits—the sensory problems in vigilence and monitoring, and the human capabilities for information processing and decision making.

I would like to give you an example of our past work in this area.

A systematic application of behavioral technology was included as part of the Navy's Sea Lab Program to study man's capability to live and work effectively at great depths in an open sea environment. Through a variety of tests, measurements and experiments, baseline data, not available before on human performance and human behavior, has been collected and analyzed. The results

have demonstrated that man can do an extensive amount of useful and productive scientific and operational tasks even while living in hostile sea environments for extended periods of time. The results are applicable to military operations and to the industrial exploitation of the sea. Specific military operations to which these results are applicable are: (1) to locate, identify and describe the conditions of distressed submarines, (2) to effect rapid and efficient submarine rescue and escape, (3) to carry out underwater salvage and construction, and (4) to inspect, maintain and repair underwater replacement.

The second broad area, research in *Manpower Selection and Training*, concerns techniques to improve the selection, classification, training, and utilization of military personnel. Most enlisted personnel entering military service are unskilled. They must be properly matched with needed skills. They must be trained rapidly and effectively, at minimum costs and time, for combat roles. A major problem is reliably predicting performance at the time of selection.

In addition to performance prediction, we are supporting work in areas such as:

(*a*) Evaluating and improving organizational effectiveness and the composition and interrelationship of teams and crews.

(*b*) Optimal utilization of advanced training techniques such as programed instruction, computer aided instruction, and educational television—especially to reduce training time and cost, while retaining or increasing the performance levels of graduates.

(*c*) Improved personnel data storage and retrieval facilities in the military service to permit maintenance of up-to-date personnel skills inventories.

Research work in the past has developed training methods which: (a) reduced training time for electronic maintenance technicians by 60% with increases in proficiency of from 50% to 200%; (b) developed a 22-week radar repair course which proved to be more effective than the regular 37-week course; (c) developed the standard 32-hour course for aerial observers which proved equal to an earlier course of 117 hours; (d) reduced washout rates in flight training from about 30% to 10%.

These are only a few examples. They have resulted in significant savings of time and money. If we equate training time saved with dollars, the reduction of 37 week radar repair course to 22 weeks resulted in savings of $900,000 per year.

Human Factors Engineering is an interdisciplinary area involving engineers, behavioral scientists, computer specialists, and biological scientists. Traditionally, man designed machines without adequate references to the human beings who would operate and maintain them. We tended to rely on man's apparently limitless capacity to adapt. As engineering technology advanced, the complexities of equipment began to exceed the capabilities of the operator.

The "human engineer" must use engineering language to describe the human component in a man/machine system. He is now used in system development to (a) help determine the role that man should play in the system; (b) assist in designing the equipment; and (c) define the tasks which man will perform.

We are now becoming more sensitive to the possibility that an inadequate analysis of the manpower requirements for a major system may be very costly. As you know, the DOD is now giving special attention to the "total cost of effective ownership and use for the planned life cycle", which includes development, production, support, and maintenance cost. Hardware design has generally been influenced by such physical factors as the peripheral vision of pilots in the design of cockpits. But we are now emphasizing studies of the "man-in-the-system", that is, the quantity, quality, and cost of people to operate, maintain, and support the hardware. The new emphasis upon life cycle cost places a premium upon determining the best combination of human and machine capabilities.

I would like to give you a couple of examples of the outputs of this area of research.

(*a*) In excess of $3.0 million was saved through early design modifications of the fire control pack of the PERSHING Missile System; operator requirements were also reduced by 50%.

(*b*) Loading time of the SERGEANT missile was reduced by 25% and the number of men required for the operation of each missile was reduced from 11 to 6 through human factors engineering changes in handling procedures.

I now turn to our research on *Cultural and Social Factors.*

Worldwide U.S. commitments place military units in continuous contact with indigenous leaders and civilian populations. To do our job well, we need a thorough understanding of the motivations, beliefs, and patterns of behavior which characterize these countries.

A systematic proven theory of cultural change is not available. We know very little about the processes of social change, about why groups behave the way they do. In this area, there is a lack of systematic field research; there is inadequate theory about the cultural change processes: and there has been too often a failure to recognize the advantages of inter-disciplinary reseacrh on behavioral and social problems.

Even though these "information gaps" exist, the U.S. government obviously must continue a very large array of international activities. For example, Defense personnel participate in political representations and negotiations, serve as trainers and advisers, contribute to economic and social development programs, and participate in counterinsurgency operations at various levels in support of national policy.

I would like to give a few examples of this overseas involvement.

(*a*) In FY 1967, the U.S. has Military Assistance Programs (MAP) in 39 countries.

(*b*) In FY 1967, MAP supports civic action programs (these are conducted by local military forces) in 27 countries. In the past five years, U.S. assisted civil action programs in these foreign countries have constructed or repaired over 10,000 miles of road, built over 1,000 schools, and provided medical and dental care to more than 4 million people, not counting South Vietnam.

(*c*) In FY 1967, MAP is supporting the training of 16,800 foreign nationals.

All of the above activities are important. It may not be clear that these efforts directly require research to be carried out. But to do these jobs well, and to do them better, a thorough understanding of the cultural and social factors in each country is required. First, because when we train foreign nationals, we must be sensitive to the environments to which they will return. Second, because our training influences the capability of foreign military officers, who in turn influence interactions between governments. And third, because the effectiveness of DOD personnel serving abroad is related to their individual understanding of the cultural environments to which they are assigned.

I want to try to be clear on a distinction that applies to our work in foreign area research both in cultural/social and policy studies. As in our other areas there are studies which are relevant to our responsibilities, and studies which are uniquely related to our operational needs. Some of the work which we support would not be required *if* the information were available or were being developed outside the DOD. This category is relevant, but not necessarily unique, to DOD needs. I am not able to give you a precise estimate of the fraction of our foreign-area related effort which is relevant but not uniquely related to our mission. I believe it is a small amount. However, the DSB study to which I referred earlier will give us this answer. If other Federal agencies were able to take on some of the other work we would be pleased and particularly if other agencies were prepared to expand this needed activity.

As examples of the work in this area, I would like to mention two efforts which have made, and are still making, direct contributions:

(*a*) Casebooks on fifty-seven 20th Century insurgencies have provided a basis for analysis of insurgency, and have assisted in the:

(1) Development of orientation and training materials for advisor-counterpart activities.

(2) Analysis of cultural factors inherent in insurgent and unconventional warfare.

(3) Study of the role and techniques of indigenous military forces in developing nations.

(4) Research on the cultural factors which underlie success in civic action programs.

(*b*) The Cultural Information Analysis Center (CINFAC) provides a continuing "quick reaction" service to all elements of the Defense Establishment and other government agencies in the social science aspects of low intensity conflict and operations in the developing nations. Many of the requests for data from this Center come from General Westmoreland's staff, as well as other government agencies (State, HUD, NASA, OEP, Commerce, Interior), universities and research organizations.

Policy Planning Studies concern strategic planning, with particular emphasis on the political, economic, and military trends throughout the world. The purpose of the program is to help insure that defense planning anticipates and is prepared to respond to the changing patterns of political and power alignments.

The emphasis of the studies is on analyses of national and international developments that will affect future defense planning, policies, forces, and weapon systems. Along with our investment in the research, technology, and engineering of new weapon systems, there must be a coordinate effort, in the social sciences, to learn more about the political and military context of our long-range planning.

Most of the studies in this area are classified; so I am unable to discuss examples in detail. However, to give you a better idea of the character of these studies, they generally involve the following kinds of studies:

(*a*) Examination of alternative possible U.S. security programs for Europe and the Pacific.

(*b*) Evaluation of possible courses of U.S. policy toward the proliferation of nuclear weapons.

(*c*) Assessment of the value of alliances in insuring the national security of the U.S.

DOD ANALYSIS OF THE PROPOSED NATIONAL FOUNDATION FOR THE SOCIAL SCIENCES

This section is directed to questions five and six in your letter of January 12, 1967, to Secretary McNamara and provides an analysis of the DOD views on S. 3896, 89th Congress.

As we understand it, the bill would establish a National Foundation for the Social Sciences to encourage and support research in the social sciences independent of any mission-oriented department or agency of the Federal Government. The programs presumably would be complementary to those already existing in operating agencies, rather than a substitute for ongoing mission-related activities.

Based on my previous remarks, you know that the Department of Defense believes that a strong social science research base is an increasingly important national resource. This base, along with biomedical, physical and engineering science research, is a vital, national capability. Development of this resource is in the national interest to serve public agencies, private institutions, and individual citizens. The funds required to support the future development and application of social science knowledge has exceeded, and probably will continue to exceed, the capabilities of private sponsors. Therefore, the Department firmly supports the proposition that there will be a need for increasing federal support of the social sciences.

Regarding your question on the probable impact of S. 3896 on the Department of Defense, we have two comments. First, we do not believe that the establishment of an NSSF would affect the types and amount of social and behavioral science research conducted by this Department, with the possible exception of some basic research including foreign area work.

Second, the establishment of a competitive source of federal funding for social science research might make it more difficult in the short term for DOD to attract the desired investigators. However, this would be acceptable if we could see important, long term gains. Long term funding at a higher level, for example, would create a greater scientific personnel base. A stronger base clearly would be in the Department's interest.

The Department of Defense has a strong interest in supporting research which involves interdisciplinary work between the social and the natural scientists. Many of our research needs can only be solved by an interdisciplinary approach. It not clear what the impact of the establishment of the proposed National Foundation for the Social Sciences would have on stimulating interdisciplinary research. We must ensure that any actions we take must promote rather than inhibit the growth of needed interdisciplinary relationships.

