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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

JUNE 27, 28; JULY 12 AND 13, 1967

PART 3

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NATIONAL FOUNDATION FOR SOCIAL SCIENCES

TUESDAY, JUNE 27, 1967

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

The subcommittee met, pursuant to recess, at 9:55 a.m., in room 3302, New Senate Office Building, Senator Fred R. Harris (chairman of the subcommittee) presiding.

Present: Senator Harris.

Also present: Dr. Steven Ebbin, staff director.

Senator HARRIS. The subcommittee will be in order.

We are continuing hearings on S. 836, "A bill to create a National Foundation for Social Sciences."

We are very pleased to have Dr. Kalman Silvert, department of government, Dartmouth College, and without objection we will place in the record at this point a biographical sketch which has been prepared concerning Dr. Silvert.

Biographical Sketch: Dr. Kalman H. Silvert

Department of Government, Dartmouth College, Hanover, New Hampshire. Ph. D. Political Science, University of Pennsylvania; Director of Studies, American Universities Field Staff; Member, American Political Science Association. Research: Latin American Comparative Politics of Modernization.

Author: "A Study in Government: Guatemala", "The Conflict Society", and others.

TESTIMONY OF DR. KALMAN H. SILVERT, DEPARTMENT OF GOVERNMENT, DARTMOUTH COLLEGE, HANOVER, N.H.

Dr. SILVERT. Thank you, Senator. It is nice to be back. I shall try to continue what I started doing at last year's session, but also try to project a bit into the more mature stance of the committee as evidenced by its presentation of a bill and the rest of it, as a tie between what was going on at least in my mind last year and where I think I am this year.

I should like to start with a statement concerning once again the relationship between social science and everything else. It is an old subject, I know, but I still think it is a decent springboard.

In your letter of invitation to testify before your subcommittee you listed five questions to which you suggested remarks should be addressed.

I should like to concern myself with two of them: "An identification of problems that have arisen concerning Federal support of social and behavioral science research," and "What Congress can do to bring

about proper relationship between social scientists and the Government, and how such a relationship should be structured."

In my comments, I shall draw on my particular experience in overseas research for examples.

Certainly social science research in general, and most particularly survey research, has suffered during the last 2 years overseas, and especially so in the developing world. Many contributing reasons can be listed: the effects of given Government-sponsored investigations, subventions of academic and quasi-academic entities by intelligence agencies, the heaviness of the flow of American researchers, disagreement among given influential groups with U.S. foreign policy, fears of "academic colonialism" and of competition and loss of prestige and jobs to foreign scholars, and so forth.

But the common feature of all these problems overseas, as it is of many of the domestic difficulties of social scientists, has to do with the matter of boundaries—their definition, their legitimacy, and their recognition.

Obviously it is not only Africans or Latin Americans who do not know whether a visiting social scientist is a social engineer, an intelligence agent, an ideologue, a disappointed gossip columnist, or a mere tourist. Really all of us, including social scientists, share these problems of self-image.

Should a social scientist not do his professional best to ameliorate social ills at any given time?

Should he not assist his government to make the most rational decisions possible at any given time?

Should he not have a commitment to the kind of society that permits him to learn and exercise his profession?

Should he not be interested in attitudes as raw data materials and enjoy the travel that broadens?

The answers do not come easily from simple commonsense. I should suggest that the matter of "boundaries," or "levels of generalization," or even of simple categories will assist us to an answer relevant to what this subcommittee is studying.

That is, we are speaking of social scientists engaging in non- or quasi-scientific roles. But the very requirement of maintaining a truly social scientific stance defines limitations in carrying out those other functions.

The editorial in the current, May 1967, issue of The American Sociologist argues that "* * * the social sciences * * * should be in accord with the main traditions of the intellectual disciplines.

"This includes a strong claim to the autonomy of the primary professional functions, which undoubtedly are research and teaching * * *"—and I would like to underscore the word "autonomy."

The editorial continues:

> The basic valuational position is that classically formulated by Max Weber as "value neutrality" . . ., which is not to be interpreted as neutrality toward all values, but lending clear primacy to the values of the intelelctual enterprise as such and refusal to let it be dominated by other values, notably those, on the one hand, of immediate practical interests; on the other hand those of a particular "world view" at religious or political levels.