In response to your request for a commentary on S. 3896, the Department of Defense supports the general objectives of the draft bill. However, we have reservations about various aspects of the NSSF as proposed.

The Department's more detailed commentary on the proposed bill is as follows:

(1) S. 3896 provides at Section 7(b) that mission-oriented departments or agencies may request the foundation to carry out programs on a reimbursable basis. This provision counteracts the basic need to assure total independence of the proposed foundation from mission-oriented departments and agencies. It is the opinion of the Department of Defense that a federal foundation with responsibility for the social sicence research should: (a) fund or conduct only unclassified research, and (b) fund or conduct primarily basic (or fundamental)

research. It should not undertake any program at the request of a policy, intelligence, or operating agency, or accept funds from such agencies. We do not propose a prohibition on true collaborative programs, which might well be in the interest of the Government.

Under these conditions a foundation would be less vulnerable to the suspicion that the research it supports is controlled by the Government's policy, intelligence, or operating agencies. Nonetheless, Department of Defense believes that the potential for suspicion by foreign governments cannot be eliminated whenever foreign area research is, in fact, supported by federal funds and institutions.

(2) A stronger statement is needed that the thrust of the program of such a foundation would be toward fundamental or basic research. It is believed that primarily through the development of theory and basic experimental programs that the social sciences will advance. The Department of Defense and other mission agencies are already heavily involved in applied research required for their direct needs.

(3) S. 3896 has no specific provisions for assigning responsibility for undergraduate and graduate education programs in social sciences. Such programs will be essential to provide the base required to achieve the purposes of this Bill.

(4) In relation to Section 6(2) and 8, we believe it should be made clear that a major objective of any such foundation would be to develop the United States capabilities rather than to promote the development of foreign social scientists, although collaborative investigations with foreign scientists should be permitted and encouraged.

(5) There is a need to clarify Section 9(a) which states that "no individual formerly in the employment of the federal government shall be eligible to receive any grant or other assistance pursuant to this Act . . . in the two-year period following the termination of such employment." This Section would have a detrimental effect on recruiting Government personnel and appears to go beyond current policies. For example, this Department employs social scientists who might join a university faculty to participate in social science research potentially supportable by the proposed foundation. This broad policy appears to be unduly restrictive since it may be in the best interest of the Government to encourage scarce scientific talent to participate in governmental social science activities without prejudicing their future.

In light of these comments, the Department of Defense is opposed to the enactment of S. 3896, 89th Congress in its present form.

Senator HARRIS. Thank you for coming and thank you for this testimony.

I think at this stage, we can reach certain conclusions from these 3 days of hearings on Senate Bill S. 836—first, that increased Federal support for the social and behavioral sciences is definitely needed. That has been the uncontroverted testimony before this subcommittee; furthermore, that increased Federal support for the social and behavioral sciences would be welcomed by, and helpful to, the mission-oriented agencies.

Secondly, I think we can conclude that a change in form of organization for such increased support of the social and behavioral sciences is necessary and required and that the Congress should consider all possible alternatives for such change in forms of organization before action is taken.

I think we can conclude, third, that the principal alternatives for such change and increased support are two; that is, the congressional authorization and direction for the National Science Foundation to increase its activities in the social and behavioral sciences; and two, the establishment of a National Social Science Foundation as provided in S. 836. There are possible advantages and disadvantages in each alternative which have been pointed out in these hearings.

I think it is obvious that the mission-oriented agencies will continue their support at least at present levels in the social and behavioral science field, whichever of these alternatives Congress decides upon, and that interdisciplinary effort in the fuzzy areas between the natural and social sciences will certainly not be reduced. I think the fear that that would be true has been shown to be untrue, or has been unproved up to now in these hearings, if not, indeed, unsupported in fact.

I think our fourth conclusion would be that further examination into this matter by this subcommittee is clearly justified and required. So I will announce that we will be holding additional hearings and seminars on S. 836 and the related general subject matter of increased Federal support needed for the social and behavioral sciences and the change in organization that that may require.

Until the announcement of specific times and dates for those hearings and seminars, the subcommittee will be recessed at the call of the chair.

(Whereupon, at 12:30 p.m., the above subcommittee hearing was recessed, subject to the call of the chair.)

APPENDIX

DEPARTMENT OF AGRICULTURE,
OFFICE OF THE SECRETARY,
Washington, February 28, 1967.

Honorable FRED R. HARRIS,
Chairman, Subcommittee on Government Research, Committee on Government Operations, U.S. Senate, Washington, D.C.

DEAR SENATOR HARRIS: I am enclosing a statement on behalf of the Department with respect to S. 3896, "A Bill to Create a National Foundation for the Social Sciences," and on social science research in the Department. I am fully in accord with the objectives of encouraging expanded programs of research in the social sciences by whatever method the Congress may adopt to achieve this goal. This entire area has suffered from inadequate support in the past, yet it is vital to the future of our nation.

Sincerely yours,

JOHN A. SCHNITTKER, *Under Secretary.*

SOCIAL SCIENCE RESEARCH IN THE UNITED STATES DEPARTMENT OF AGRICULTURE AND THE PROPOSAL FOR A NATIONAL FOUNDATION FOR THE SOCIAL SCIENCES

(1) Social science research has been of basic importance to American farmers and to the development of farm programs since the establishment of the Department of Agriculture in 1862. The Department was charged then with collecting statistics and making the information derived from them available to farmers.

Since World War I, economic maladjustments in farming have overshadowed drought, flood, pests, diseases, and other physical and biological problems. In peacetime, the basic problem, until very recently, has been one of surplus production and inadequate farm income. In war-time, the basic problem has been one of short supplies and inflationary prices. The social science research being carried on by the Department just after World War I, was brought together in the Bureau of Agricultural Economics, established in 1922. Much of the early work was in developing better plans for farm management and efficient production.

The passage in 1925 of an amendment to the Hatch Act, commonly known as the Purnell Act, placed strong emphasis on economic and sociological investigations and in so doing added a new dimension to Federal support for research at State Agricultural Experiment Stations. This Act provided a stimulus for greater research in the social sciences, both in USDA and among the State Stations.

After 1933, the administrators of new agricultural programs relied heavily upon economists and other social scientists for both data and analyses. The studies of farm income and work on the concept of parity, for example, were basic to program implementation. The broad view of problems, which is typical of the social scientist, led directly to the establishment of many important programs, including the school milk plan, the food stamp plan, and programs for supervised credit.

During the past few years, economists and other social scientists have been in the forefront in planning and evaluating our overseas technical assistance programs in agriculture. They have developed the World Food Budget as a key tool in the War on Hunger. At the same time, our social scientists both in USDA and at cooperating State Experiment Stations have been called upon to analyze the extent of and to propose means of eliminating rural poverty in the United States.

(2) All social science research in the Department of Agriculture is unclassified. Most is in-house research. It is centered primarily in three agencies of the Department: the Statistical Reporting Service, the Economic Research Service and the Farmer Cooperative Service. Social science research in forest economics is administered by the Forest Service.

The Statistical Reporting Service (SRS) is the main fact-gathering agency of the Department of Agriculture. This organization for collecting and disseminating current primary data on agriculture has been in operation for more than 100 years. The size of the fact finding job has grown with agriculture, which is still the Nation's largest industry. The Nation's agri-business also employs about 10 million workers in industries which process and distribute farm products and about six million in industries that process and distribute goods and services bought by farmers. SRS issues some 700 reports each year giving estimates of current production, stocks, and prices received by farmers for nearly 200 farm products. It is organized into three divisions and the Crop Reporting Board. The Crop Reporting Board is the official issuing agency for all reports and estimates which might affect economic conditions. The three divisions are: Agricultural Estimates, Standards and Research, and Field Operations.

The Economic Research Service is the principle social science research agency of the Department of Agriculture. It's function, broadly speaking, is to provide reasoned answers based on economic and social analysis to questions on the effects of many alternative courses of action, both by government and individuals in the areas of agriculture and food and fibers. The Economic Research Service is organized into seven divisions and the Outlook and Situation Board. The divisions are: Marketing Economics, Foreign Regional Analysis, Farm Production Analysis, Foreign Development and Trade, Economic Development, Economic and Statistical Analysis, and Natural Resource Economics. The capabilities of the historian, political scientist and sociologist as well as those of the economist and the economic statistician are required in preparing this kind of analysis.

The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. Agricultural coopertion is deeply rooted in our American economy, as well as in the economies of several Western European countries where a developed agriculture is a strong and vital part of the economy. As a means of helping farmers help themselves to modernize agriculture and meet the world's food needs, the successful cooperative occupies a key position in foreign as well as domestic agriculture. The Farmer Cooperative Service is organized in three program divisions: Marketing, Purchasing, and Management Services.

The Forest Service is responsible for husbanding the Nation's forest resources to provide for present and future needs for timber, water, recreation and grazing. Because of rapid economic growth and past exploitation, there is increasing need for careful management of the 770 million acres of forest lands in the United States. Careful economic analysis of the management and renewal of this resource, costs of production, supply, demand and price are the responsibility of the Forest Economics and Marketing Research Division of the Forest Service.

The Agricultural Research Service conducts research on consumer and food economics with particular reference to food consumption studies, diet appraisals and family economics investigations.

The Cooperative State research Service administers Federal grants to the State Agricultural Experiment Stations under provisions of the amended Hatch Act and supplementary legislation. Some 15 percent of these appropriations are expended for the support of social science research conducted in agencies of the Department.