And gentlemen, I do not think we can have it both ways. I don't think you can ask a political scientist as an individual, a religious and

political man, to include immediate political interests or practical ones in his research without doing damage to the autonomy of his profession.

The primary dilemma in government—social science relations then is quite clear. The former, an instrumental agency, wishes to justify support of the social sciences in terms of the accomplishment of immediate public ends.

The later, if it is the genuine scientific article, has as its first—and sometimes its only—goal the betterment of the intellectual enterprise itself. But that statement is no "art for art's sake" postulation.

It assumes that a brutally direct primary commitment to the intellectual task will serve to feed more valid materials into the mills of the public processes, and that in turn the opportunity for more rational and pragmatic public decisionmaking will reinforce the strength of those general social institutions and value systems that make it possible for academic inquiry to go on.

Those public servants who support scholarly research only for immediate utility will sometimes find it hard to justify the results. Current newspaper rumor, for example, has it that the Soviets have just fired their ranking Middle Eastern "expert."

How many social scientists have been wrong about fortified village programs, or invasions, revolutions, and depressions? All of us know numerous cases in which "predictions" have failed because they were the fruit of a "value laden" commentator, and not of a "value free" social scientist "so far as possible guided by the evaluation of cognitive objectivity as defined and directed by professional competence in substantive subject matters."

That is a typical piece of something which social scientists call jargon but look at it again—"so far as possible guided by the evaluation of cognitive objectivity * * *"—guided by a recognition of existential or empirical events as defined and directed by professional competence in given substantive subject matters.

I strongly suggest that much analysis designed for immediate policy consumption has little to do with the social sciences.

I am aware that reasoning of this kind has been presented to the subcommittee before in earlier hearings. This restatement of tasks and of boundaries was important not only when the propriety of certain specific research projects was being questioned here, but also now when specific organizational arrangements for proper Government-social scientific relations are being proposed.

We all agree that in time of relative peace, at least, Government support of the social sciences should be extended only if there will be mutual advantage; the benefit will continue to flow in the long run only if the integrity of the social science community is maintained.

This maintenance depends on Government's careful respect for the boundaries separating the two spheres of activities, and on the maintenance of a primary intellectual and scientific commitment by the social scientists themselves.

These good intentions are easier expressed than practiced. We all know adages about people who control purse strings, and those who want to loosen them. The Government might be well advised to turn to the experience of private American foundations to see how they have governed their relations with the American academic community.

It is true that there have been many complaints about the effect of foundation assistance on the choice of research subjects, faddishness, promotions, and other aspects of academic gamesmanship.

I don't know whether you have read Dwight McDonald's book on the Ford Foundation, but one of the chapter titles is "Shall We Go to Paris or Fly?" That is indicative of the kind of alternative often proposed when somebody designs a research project and gets into the gamesmanship of foundation ploying.

I am working for the Ford Foundation so I am sensitive to the question of what an academic person should decide and a foundation person should decide.

And certainly not all tension has evaporated. Perhaps the most explicit danger point concerns the choice of research subjects and the types of research areas to be supported, whether by private or public assistance.

In the absence of acute and sudden national interest, almost invariably spurred by political events, the matter of preselection should be settled by all the formal and informal channels of academic communication: these are academic committees sponsored by a foundation as in the case of the Social Science Research Council; ad hoc meetings, of which there are numerous examples; the usual workings of friendship, colleagueship, and general reputation, reinforced by the telephone; the mounting of fellowship programs to insure a continued infusion of new blood.

In foreign area studies, however, these means have worked uncertainly in the past, as is evidenced by our still serious knowledge gaps concerning such countries as Cuba and Brazil, or such problems as the causes and patterns of social change.

Perhaps the most significant measure of successful relations between academic and their ancillary supporting institutions is whether useful and significant bodies of data and analysis and speculation are at hand for use when public need demands.

That is, the creation of knowledge in anticipation of demand is the critical indicator of whether academic social scientists are guided first by intellectual considerations, or first by political and reputational and economic ones. Although this standard is a harsh one, and demands a very high level of academic commitment, it is not unreasonable to demand it of the social science community as a whole if not of all individual practitioners.

I consider this point to be perhaps one of the most crucial anybody can make. It is a good objective indicator. If academic freedom is to be measured for its social effectiveness, it is precisely in this area of production in anticipation of need. This is a simple, easy measure of whether persons are doing basic research or merely reactive research in response to other Government agency stimuli.