The Department of Agriculture feels that the social science research required for policy and program formulation must be done in-house. At the same time, the Department uses the long term, basic social science research being carried out in th State Universities and Experiment Stations, and in other research institutions.

(3) All of the social science research supported by the Department is oriented toward its mission. It is vital to the success of the Department in fulfilling its assignments.

(4) In response to a recommendation by the Senate Committee on Appropriations on April 9, 1965, the Department of Agriculture, in cooperation with the State experiment stations and Land Grant Colleges, made a study of current agricultural research and future research needs. According to this report, social sicence research carried out by agencies of the Department of Agriculture totaled $16.1 million in fiscal year 1965. Social science research accounted

for 10 percent of USDA expenditures for research, but for only a tiny fraction of total expenditures. This report did not include statistics as a social science. Federal grant expenditures at the State Experiment Stations for social science research in fiscal year 1965 were about $9 million.

The sums appropriated for social science research, including statistics, have increased steadily during the past several years. In 1963, appropriations for the Economic Research Service, Statistical Research Service, and Farmer Cooperative Service together amounted to $20 million, and in 1967, $37 million. In each year, the total was a very small part of the total appropriation for the Department. We expect that the appropriations for social science research will continue to increase because of its recognized usefulness to the farmers and to the people of our Nation.

Social science research in USDA, fiscal year 1965 [1]

	Dollars	Man-years
Anthropology	190,000	10
Economics	11,980,000	489
Education and communication	168,000	7
History	65,000	2
Law	70,000	5
Political science	18,000	1
Psychology	305,000	5
Sociology	488,000	14
Total	13,284,000	533

[1] Does not include USDA grants, contracts and cooperative agreements with State agricultural experiment stations or USDA grants and contracts in foreign countries financed with foreign currencies obtained under provisions of Public Law 480, or financed by AID. From "A National Program of Research for Agriculture" report of study sponsored jointly by Association of State Universities and Land Grant Colleges, October 1966.

(5) A National Social Science Foundation might effectively marshall increased public and private support for research in the social sciences. It might serve in a coordinating and liaison capacity between institutions conducting research and between disciplines in the social sciences. It might direct attention to needed research and promote the implementation of such research. A National Social Science Foundation could not effectively absorb or displace the social science research presently carried out by the Department of Agriculture. However, such recognition of social science research might add to its stature and emphasis in the Department and in the Land-Grant Colleges.

A Foundation might also be charged with the responsibility for improving the quality of training and education in the social sciences. We must encourage more of our able young people interested in the social sciences to continue with graduate training. It is our impression that there is no existing legislation adequate to meet this particular need.

(6) The Department of Agriculture fully endorses the idea of encouraging more research—particularly more high quality research—in the social sciences. Progress in solving our social problems has been disappointingly slow. While more research would not necessarily provide all the answers, we believe that it would be of major help. This is true of problems in agriculture and in every aspect of our national life.

Our own experience in the Department of Agriculture suggests some of the advantages of a separate organization for the social sciences. From 1953 until 1961, such work was placed under the direction of agencies which were oriented toward research in the physical sciences and in marketing. In 1961, social science research again became independent, under the leadership of the Director of Agricultural Economics. This restored the opportunity to carry out research on the economic and social aspects of overall agricultural problems. Such an approach has been rewarding.

It has been pointed out, however, that the National Science Foundation has a division devoted to the social sciences. It has made some grants, has awarded some graduate fellowships, and has compiled a directory of social science information services. While most of its grants and other expenditures are for advancing research in the mathmatical, physical, medical, biological and engineering

sciences, a larger appropriation of funds earmarked for the social sciences, a law directing that a greater percentage of funds be expended in this area, or a law emphasizing the responsibility of the National Science Foundation for the social sciences might serve the need.

Regardless of the method adopted for encouraging additional research in the social sciences, we believe that some such program should be adopted for the future welfare of our Nation.

Foreign Area Research Coordination Group (FAR) Second Annual Report September 1966

HISTORICAL SUMMARY

The Conception of FAR

In December 1963 a group of government research administrators representing nine agencies met in the Department of State to explore better coordination of foreign affairs research. The participants agreed that:

1. There was an urgent need to establish an interdepartmental mechanism to coordinate contract research on foreign affairs;

2. The State Department's Office of External Research, on the basis of its long experience as an interagency information center and coordinator of contract research, should take the lead to set up a mechanism.

By mid-February 1964 the External Research Staff had prepared and discussed with agencies draft terms of reference. Invitations to the first meeting in April 1964 of what came to be called the Foreign Area Research Coordination Group (FAR) were extended to some 18 government research offices.

The unanimous approval of the FAR concept by the participating agencies, and their continuing support over the past two and a half years, are evidence that the Group is addressing itself to a government-wide need for better planning and coordination of contract research in the social sciences related to international affairs.

In April, 1964 the Group approved terms of reference that include this language:

"The central objective of the Group is the systematic coordination of government-sponsored foreign area and crosscultural research in the social sciences. The Group will attempt to insure cooperative effort in research activities, to prevent duplication between agencies, to encourage maximum use of research results, and to promote efficient use of private research capabilities."

The First Meeting—China

Substantive problems from the very beginning were made the Group's first order of business. At its initial meeting, held at the Department of State on April 9, 1964, and attended by research administrators from 20 agencies, the Group did make certain institutional decisions, but focused its primary attention on the research problems and the priority needs for research on Communist China. State's Office of Extenal Research, serving as Secretariat for FAR, prepared for this meeting a special inventory of government-sponsored research on China which for the first time under one cover described the 381 studies which represent the bulk of contract research on Mainland China since 1949. Analysis of this material revealed a reduction—of which government research managers were scarcely aware—in the number of Government research contracts on China during recent years. Allen S. Whiting, Director of the Office of Research for the Far East in State reviewed the field of China studies and identified gaps and other problems that needed discussion.

The Second Meeting—Latin America

The second meeting of FAR was held in the Pentagon on June 17, 1964. Government-sponsored research on Latin America was the focal point for discussion and action. The Secretariat again provided a special research inventory—this time a guide to 529 government-sponsored studies on Latin America undertaken during the eight years from 1957 to 1964. The increased tempo of government research on Latin America, noted in the inventory analysis, was emphasized by speakers representing Army, AID, USIA, Agriculture, and HEW, who outlined the current research programs of their agencies.

The Third Meeting—Africa

The potential benefits in FAR's mission were underlined by Robert Amory of the Bureau of the Budget at the third meeting held December 2, 1964, in the Executive Office Building. He stressed the importance of coordinating government-wide research and noted that FAR was "moving into new ground and toward potentially very great achievements" in its effort to draw together the government research community so that it might act in concert.

Africa was the focus of the meeting. Robert Baum, Acting Director of State's Office of Research and Analysis for Africa, discussed major trends and gaps in government-sponsored research on Africa. He used as a starting point a special inventory of 386 African studies sponsored by government during the past five years, compiled by the Secretariat. To balance the picture of U.S. research on Africa, the Office of External Research contracted with Professor Robert Lystad of Johns Hopkins' School of Advanced International Studies to present a paper on the state of private research on Africa. Both addresses were subsequently issued as FAR documents (and published by the African Studies Association). The participants also considered the need for more effective coordination of research on counter-insurgency and problems of overseas internal defense.

The fourth meeting—Organizing for better coordination

On June 10, 1965, the Group considered a broad range of subjects with an organizational emphasis, from the problems of obtaining orderly financial support for FAR activities to the question of revisions in the FAR terms of reference. The discussion covered the variety of Congressional views on the concept of interagency research coordination and addressed itself to special problems of research management that affect the Department of Defense and ACDA. The major decision of the meeting was to endorse an action procedure that would better coordinate contract research planning, with the proviso that it be reviewed at the next meeting.

Other business included a review of current proposals for cooperative arrangements between Government and academic researchers, the creation of a Behavioral Sciences Subcommittee, and discussion of problems of access confronting U.S.-scholars in less developed areas.

The fifth FAR meeting—A new direction

In the summer and fall of 1965 the Camelot affair (well-documented elsewhere) drew public attention to the Government's problems in management of external research, especially where overseas field work is involved. It led to the Presidential Directive to Secretary Rusk dated August 2, 1965, with regard to the risks of harm to U.S. foreign areas.

Although the FAR did not meet formally during this period of reappraisal and adjustment, its communications network provided a useful base for interagency consultation, and its Secretariat and subcommittees continued to be active. Meanwhile, the FAR itself was reexamined and given an expanded mission.

Appearing before the Fascell Subcommittee[1] on August 4, 1965, Secretary Rusk announced that the Department of State had moved to strengthen the FAR by appointing the Deputy Director of the Bureau of Intelligence and Research to chair the Group in the future, and that he would ask the other agencies to raise their levels of participation accordingly. The Secretary added that the Department would "do everything in its power to make the Foreign Area Research Coordination Group a more effective body." His testimony also included a review of the origin and development of the FAR to that date.

In its final report, the Fascell Subcommittee praised the Group's contribution to improved communication and applauded the efforts to strengthen the FAR and to draw up voluntary agreements on research priorities. The Subcommittee also found that the coordination of foreign policy research was being "greatly improved," although it specifically recommended additional mechanisms to provide "an effective direction-giving system" and to ensure full collaboration between the Government and the private scholar.

The new Chairman, George C. Denney, Jr. called the first meeting of the reconstituted Group on April 21, 1966. He urged that renewed energy be put

[1] House of Representatives, Committee on Foreign Affairs, Subcommittee on International Organizations and Movements.

into the effort to support the effective conduct of foreign affairs through research resources and he called attention to the Congressional interest in the progress of the group.

The highlight of the meeting was the consideration of a draft Interagency Agreement on Research Planning, which was consistent with the action at the preceding meeting but reflected additional interagency discussions. The object was to design a voluntary and flexible procedure for cooperation which would at the same time be reasonably orderly and efficient. Since the meeting, all of the member agencies have adhered to the Agreement (attached) which went into effect on June 10, 1966. The Chairman suggested and members agreed that consultative relationships be developed between the FAR, its subcommittees, and private academic organizations.

The work of the subcommittees

The first three general meetings, in discussing regional research, quickly concluded that the best progress could be made if the Group established specialized subcommittees, which would offer a meeting center for regional experts of the agencies. Later the FAR applied the same device to the handling of crosscutting functional subjects. At the present time the following FAR Subcommittees are at work: *China, Latin America, Behavioral Sciences, Documentation, Africa* and *International Education.*

All these Subcommittees follow the same broad guidelines:

1. To prepare recommendations concerning long and short term government research needs;
2. To serve as focal points for contacts with the private research community;
3. To serve in general as catalysts for the stimulation of research both in and out of government;
4. To present to the FAR Group specific recommendations regarding any and all aspects of research on their substantive areas.

The subcommittees are small working groups of professionals who have common research interests and who focus on the substantive research problems of particular areas and fields of interest. At subcommittee meetings the individual agency representatives are expected to set aside insofar as possible the particular concerns of their agencies in order better to serve the broad interests of the government research community. The subcommittees refer actions and recommendations to the parent FAR group for approval. The FAR chairman appoints subcommittee chairmen after consultation with FAR members.

Special mention may be made of the subcommittees' approach to the problem of opening up contacts with the academic community.

The FAR Africa Subcommittee has already begun to establish contact with the Joint Committee on African Studies of the Social Secience Research Council and the American Council of Learned Societies, and with the African Liaison Committee of the African Studies Association. Envisaged are informal relationships between the government group and their academic counterparts enabling the Government to know of academic expertise while giving the academic world better understanding of the government's needs and problems in the research field. The Behavioral Sciences subcommittee recently cooperated with the National Academy of Sciences in sponsoring a joint government-academic symposium at Airlie House to discuss foreign area research experience and needs; and it hopes to develop special relationship with the NAS Advisory Committee on Government Programs in the Behavioral Sciences.

The three geographic subcommittees have dealt primarily with problems related to exchange amongst the agencies of information about research, and with identification of the government's priority needs for research. In addition, the China Subcommittee continues to concern itself with broadening government-sponsored research on China, and the Latin American Subcommittee with assessing the after-effects of Project Camelot on current research programs.

Members of the Behavioral Sciences Subcommittee have been particularly active in meeting with their counterparts in the academic community, and with representatives of professional societies, to work toward improving government research programs in behavioral science. The Subcommittee is currently assessing the status of behavioral science research projects in the various FAR agencies. One of its major concerns has been the conduct and utilization of government-sponsored research.

The International Education Subcommittee, in line with its strong emphasis on liaison with the academic community, is planning for late 1966 a joint government-academic conference designed to improve research programs focused on problems of youth and leadership in the less developed countries.

The Documentation Subcommittee continues to set itself the primary aim of improving interagency exchange of information on research. Its recommendations for revamping FAR's periodic inventories of government-sponsored research and for improving access to research documentation, have been welcomed by the entire FAR community. It is currently studying use of a common form for automating research reporting.

The FAR Secrtariat and Documentation Center

The Secretariat of the FAR is located in the Office of External Research and consists of two full-time staff members. In addition, other External Research officers supply executive staff service for the various FAR subcommittees. Beginning in Fiscal-1968 the State Department will seek to provide financial support for all Office of External Research activities in support of the FAR. Heretofore these services have been financed through a pooling of funds by several member agencies.

Similarly the FAR Documentation Center has been supported by agency funds contributed to the Office of External Research. During the past year the Secretariat has made numerous proposals for strengthening the Center. Concentrating on unpublished research, this growing collection of papers related to foreign areas, foreign policy, and international security affairs, has serviced the entire foreign affairs community of the government. New acquisitions are running at the rate of over 210 papers and reports per month, comprising chiefly the products of government research contracts and products of private research which are unlikely to be published or will not be published for some time. The Center fills aproximately 400 loan requests per month from government officers.

The Center has taken the first steps towards automation. The acquisition of a Flexowriter has saved time in preparation of the monthly accessions lists entitled *Papers Available* and has made possible specialized listings on topics like "Vietnam and U.S. China Policy", "Western Europe and the Atlantic Alliance and "The Social Sciences in Foreign Policy: Government Support of Foreign Affairs Research."

Also the Center continues to track down new sources of material, and has lately begun to collect and list reports written at the National War College and the State Department's Senior Seminar.

As a service directed primarily toward the private research community the Center published a directory describing some 75 government offices which make available to scholars information and services related to foreign affairs research. Comprehensive data contained in the directory would have been impossible to obtain without the full cooperation of FAR members. Over 4,000 copies have been distributed to research institutions and scholars, and demands continue so heavy that the directory has been placed on sale at the Government Printing Office.

APPENDIX: THE WORK OF THE SUBCOMMITTEES

Africa.—Three meetings of the Subcommittee have been held in the past year, chaired by Robert Baum of the State Department. The year's main activity was the preparation of a list of subjects on which African research could substantially contribute to the government's own needs. Following discussion at the meetings in June and October 1965, and a number of revisions suggested by members, the list was adopted at the May 1966 meeting. The list, which cites some 42 topics, has been circulated within government for its own use but with the understanding that it could be shown on a limited basis to researchers who specifically request an opportunity to see it.

Another preoccupation of the Subcommittee was the African Research Committee (ARC), a group which, sponsored originally by the Army Research Office, held a series of conferences and reports on the status and future requirements for research on Africa. The ARC question was discussed by the Subcommittee, both with respect to problems of government-academic relations and in terms of the broader question of securing adequate and continuing support for private research on Africa. The ARC has recently decided to disband.

At the June and October meetings, some discussion was devoted to the problem of research documentation on Africa. The June meeting heard a report by Conrad Reining of the Library of Congress on this problem, and the point of departure for the discussion in October was a proposal to AID by a private agency for establishment of an Africa current documentation center. While no concrete steps have been taken to date the problem has been recognized by the Subcommittee as a real and continuing one on which coordination with the Documentation Subcommittee will be essential. A possible answer to the problem may be found in the new African publication procurement centers being set up in Africa by the Library of Congress.

Several new developments dominated the May 1966 meeting: a proposal by a university African studies program for a project that could entail support by several government agencies (The project is now under study.); a heightened interest in the Subcommittee's increasing its coordination of research plans on the role of the military in Africa; and a proposed liaison between the Subcommittee and existing academic groups such as the SSRC–ACLS Joint Committee on African Studies, the African Liaison Committee of the African Studies Association, and the Africa Science Board of the NAS. On military studies, the Chairman reviewed steps already taken to coordinate various research efforts, and representatives of various agencies outlined their own programs and concerns.

Behavioral Sciences.—In May 1965 seventeen behavioral scientists in government and private research met with FAR representatives and recommended the establishment of the FAR Behavioral Sciences Subcommittee. Luigi Petrullo, Office of Naval Research, was selected as Chairman. In this way, FAR and a long-established informal discussion group joined forces to draw mutual profit from the Group's experience and the FAR support mechanisms.

The Subcommittee's main concern has been the need for refinement of behavioral science terminology and the establishment of criteria for the conduct of government-sponsored research abroad. Discussion at a number of meetings brought to light the necessity for greater understanding and cooperation between the academic and government communities engaged in behavorial science research on foreign areas. Dr. Kalman Silvert of Dartmouth College and the American Universities Field Staff addressed the Subcommittee on academic ethics and research abroad.

As the problems raised by Silvert and others clearly needed further consideration, the Subcommittee decided that a symposium might profitably assess the current status of behavioral science research. As one of the preliminary steps Congressman Donald Fraser, a member of the Fascell Subcommittee, spoke on government needs and priorities in behavioral science research.

At the recommendation of the Subcommittee, the State Department contracted with the National Academy of Sciences to organize and conduct a joint FAR/National Academy symposium on foreign area research which was held at Airlie House in October 1966.

China.—The subcommittee, chaired during this period by Allen Whiting of the State Department, focused its efforts on three inter-related activities: distribution of the Mainland China press translations to the academic community; government research priorities on Communist China: and FAR member agencies' research plans.

The press translations published by the U.S. Consulate General in Hong Kong are the most important single source of information on developments within Communist China. Produced primarily for government use, averaging some 15000 papers this year, some 100 copies have for the past 15 years been sent free of charge to university research centers and individual scholars by State's Office of External Research. When budget cuts threatened suspension of this service, the Subcommittee took the lead in finding means of maintaining the availability of the translations to the academic community.

In May, 1965 the Subcommittee issued a "Statement of the Position of the FAR China Subcommittee on External Research Priorities." This was a list of research topics reflecting the long-term priority research needs of all FAR agencies engaged in research on China. The statement was sent to the Joint Committee on Contemporary China of the American Council of Learned Societies and the Social Science Research Council and has been made available to other academic groups.

In order to further cooperative research planning and lessen duplication, member agencies sent in to the Subcommittees their lists of planned contract research on China for Fiscal years 1965 and 1966. The group is temporarily without a chairman, since Allen Whiting was assigned to Hong Kong in June 1966.