If this criterion is to be employed, then its acceptance has direct implications for the kind of social science research which Government and the private foundations should support.

This subcommittee has placed a great emphasis on behavioral science research. To the extent to which survey research is related to behavioral approaches, and to the extent to which the survey approach is what has been put into deepest question overseas, this interest was not misplaced and it is not misplaced.

But now that a bill is pending for the establishment of a National Foundation for the Social Sciences, I think it not remiss to caution balance and distribution in the support of social science research.

It is not that I am opposed to quantitative techniques; I am somewhat addicted to them myself.

Nor is it that I wish to enter into the endless arguments about whether "behaviorism" or "behavioralism" is the proper term, or whether anything useful has ever come from quantitative techniques, and so forth.

I take it simply as a matter of course that social scientists are interested in as high a degree of exactness and precision as possible in the definition of data, their gathering, and their analysis.

So, for the purposes of this discussion, all I wish to argue is that such precision is often impossible in certain kinds of social science questions, and in certain kinds of social science theaters of investigation.

I hope you will agree that when a more precise technique can be used, it is the one that should be employed; but that when such a technique is not fitting, the granting of research assistance should be determined by the significance of the questions to be explored, the competence of the proposed researchers, the receptiveness of the subjects of study, and the appropriateness of the supporting institutions, if any, that are involved.

In Latin America this means since there are many areas in which you cannot do quantitative behaviorial research, foundations will no longer give funds for doing work in Latin America and in this case a major area of social science inquiry is going to be foreclosed.

The religious adherence to methodology occur because it is much easier to argue methological doctrine than it is to argue theoretical ones—the latter is opposed to God, mother, and freedom and the determines the latter under those conditions.

Explicitly, then, I am arguing that an NSSF should support speculative examinations into social theory, community studies such as those usually conducted by anthropologists, and all other respectable forms of adding to our body of social knowledge, including historical work and naturally survey techniques.

The overwhelming interest in survey techniques and "behavioral" research is often tied to a concern with as direct an application of social science findings to the political processes as may be possible.

That desire is not reprehensible in itself; but let me repeat, so long as that aim primary to the granting of research funds, it will inevitably twist Government-social science relations and weaken the long-term endeavor.

As production in anticipation of demand is a measure of academic success, may I suggest that "pure" social science is the measure of governmental and private sectoral respect for the maintenance of the primacy of the intellectual social science endeavor.

The argument that mechanical rules concerning "good" and "bad" methods should not stunt the growth of theory and the development of historical and other modes of investigation carries with it an implication concerning the length for which grants are made.

The desire for applied, quantitative studies easily converts itself into the design of "projects," in which 2 or 3 years of effort reward

the sponsors and the researchers with a report or a book or a series of articles.

The end is clearly visible, success or failure seemingly simple to assess. Such clarity brings joy to the mind of the grant giver when he turns to his periodic task of evaluation of other people's and his own past performance.

There should be room for the more contemplative scholar working on the longer study demanding maturation, and time to worry about the full implications of available data and to examine all the available literature on his subject and probably much of it off his subject.

Even in quantitative survey studies the better ones have taken 10, 11 years.

The first big breakthrough in quantitative studies of developing areas, "The Passing of Traditional Society, took something like 11 years to complete. The Almond and Verba work, "The Civic Culture," took a decade. But most grants are made for 2, 3, or 4 years.

In sum, then, I am suggesting that the proposed NSSF should support the social sciences in the full range of their enterprise, conceptually and chronologically.

Do these remarks concerning the limitation and scope of governmental social science relations have any implications for the institutional vessels and organizational devices which would best serve these purposes?

On their surface, they would seem to argue for an administrative separation between physical and social scientists, for even though the nature of academic commitment characterizes all scholars, the area of intellectual endeavor and the methods employed are, of course, different.

As I argued when I was before this subcommittee last year, the "hard" sciences deal with phenomena which can be treated as though they repeat themselves, the social sciences with seemingly nonrepetitive phenomena.

A laboratory for a social scientist is in large measure an intellectual construction, and he thus must make "all other things equal" by a combination of conceptual devices, in the absence of mechanical equipment which can assist him to this same requirement. This difference in itself causes many physical and natural scientists to sneer at their fellows in the social "sciences"—and the quotation marks are in their voices, and if I may say so in their actions on faculty committees and on grant-giving committees.