Documentation.—The Documentation Subcommittee has been charged by the FAR with the general problem of improving both documentation and exchange of information. The Subcommittee's initial task was to advise on revising the inventories of *Government-Sponsored Research on Foreign Areas* published by the Office of External Research. Subcommittee chairman has been Erwin Lachman of AID.

In an effort to provide better documentation services to the Government's foreign affairs research community, member agencies agreed in June 1966 to broaden the Subcommittee's terms of reference to include—

(1) advising FAR on questions of documentation;

(2) exploring ways and means of making more effective the exchange of information on government-sponsored and private foreign area research;

(3) investigating the possibility of developing an information system which would meet current FAR needs, particularly in respect to (a) research planning (b) coordination of documentation with the State Department's Foreign Affairs Research Council and (c) avoiding unnecessary duplication of research reporting by FAR members; and

(4) presenting to the FAR recommendations to implement the use of automatic data-processing techniques.

One of the Subcommittee's major areas of concern has been to develop a suitable method of implementing the recently-concluded "Interagency Agreement on Research Planning Procedures". If member agencies are to voluntarily coordinate their research plans, some means must be found to facilitate exchange of planning information. As a first step, the Director of the Office of External Research requested the Executive Secretary of the FAR to distribute to all FAR members a list of contract research projects planned by the Department of State during 1967. The Subcommittee has asked the FAR Secretariat to devise a standard form that could be used by all FAR agencies to report their research plans and projects. The Secretariat is now working on adaptation of a Defense Department form already in use. In July the subcommittee was briefed on use of the form by members of the Army Research Office. Members of the Secretariat have also discussed the form with the staff of the Committee on Scientific and Technical Information (COSATI) of the Federal Council for Science and Technology and other government agencies.

International Education.—Absorbing the Interagency Committee on International Education of the Bureau of Education and Cultural Affairs (CU), an FAR Subcommittee on International Education was formed in March 1965. At that time the members agreed to consider "international education" in a broad sense, including all aspects of youth and leadership development. This mandate has allowed representatives of such disparate agencies as the Air Force and the Welfare Administration to discover overlapping areas of concern and mutual needs for research. The chairman is Forrest Clements of AID.

Early meetings were devoted to individual presentations by members describing in some detail the scope of their current research programs, and anticipated directions in which these programs will move. Later meetings featured informal talks by guest speakers from governmental and private organizations whose activities are of interest to the subcommittee. Guests included Richard Humphrey, Director of the American Council on Education's Commission on International Education; Shelton Granger, Deputy Assistant Secretary for International Affairs of the Department of Health, Education, and Welfare; and Walter Johnson of the African-American Institute and Fred Burke of the African Program at Syracuse University.

More recently, the Subcommittee has planned a conference on Youth and Leadership in the Developing Nations. Scheduled to take place at the Gramercy Inn, Washington, D.C. in November, the conference is designed to allow government officials and university scholars to continue the discourse begun at a conference on a similar theme held at Howard University in May 1964. At this meeting academic scholars presented papers dealing with youth in the developing nations. The report from the Conference, "Changing Roles of Youth in Developing Nations", received wide distribution both within and outside of the

government. The followup conference will permit government administrators of youth programs to present papers dealing with programs aimed at youth with academic participants serving as discussants. It is hoped that the results of the Conference will prove a substantive base for subcommittee action during the coming year.

Latin America.—The Subcommittee, chaired until recently by John Evans of USIA, has focused on the problem of improving interagency communication and exchange of information on Latin American research programs. Some attention has also been given to more substantive research problems.

As a first step, the Chairman suggested that the Subcommittee should find out what research on Latin America was being done in the government. A proposal for periodic agency reporting was discussed but was superseded by the work of the Documentation Subcommittee in revising and expanding the inventory of government-sponsored research.

Discussions within the Subcommittee have led to the identification of an important subject of common interest to member agencies, namely research on the role of the military in Latin America. The research programs and plans of six agencies were discussed at meetings of representatives of interested agencies and at a special meeting on FAR in March 1965. Consultations by the FAR Subcommittee have eliminated unnecessary duplication, and they have contributed to a more effective and comprehensive research effort.

Recently the Subcommittee assessed the impact of the Camelot episode on Latin American research programs to determine whether there has been a resulting tendency towards sponsoring less controversial research. Suggestions were made that FAR might play an important role in stimulating debate of some of the issues raised, including the ethical and practical problems of foreign area research.

Foreign Area Research Coordination Group (FAR)

AGENCY PARTICIPATION

This is an alphabetical list of participants in the Foreign Area Research Coordination Group (FAR).

Agency for International Development.
Arms Control and Disarmament Agency.
Central Intelligence Agency.
Department of Agriculture.
Department of Defense:
- Advanced Research Projects Agency.
- Director of Defense Research and Engineering.
- International Security Affairs.
- Defense Intelligence Agency.
- Department of the Air Force.
- Department of the Army.
- Department of the Navy.

Department of Health, Education, and Welfare (HEW).
Department of Labor.
Department of State.
National Academy of Sciences.
National Aeronautics and Space Administration.
National Science Foundation.
U.S. Information Agency.
Executive Office of the President.
The Smithsonian Institution.
The National Endowment for the Humanities (as of November 1966).

FAR SECRETARIAT

(Office of External Research, Bureau of Intelligence and Research.)
Department of State:
- Albert P. Toner, Executive Secretary.
- John W. Sewell.

INTERAGENCY AGREEMENT ON RESEARCH PLANNING PROCEDURES

"It is important to insure that the activities of the various agencies supporting behavioral and social science research are thoroughly coordinated. Few of the projects carried out under Government grants and contracts interest only a single office or even a single department. The overlapping interests of the many departments and agencies doing research related to foreign affairs consequently pose serious problems of coordination. * * *"

From the Secretary of State's testimony before the House Foreign Affairs Subcommittee on International Organizations and Movements, August 4, 1965.

The Foreign Area Research Coordination Group (FAR) believes that one of its purposes is well indicated in the statement above of the need for coordination of government-sponsored research on foreign areas. The FAR believes that the desired coordination can be facilitated through the agreement among its members to exchange information about their plans for contract research, to discuss these proposals when necessary to improve their relevance to more than one agency, and to take full account of these considerations in the final shaping of their programs. In this way, the freedom of each agency to act can be reconciled with the objective of efficiency and maximum utility in the total government program for contract research.

As a practical means of realizing these purposes, the FAR member agencies engaged in foreign area contract research have individually notified the secretariat of their adherence to the attached statement of responsibilities and procedures.

A. Responsirbilities of an agency sponsoring contract research

1. To inform interested agencies sufficiently early and in such detail about research programs and projects that other agencies can meaningfully consider their interests and make suggestions.

2. To indicate whether or not the agency would welcome joint sponsorship or cost sharing.

3. To keep the FAR Secretariat informed of proposals which have reached a stage suitable for coordination, and of bilateral coordination with interested agencies.

4. To be receptive to proposals from interested agencies for discussions of research plans bilaterally or in the FAR or one of its subcommittees.

5. To welcome comments and suggestions from interested agencies and to take them into account in perfecting plans, projects, and contracts.

B. *Responsibilities of the FAR Secretariat*

1. To assist agencies in determing the scope and manner of appropriate coordination, and to handle, to the extent that agencies desire it, the paper work of exchanging information about research plans and suggestions from interested agencies.

2. To assist FAR subcommittee chairmen in the use of subcommittee processes to facilitate coordination.

3. To continue to publish research lists, bibliographies, and other supporting materials.

C. *Responsibilities of interested Agencies*

1. To cooperate through FAR subcommittee processes in an attempt to develop consensus on research priorities, desirable research methods, and appropriate division of labor.

2. To consider programs and projects of sponsoring agencies and promptly submit comments or suggestions.

D. *Notes on implementation*

1. FAR comprises 22 agencies. The number of agencies really interested in any given proposed project will be much smaller. It is up to the sponsor, the FAR Secretariat and other agencies to work out procedures which will minimize paper work and speed coordination. Some agencies will want details of projects, others will be content with summaries to ascertain the degree of their interest.

2. Research planning procedures vary from agency to agency, but in general the appropriate time for interagency coordination on any research project comes well before its terms of reference have been wholly agreed upon by sponsor and prospective contractor or grantee. For most effective coordination, research de-

signs at this stage of interagency consultation should be tentative and flexible enough to allow for desirable changes which may be suggested in the course discussions.

3. Research proposals to be considered for coordination include those wholly generated within the sponsoring agency, those designed wholly outside government and submitted to an agency for sponsorship, and those formulated by prospective contractors following guidelines set forth by an agency. The favorable moment for coordination will vary from category to category.

4. The sponsoring agency will determine at what stage interagency coordination is likely to be most fruitful. At this earliest feasible stage, the sponsoring agency will notify the FAR Secretariat. Notification and dissemination of information may take various forms mutually agreed upon by the sponsoring agency and the FAR Secretariat.

5. The FAR Secretariat will forward information to: (a) members of FAR who have requested notification on certain topics, or (b) members judged most likely to be concerned with the research project.

6. Members may comment on a proposal directly to the sponsoring agency, or through the Secretariat, but will in any case give the Secretariat notice of action taken, so that in any subsequent discussions the Secretariat will be aware of that agency's interest.

7. FAR Subcommittees will serve regularly for discussion both of proposed research projects and of major in-progress contract programs of interest to their members.

(Approved by FAR membership at the first meeting of the Group, April 9, 1964.)

Terms of Reference

Foreign Area Research Coordination Group

1. Identification

The committee will be entitled the Foreign Area Research Coordination Group. Its symbol will be FAR.