Whatever administrative configuration is decided upon—and I leave such matters to the expertness of the legislators—the cause of the social sciences will not be served if policy and applied sciences are determined by persons with the training of the physical sciences behind them, or by social scientists who assume that the only qualitative difference between them and their "harder" brethren is that the latter are more advanced.

The qualitative differences must be reflected for a sound relationship to exist, and again this is a point I should like to underscore. There are, indeed, qualitative differences between the ways in which we work, and to sit in blind admiration of a physicist because he can project with some greater surety than we, is to presume we are in the same continuum.

I am arguing that we are in different categories for some purposes, and not in the same category.

Compared with this consideration, any discussions about whether an enlarged NSF or an NSSF is preferable pale into insignificance.

I am aware of the arguments that the social sciences will be better supported if maintained under an enlarged NSF umbrella, and that NSF support goes a long way to guarantee the purity of researchers working overseas.

The former allegation is speculative and escapes my competence, which really means that I don't think it can be demonstrated.

The latter claim is, in my experience, certainly true. NSF does have a great deal of prestige overseas. It makes it easier to pull conferences together because foreigners are willing to appear, and so on.

I see no reason, however, to presume that an NSSF could not gain a similar measure of overseas acceptance. In sum, what I think is important is that broad gaged and cultured social scientists should themselves determine the best ways to seek the fundamental self-interest of their disciplines.

I can imagine that these ends could be successfully served by a well-designed NSF structure, and ill served by a poorly ordered separation into two foundations.

Either administrative design, as such, to my mind, could serve the purpose, although a broadly inquiring, alert, reasonably financial NSSF seems to me to be clearly the better mechanism—all other things being equal.

Thank you, Senator.

Senator HARRIS. Thank you, Dr. Silvert, for your statement and for your appearance again before this subcommittee.

I take it from your last sentence that having studied the matter you have come down the side of creation of a separate National Social Science Foundation.

Dr. SILVERT. Yes, I have. I think it would be less clumsy. I think it would be open to more direct pressure from the academic community, more sensitive, more immediately responsive to it; that is, the NSF structure would be somewhat clumsier. Whatever limitations you get with the NSSF would be made up by its greater responsiveness to the Social Science Community.

Senator HARRIS. I might say I agree with you that the National Social Science Foundation should certainly sponsor research on a broad range and not be limited to any particular school of thought.

I go further in saying this same thing in a different way. I would think it should have a very strong legislative mandate in the committee report for encouraging innovative thinking and research and therefore controversial research.

I think it should be very careful to avoid rigidity, either theoretical or methodological oriented doctrine. I think that would be terribly unfortunate.

Dr. SILVERT. I think we all agree that kind of thing is required, but the problem of implementation of that desire comes smack up against not necessarily administrative organization, but rather the kind of persons hired to manage the enterprise.

As we know, private foundations go through periodic revolutions in order to stay fresh. Foundation "X" may be nice to work with and

all of a sudden it changes. The Government gets into research and has given everybody else the strength to make mistakes.

Or Foundation "Y" has a hardening of the arteries for 15 years and a new man says the worst thing we can do is to do nothing, and indeed if we insist on doing something then we will not make the most profound of all mistakes—inaction.

The issue is what kind of sanction we will apply in the event mistakes are made. Those sanctions often involve the periodic brutal hiring and firing of aides.

The issue is how to keep fresh blood coming through, with fresh ideas but with enough continuity to have a dedication and determination to commit oneself to certain kinds of theoretical viewpoints. As long as foundations courageously determine policy, and as long as the time periods of such commitments are relatively short—8, 10, 15 years are more than enough—then I think innovation can be pushed by granting agencies without damage to academic integrity.

This task is not easy, and it takes a very special breed of foundation executive.

Senator HARRIS. How would you differentiate between survey research and behavioral research? Could you give an example of each?

Dr. SILVERT. Survey research is a simple technique in which the researcher uses a questionnaire applied by an interviewer, or by self-interview, to get at certain attitudinal constellations in the respondent.

Behaviorism and behavioralism, it appears to me, are very bad terms, but what they refer to is that we study the actual activities of persons, including verbal behavior.