2. Purpose

The central objective of the Group is the systematic coordination of government-sponsored foreign area and cross-cultural research in the social sciences. The Group will attempt to insure cooperative effort in research activities, to prevent duplication between agencies, to encourage maximum use of research results, and to promote efficient use of private research capabilities. Group activity will focus on research in anthropology, economics, history, politics, psychology, and sociology related to United States foreign policy—political, military, economic and cultural.

3. Nature and Role

Group meetings will normally center on substantive or methodological research areas, serving as a forum for government-wide review and assessment of research programs. It is anticipated that discussion may deal with the direction, trends, needs, gaps, and relationship to in-house and private studies of government research programs falling within the range of Group interests. Participants will include both the designated agency representatives and guests, as appropriate, from the government and private research communities.

Decisions of the Group will be in the form of recommendations to the agencies represented and, on occasion, to the general research community, both governmental and private. Such decisions will not be binding, but will be recommendations for action by the appropriate agencies. The Group will not exercise a veto power nor otherwise attempt to direct the research program of any agency.

4. Organization

(*a*) Chairman. The Chairman shall be responsible for carrying out activities agreed upon by the Group, including the conduct of meetings as presiding officer, the programming of Group business and meetings, and direction of the Secretariat through the Executive Secretary. With the concurrence of the Group, the Department of State will name the Chairman.

(*b*) Executive Secretary. Under the direction of the Chairman, the Executive Secretary will assure the performance by the Secretariat of all necessary func-

tions in support of Group activities. In the absence of the Chairman, the Executive Secretary will assume his duties. The Executive Secretary will be the Director of the External Research Staff of the Department of State or his designee.

5. Membership

Membership will include all organizations whose participation in Group proceedings is essential to the achievement of effective coordination of government external research on foreign areas in the social sciences. Initial membership will be:

Department of State:
- Bureau of Intelligence and Research.
- Bureau of Educational and Cultural Affairs.

Department of Defense:
- Advanced Research Projects Agency.
- Internal Security Affairs.
- Defense Research and Engineering.
- Department of the Army.
- Department of the Navy.
- Department of the Air Force.

Agency for International Development.
Central Intelligence Agency.
U.S. Arms Control and Disarmament Agency.
U.S. Information Agency.
National Science Foundation.
Department of Agriculture.
Office of Science and Technology.
Department of Health, Education, and Welfare.

6. Secretariat

The External Research Staff of the Department of State will serve as Secretariat for the Group. It will perform the functions described below as well as any others deemed necessary by the Chairman or requested by the Group, within the limits of Staff capabilities. In carrying out these functions the External Research Staff will continue to perform in its role as an inter-departmental service funded by several agencies for the purpose of promoting efficient use of government and private research on foreign areas and cross-cultural studies.

The Secretariat, as directed by the Executive Secretary, will:

(*a*) Plan and organize Group meetings. It will issue an agenda, extend invitations, arrange necessary facilities, provide staff for the meeting, record the minutes, and provide other administrative services as needed.

(*b*) Distribute documents or working papers resulting from Group meetings and/or prepared by the member agencies regarding government research programs.

(*c*) Prepare and disseminate analytic presentations of government external research programs, past, present and planned—based on information submitted by member agencies.

(*d*) Follow up Group decisions with the assistance of interested agency representatives.

NOTICES

Department of State, Agency for International Development

Ambassador at Athens, Greece, et al., redelegation of authority

Pursuant to the authority delegated to me by AID Delegation of Authority No. 54 dated October 21, 1964, I hereby redelegate to the Ambassador at Athens, Greece, the AID Mission Director at Cairo, United Arab Republic, the AID Mission Director at Ankara, Turkey, and the Ambassador at Beirut, Lebanon, and to any person acting in the capacity of any of them, the authority to administer and implement grant agreements by and between the United States of America and Roberts College, Turkey; American Hospital of Istanbul, Turkey; Pierce College, Greece; American Farm School, Greece; Athens College, Greece; American University of Cairo, United Arab Republic; American University and International College, Beirut, Lebannon; entered into pursuant to sections 214(a) or (b) of the Foreign Assistance Act of 1961, as amended; such authority may

be exercised only with respect to those grant agreements with institutions in countries for which the said Ambassadors and Mission Directors have operational responsibility. Authority redelegated herein is subject to the following limitations:

(1) The authority to amend the grant agreements is not redelegated herein;

(2) The authority to grant approvals under the grant agreements, including approvals of contracts and contractors for construction, architectural or engineering services, shall be limited to approvals in which less than twenty-five thousand U.S. dollars ($25,000), or the equivalent thereof in other currencies, is involved;

(3) The authorities redelegated herein shall be exercised in accordance with agency policies, regulations and procedures;

(4) The authorities redelegated herein shall not be redelegated.

This redelegation of authority shall be effective immediately.

Dated: September 27, 1965.

A. H. MOSEMAN,
Assistant Administrator, Office of Technical Cooperation and Research.

Concurrence:

WILLIAM B. MACOMBER, Jr.,
Assistant Administrator, Bureau for Near East and South Asia.

[F.R. Doc. 66–327; Filed, Jan. 11, 1966; 8:47 a.m.]

ASSISTANT ADMINISTRATOR, TECHNICAL COOPERATION AND RESEARCH, REDELEGATION OF AUTHORITY

NOVEMBER 23, 1965.

Pursuant to the authority delegated to me by AID Delegation of Authority No. 54, dated October 21, 1964, I hereby amend the Redelegation of Authority to administer and implement grant agreements entered into pursuant to section 214(a) or (b) of the Foreign Assistance Act of 1961, as amended, signed by me September 24, 1965, as follows:

Strike on p. 2, No. 4 "The authority redelegated herein shall not be redelegated" and substitute therefor:

No. 4. The authorities redelegated herein may be redelegated by the individuals listed above, as appropriate, but not successively redelegated.

DONALD B. MACPHAIL,
Acting Assistant Administrator, Technical Cooperation and Research.

Concurrence:

WALTER G. FARR, JR.

[F.R. Doc. 66–326; Filed, Jan. 11, 1966; 8:47 a.m.]

[Public Notice 242]

GOVERNMENT-SPONSORED FOREIGN AFFAIRS RESEARCH, PROCEDURES FOR REVIEW

The following procedures apply to all Federal agencies supporting foreign area research. The procedures are issued in accordance with the President's letter of August 2, 1965, to the Secretary of State (Vol. 1, Weekly Comp. Pres. Docs. 43) and pursuant to the assignment of authority made by the Secretary of State to the Director, Bureau of Intelligence and Research in his letter of August 30, 1965 to heads of departments and agencies.

A. *Definition of government-sponsored foreign affairs research.* Government-sponsored foreign affairs research is defined as research programs and studies in the social and behavioral sciences dealing with international relations, or with foreign areas and peoples, whether conducted in the United States or abroad, which are supported by contracts or grants awarded by agencies of the United States. In-house research is not included.

B. *Responsibilities for review and clearance*—1. *Department of State responsibility for clearance of foreign affairs research.* The Department of State

will review Government-sponsored foreign affairs research in accordance with the President's letter of August 2, 1965 to the Secretary of State:

"I am determined that no Government sponsorships of foreign area research should be undertaken which in the judgment of the Secretary of State would adversely affect U.S. foreign relations. Therefore I am asking you to establish effective procedures which will enable you to assure the propriety of Government-sponsored social science research in the area of foreign policy.

Under the procedures set forth herein, developed pursuant to the President's letter, the Department of State will be responsible for formulating policies for review and clearance of foreign affairs research and for clearing research projects submitted to it for that purpose by other Government agencies.

2. *Other agencies' responsibilities.* a. To facilitate review of foreign affairs research, certain responsibilities set forth in these procedures remain with the agencies sponsoring foreign affairs research.

b. Each agency will designate a clearance point to be responsible for reviewing projects, providing information, making determinations as to clearance required, and submitting projects to the State Department for review in conformance with these procedures.

C. *Categories of research*—1. *Projects required to be submitted to and cleared by the State Department.* This category consists of projects involving foreign travel or contacts with foreign nationals sponsored by the military and foreign affairs agencies.[1] Certain exceptions are specified in subsections 2 and 3 below. Projects will be considered cleared unless other State action is communicated to the agency within 15 days after the required information is received by the Department for review.

2. *Projects requiring review and determination by the clearance point within an agency as to whether such projects need be submitted to the State Department for clearance.* The clearance point within an agency is responsible for submitting to the State Department for clearance projects falling under this subsection when it determines that the conduct of such research might have potentially adverse effects on U.S. foreign relations. Projects thus submitted will be considered cleared unless other State action is communicated to the agency within 15 days after the required information is received by the Department for review.

The clearance point will transmit information items 1, 2, 3, 6, and 7 to the State Department on projects it determines do not require State Department clearance. The State Department reserves the right to request further information on projects not submitted for clearance under this subsection and to require submission for clearance of any such projects.

The types of projects under this subsection are as follows:

a. Projects, either classified or unclassified, involving foreign travel or contact with foreign nationals, which are sponsored or subsidized by domestic agencies. With respect to projects not submitted for clearance, the agencies will insure that the Ambassador is informed through State channels sufficiently in advance of the arrival of contractor personnel in a country so that he may transmit timely advice to Washington.

b. Projects, either classified or unclassified, involving foreign travel, but with contact limited to U.S. official personnel. In each case, notification to the Ambassador will be required as under C.2a.

c. Projects, either classified or unclassified, to be conducted initially in the United States with no foreign national contacts, but which might later involve foreign travel and contact with foreign nationals. Where travel is subsequently decided upon, the project travel plans will be submitted to the State Department for approval as required under C.1.

d. Unclassified projects not involving foreign travel or contact with foreign nationals.

e. Any other type project which, upon agreement between the Department of State and another agency, is made subject to the review procedures in this subsection.

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[1] The Department of Defense, the U.S. Information Agency, the Arms Control and Disarmament Agency, the Agency for International Development, and the Central Intelligence Agency.

3. *Projects not requiring State Department clearance.* Projects under this category need not be submitted to the State Department for clearance but information items 1, 2, 3, 6, and 7 shall be furnished to the Department at the time specified in section I or quarterly at the discretion of an agency. The Department retains the option to request additional information or to review a project.

a. Classified projects to be conducted entirely in the United States with no contacts with foreign nationals. The Department of State shall be consulted before such a project is declassified and such projects shall thereupon be treated in accordance with category 2.

b. Routine renewals and amendments to projects already cleared by the State Department or, in the case of field research, which include provision for continuing coordination with the embassy.

c. Modification or extension of existing in-country research projects or programs carried out by agreement with the host country and with the approval of the U.S. Ambassador. Such modifications and extensions are considered cleared upon certification of this approval to the Department of State by the U.S. Ambassador.

4. *Research in progress before August 2, 1965 other than that covered in C.3.c. above.* In order to expedite review of this category, the Department of State may provide each agency with a listing of all foreign affairs research projects and programs currently known to the Department of State. The Department of State may indicate what additional information, if any, it seeks about these projects and may also request information on all on-going projects and programs which may not appear on the listing. Any such project or program will be considered cleared unless the Department of State informs the agency that it needs to be reviewed.

D. *Continuous programs of research*—1. *Programs of contract organizations.* Apart from the handling of research projects as specified in C above, government agencies shall keep the Department of State informed about continuous foreign affairs research programs carried out by research organizations receiving their principal support from such agencies. After consulting with an agency, the Department of State may ask to clear specific projects in accordance with section C of these procedures.

2. *Plans and projects not requiring clearance.* In cases where research organizations receiving their principal support from agencies are not required to clear their research plans or projects with sponsoring agencies, the Department of State shall not require clearance of research programs. However, the sponsoring agency, the Department of State, and each of the major research organizations concerned shall determine jointly the best means for keeping the Department of State informed of all foreign affairs research carried out by such organizations and individuals.

3. *Contract programs of agency field offices.* Similarly, the Department shall be kept informed about contract research programs carried out through field offices of agencies. Individual projects carried out under such programs shall be reviewed in accordance with section C of these procedures.

E. *Grants to academic institutions.* Grants to academic institutions for general purposes (such as construction of facilities, expansion of faculty or unspecified research in an academic discipline) related to foreign affairs research will not be subject to Department of State clearance. Agencies shall keep the Department informed about such general purpose grants.

F. *Other research activities*—1. *Conferences and consortia.* The definition of foreign affairs research includes Government-sponsored conferences with foreign nationals dealing with questions of foreign affairs research and studies of or support for academic research consortia.

2. *Informal contacts with foreign nationals.* Informal communications of contractors with foreign nationals in the United States are not subject to Department of State clearance. However, agencies may consult with the Department of State about the propriety of such contacts, particularly when they are carried out by members of research organizations clearly identified as institutions created specifically to serve the agency.

G. *Travel by contractors and grantees*—1. *Information on travel.* It would be helpful if agencies inform the Department of State about travel and work abroad

of their contractors and grantees even when the Department has not required clearance for such activities.

2. *Travel for private purposes.* The Department of State will not concern itself with the foreign travel of contractors and grantees that is not directly related to Government-sponsored foreign affairs research. This includes attendance at professional meetings abroad and fieldwork abroad on privately supported research.

H. *Reports.* The clearance point within an agency is responsible for insuring that the contents of unclassified research projects will not adversely affect U.S. foreign relations. Should the clearance point have any question concerning the propriety of an unclassified research report, it should consult with the State Department concerning disposition and possible classification of such reports. The release of Department of Defense classified studies to foreign governments will continue to be the responsibility of the Military Information Control Committee.

I. *Information required from sponsoring agency.* As a general rule, information will be submitted to the State Department by agencies before a grant is awarded or a contract is concluded. Agencies are responsible for consulting with the Department of State on the propriety of unclassified invitations for bids or publicity of any kind. Arrangements for communication of information on project proposals may vary depending on the agency and sometimes on particular projects. Such details will be worked out with agencies by the Chairman of the Research Council (see below).

Sponsoring agencies shall submit the following information:

1. Title of project and brief description.
2. Sponsoring agency or agencies (including information of any funding by other agencies).
3. Contractor, estimated cost, and principal researchers.
4. Detailed information on project: Questions to be investigated, methods, schedules, types of findings anticipated, countries or regions covered.
5. If the project involves fieldwork abroad, names of researchers and indication of time of proposed fieldwork and extent and types of contact with foreign nationals.
6. Extent to which discussion with a U.S. diplomatic mission has already been held in the formulation of the project proposal.
7. Classification of project and proposed disposition of reports.

J. *Review and clearance actions*—1. *Department of State review process.* a. Types of clearance actions: (1) cleared; (2) cleared with conditions; (3) not cleared (with statement of reasons).

b. Once cleared, there will normally be no further State Department action, although other agencies remain under obligation to inform the Department of changes in the character of the research. and, in the event of substantial changes or significant developments in the research, the Department retains the option to review the project.

2. *Criteria for State Department actions.* a. Research projects will be reviewed only for the purpose of avoiding adverse effects upon U.S. foreign relations.

b. The risks of possible adverse effects on foreign relations will be weighed against the value to the U.S. Government of the research project. Because the sponsoring agency is the best judge of the value of a proposal to its own mission, its views will be taken fully into account.

c. If the Department of State questions the propriety of any research project, it will consult with the sponsoring agency before making a final determination.

d. Clearance of research projects by the State Department is not necessarily an endorsement of the need, method, or value of the project.

3. *Policy formulation and clearance in the Department of State.* a. The Secretary of State has created a Foreign Affairs Research Council (RC), with the Director of Intelligence and Research as Chairman, to assist him in formulating policies for State Department review and clearance of project proposals. The Council is composed of the Chairman of the Policy Planning Council, the Deputy Assistant Secretary for Politico-Military Affairs, and, as appropriate, representatives of the regional and functional bureaus. The RC is assisted by the Bureau of Intelligence and Research and its Office of External Research.

b. The Foreign Affairs Research Council may from time-to-time issue guidelines to agencies to aid them in fulfilling the requirements of these procedures.

c. The Chairman of the Foreign Affairs Research Council will act for the Department on clearances, doing so on the basis of information from and discussion with sponsoring agencies and on the basis of policies and procedures approved by the Council and, when appropriate, after discussion of individual projects by the Council. The Chairman will keep the Secretary of State informed of major questions before the Council and of important actions by the Council.

4. *Appeals.* An agency may request a review of a decision, in which case the Foreign Affairs Research Council will consider the agency's appeal and will act promptly on it. Should the decision still be unsatisfactory to an agency, an agency head may consult with the Secretary of State.

K. *Requirements of the Federal Reports Act of 1942 and Budget Circular A–40.* The requirements set forth in these procedures do not relieve agencies from their responsibilities under the Federal Reports Act of 1942 and Bureau of the Budget Circular No. A–40.

L. *Review of procedures.* No later than 6 months after the effective date of these procedures, November 18, 1965, the Department of State in consultation with the interested agencies will review these procedures and make any necessary changes to improve them. Subsequent reviews of these procedures will take place as deemed necessary by the Department of State.

Dated: December 21, 1965.

THOMAS L. HUGHES,
Director, Bureau of Intelligence and Research.

[F.R. Doc. 66–355; Filed, Jan. 11, 1966; 8:50 a.m.]

DEPARTMENT OF THE TREASURY, OFFICE OF THE SECRETARY

[Dept. Circ. 570, 1965 Rev. Supp. No. 15]

AMERICAN CENTRAL INSURANCE CO. AND CENTRAL SURETY AND INSURANCE CORP., TERMINATION OF AUTHORITY TO QUALIFY AS SURETIES ON FEDERAL BONDS

JANUARY 6, 1966.

Notice is hereby given that the Certificates of Authority issued by the Secretary of the Treasury to American Central Insurance Co., St. Louis, Mo., and Central Surety and Insurance Corp., Kansas City, Mo. (Missouri corporation, with administrative offices in New York, N.Y.), under the provisions of the Act of Congress approved July 30, 1947 (6 U.S.C. 6–13) to qualify as sole sureties on recognizances, stipulations, bonds, and undertakings permitted or required by the laws of the United States are hereby terminated effective as of midnight December 31, 1965.

Commercial Union Insurance Co. of New York, a New York corporation, holds a Certificate of Authority from the Secretary of the Treasury as an acceptable surety on bonds in favor of the United States. Pursuant to Agreement of Merger effective midnight December 31, 1965, approved by the Superintendent of Insurance of the State of New York December 1, 1965, and the Superintendent of the Division of Insurance of the State of Missouri October 21, 1965, the American Central Insurance Co., St. Louis, Mo., and the Central Surety and Insurance Corp., Kansas City, Mo., are merged into Commercial Union Insurance Co. of New York, New York, N.Y., the surviving company. Commercial Union Insurance Co. of New York acquires all of the assets and assumes all of the liabilities of the American Central Insurance Co. and Central Surety and Insurance Corp. A copy of the Agreement of Merger is on file in the Treasury Department, Bureau of Accounts, Surety Bonds Branch, Washington, D.C., 20226.

No action need be taken by bond-approving officers, by reason of the merger, with respect to any bonds or other obligations in favor of the United States, or in which the United States has an interest, direct or indirect, issued on or before December 31, 1965 by American Central Insurance Co., or Central Surety and Insurance Corp., pursuant to Certificates of Authority issued the companies by the Secretary of the Treasury.

As a result of the merger and underwriting limitation of $12,187,000 has been established for Commercial Union Insurance Co. of New York, New York, N.Y., by the Treasury Department effective January 1, 1966, under the Company's Certificate of Authority to act as an acceptable surety on Federal bonds.

[SEAL]

JOHN K. CARLOCK,
Fiscal Assistant Secretary.

[F.R. Doc. 66-342; Filed, Jan. 11, 1966; 8:48 a.m.]

DEPARTMENT OF DEFENSE, DEFENSE SUPPLY AGENCY

ORGANIZATION

I. General description of organization

A. *Establishment of the Defense Supply Agency.* The Defense Supply Agency was established as an agency of the Department of Defense by DoD Directive 5105.22, dated November 6, 1961, under the direction, authority, and control of the Secretary of Defense. The Director is responsible directly to the Secretary of Defense.

B. *Purpose and scope.* 1. The mission of the Defense Supply Agency is to:

a. Provide effective, and economical support to the Military Departments, other DOD Components, Federal Civil Agencies, Foreign Governments and others as authorized or assigned as follows:

(1) Materiel commodities and items of supply (hereafter referenced as "items"), which are determined, through application or approved DOD criteria, to be susceptible of integrated management by a single agency for all of the Military Services or as otherwise assigned by the Secretary of Defense.

(2) Logistic services directly associated with the supply management function and other support services as directed by the Secretary of Defense.

b. Administer the operation of DOD programs as assigned.

2. DSA operations are conducted within the United States, excluding Alaska and Hawaii, except as specifically extended by the Secretary of Defense.

C. *Responsibilities.* The Defense Supply Agency, under the direction and operational control of the Director, is responsible for performance of the following major functions:

1. Material management encompassing item management classification, requirements and supply control, procurement, quality and reliability assurance, industrial mobilization planning, storage, inventory and distribution, transportation, and maintenance and manufacture, provisioning, technical logistics data and information, value engineering, and standardization.

2. Contract administration services encompassing administration of the Department of Defense Security Program, contract administration, production, quality assurance, engineering liaison and provision of management data.

U.S. GOVERNMENT AGENCY OBLIGATIONS FOR SOCIAL AND BEHAVIORAL RESEARCH ON FOREIGN AREAS AND INTERNATIONAL AFFAIRS, FISCAL YEAR 1966

The attached table of U.S. Goverment agency obligations in fiscal year 1966 for social and behavioral science research on foreign areas and international affairs was compiled by the Executive Secretariat of the Foreign Area Research Coordination Group (FAR). The table was requested of Thomas L. Hughes, the Director of Intelligence and Research of the Department of State, by Senator Fred Harris during Mr. Hughes' testimony before Senator Harris' Subcommittee on Government Research.

Data for the table were requested from each individual agency. The definition of research to be included in the table was made as broad as possible to give an accurate picture of government spending for foreign area social science research. The reporting agency was given the responsibility of deciding which research projects fell within the definition. No research conducted within any agency is included. The table also includes information on use of excess U.S.-owned foreign currency, agency research programs and where the research proposals usually originate.

U.S. Government agency obligations for social and behavioral research on foreign areas and international affairs, fiscal year 1966

Agency	Internal breakdown	Description of program and origin of projects
Agency for International Development:		
Office of Technical Cooperation and Research.	$4,434,946.00	Sponsors research on various aspects of the developmental process. Majority of projects originated outside of the Government and the rest were initiated within the agency.
Bureau for Africa	1,476,762.00	
U.S. operations mission	21,000.00	
Total [1]	5,932,708.00 (350,000.00)	
Department of Agriculture [1]	305,592.00 (281,592.00)	Sponsors research dealing principally with efforts to expand foreign markets for agricultural products. Almost all projects originated within the Department.
Army Control and Disarmament Agency:		
Behavioral sciences	186,765.00	Concentrates on research programs dealing with all aspects of disarmament. The large majority of research projects originated within the Agency. ACDA also has the responsibility for Government-wide coordination of disarmament research.
Other social sciences including economics.	641,755.00	
Total	[2] 828,520.00	
Department of Defense:		
Army	[3] 4,818,000.00	The Department of Defense programs in social and behavioral science are designed to assist Defense personnel in performing missions imposed by U.S. policy decisions. The Defense programs include basic and applied research, a cultural information analysis center, and politico-military and strategic studies. The origins of projects range from almost all within the Government (systems analysis, Army), to almost all within the contracting organization (ARPA and Navy). ISA usually develops projects jointly with the contractors while Air Force projects may originate either within or outside the Government.
Navy	405,000.00	
Air Force	1,556,000.00	
ISA	2,000,000.00	
ARPA	1,227,000.00	
OSD/Systems Analysis	225,000.00	
Total	10,231,000.00	
U.S. Information Agency [1]	427,621.00 (49,754.00)	Research programs are used to find ways to reach and inform the people of the world, measure their opinions and attitudes and evaluate the effectiveness of USIA programs. All projects originate within the Agency.
Miscellaneous programs	522,326.00	
Grand total [1]	35,732,814.00 (3,849,141.00)	

[1] Totals include excess U.S. owned foreign currency utilized as shown in parentheses. See attached memorandum on use of excess U.S. owned foreign currency.

[2] For many of the research projects covered in this total, only a part of the content involves the social and behavioral sciences.

[3] Includes $231,000 biological and medical research contracts with some part related to social science research.

STATEMENT ON U.S.-OWNED FOREIGN CURRENCY AVAILABILITIES AND USES

At the close of calendar year 1965, the U.S. Government held foreign currencies of 77 countries totaling approximately $2.9 billion. Of this amount, about $1.5 billion is restricted by international agrement for loans and grants related to economic development within the respective countries ($1,422 million) or for specific U.S. uses ($47 million). The remaining $1.4 billion is available for general U.S. uses in 51 countries. In 31 of these countries, the amounts available are insufficient to meet normal U.S. requirements for the current fiscal year, and it will be necessary to expend dollars there during fiscal year 1967 to acquire currency to satisfy total U.S. needs. In 9 of the countries (designated near-excess for FY–1967: Brazil, Bolivia, Finland, Indonesia, Morocco, Paraguay, Sudan, Syria, and Turkey), the supplies of currency totaling $14 million are estimated to be adequate to meet normal U.S. expenditures for about one year, or slightly more. In the 11 remaining countries, 1 balances available for general U.S. uses total $1.419 billion, and are designated "excess currencies" since they exceed the normal requirements of the U.S. for the next two to three years.

To restrict the flow of U.S. dollars outside the U.S., Executive branch policy requires that obligations and expenditures in the 20 countries designated as "excess" or "near-excess" be made payable in foreign currency rather than in U.S. dollars, wherever feasible, Treasury regulations provide that dollars not be spent to acquire foreign currencies from commercial sources when currencies are available from the Treasury to meet agency expenditure requirements. There is, of course, no benefit to the balance of payments in promoting the use of foreign currencies in those countries where U.S. supplies are already inadequate to meet current requirements.

Foreign currencies earmarked by international agreement for U.S. uses may be used for U.S. agency programs only upon reimbursement to the Treasury in dollars appropriated in regular agency appropriations or in special foreign currency program appropriations. Under Bureau of the Budget directives, only excess foreign currencies may be budgeted under and purchased from the Treasury with special foreign currency program appropriated dollars. However, any available U.S.-owned foreign currencies may be purchased with dollars appropriated in regular agency appropriations, under basic authorities of individual agencies in conjunction with the authority of section 104(f) of Public Law 480 to use foreign currencies for payment of U.S. obligations abroad.

Excess and near-excess foreign currencies are basically inconvertible, and may be used only in the country of issuance. Also, they constitute a claim on the country's resources. Large holdings, if used in ways that subtract materially from the country's foreign exchange earnings, or that create domestic shortages and inflationary pressures, have the power to damage the economic and monetary systems of the country. Such an eventuality is not in the interests of the U.S. and the U.S. must therefore place self-imposed limitations on the volume and manner of use of the currencies which it holds.

Subject to the conditions stated above, U.S.-owned foreign currencies may be used for scientific research, contractual or otherwise, in the 20 excess and near-excess foreign currency countries. Further, they are required to be used in these countries in place of U.S. dollars wherever possible. However, they may not be used in other countries to finance such activity, since the currencies are inconvertible and may be used only in the country of issuance.

In all cases, U.S.-owned foreign currency is expended instead of dollars wherever feasible in order to strengthen our balance of payments position. However, it is only in the 11 excess currency countries that our baalnces of foreign currencies have accumulated at a rate faster than required to meet normal U.S. Government expenditure requirements, and it is only in the 9 near-excess currency countries that supplies of currency are equal to normal expenditure requirements for the current fiscal year. Since foreign currencies must be purchased commercially in all other countries to meet normal requirements for U.S. expenditures, the increased use of these currencies in lieu of dollars will not reduce the flow of dollars abroad nor assist with the balance of payments problem.

1. Burma, Ceylon, Congo (Leopoldville), Guinea, India, Israel, Pakistan, Poland, Tunisia, United Arab Republic (Egypt), and Yugoslavia.