There is a psychological bias to the words "behaviorism" and "behavioralism" which really have been watered down to merely quantitative techniques in the other social science. The word I like better is "operational," the translation of a theoretical concept into terms of a measurable human event. Thus we "operationalize" the concepts and make them quantitatively measurable.

Senator HARRIS. Do you think that whatever mechanism we might choose to achieve it we need additional Federal support for research and scholarships in social sciences?

Dr. SILVERT. I commented on this last time and I really hardly see any reason to change my mind about it.

The simple, absolute question of money, it appears to one, is a dependent variable and not an independent variable.

If the money being spent by the Government now were redirected and spent with more insight, focus, and direction, then there is plenty of money in my view. If a lot more money were spent and spent badly, if we were going to decide to take a scattershot approach to things and let the data accummulate, sift down until some innovative genius comes to put them together, that deductive process costs more.

To the extent to which administrators differ and do not in themselves give direction, more money is demanded. Until we know how matters will be organized and who the organizers will be and what the relationships will be with the academic community, I do not think we can talk rationally about money.

Senator HARRIS. What about the average citizen?

Would you simply say that we need more research of the proper kind?—and I am going to ask you what that means in relation to the social sciences.

Dr. SILVERT. Yes; I think we need more research of the proper kind, but I would emphasize, "the proper kind"—for there are many different kinds. One matter at the broadest level a lot of us—not all of us—are looking for is some more highly integrating level of theory which can relate macrosocial to microsocial events. It is important for us to learn more about the relationships within small groups, about individual and group attitudes and opinions, and relate that knowledge to what happens in large groups and total national scenes.

Our theory, if it is to be really useful, must embrace both levels of phenomena at the same time.

If one is talking about socialization at the infant level, how is that linked to the level of socialization at the age of 2 or 5 and how are those linked to the primary school level and so on, and how is the entire process linked to attitude formation, and in turn to the behavior and effect of persons, groups, and societies?

We are not very good at answering these questions. We are somewhat better at some levels than other levels, but in general we are not very expert. This is at one end of it, the present capability.

At the other end of the mattter it is quite clear we need a lot of brainpower and organization.

Let me mention Cuba and Brazil as examples of need. It would not hurt the American scholarly community to have a good, solid comprehension of Brazilian politics. We have some good articles, but we do not have one good book which a non-Latin American specialist could read, to understand Brazil in terms of flat economic and political dynamics. Many complain that in this country we are unable to think in comparative terms about the evolution of societies. Now that we know economic determinism does not explain, where is the conceptual and data basis on which we can think? If we lack minimum readily available descriptive political data on the largest Latin American country, how can we evolve reliable theory?

Again, is it true that Cuba is communism with a samba? Does it make any political difference that Castro has a bit of a sense of humor in the way he approaches his problems? Is this attitude a reflection of Caribbean culture? What is the relationship between Tito, Nasser and Castro, if any? Is this question simply one of personalities? What additional factors matter?

The answers to these questions do not come alone from grand theory. In the first instance they come from a decent body of competently gathered and analyzed data.

Senator HARRIS. What would you say to the average citizen who does not really understand what contribution social science can make, or is making when he says—What could we expect from more or better research in the social sciences?

I think you have touched on some. You have talked about Brazil and about Cuba.

Would you like to add to that?

Dr. SILVERT. Something happened Sunday which is exquisitely fitting. A great big Bekin's truck pulled up in front of my stable to unload 5,700 questionnaires from Chile and that is an awful load of questionnaires, when each one of them is memeographed and very heavy and 15 pages long.

The truckdriver was a southerner. "Excuse me," he said "what is this stuff?" There was a whole batch of boxes, marked in Spanish.

So I told him as rapidly as I could.

He asked me your question—what good is it?

I rapidly told him these papers had to do with a survey of schoolchildren and teachers and parents and we want to know how different they are and we would like to know what a kid thinks about his family in a certain tight way—if he grabs onto them for greater security and warmth, which is what you would expect of a kid, and whether this kind of thing affects the way he is going to make a living later on. Suppose a fellow is very traditional, personalistic at home. What does this mean about what he does in politics?

As far as I can see from what we learned in a former study, if a fellow goes to school and gets a better job because of his education, he doesn't necessarily become openminded, democratic, freedom loving, or anything else. There is not that much of a direct relationship between going to school, getting a better job, and being a better person.

The truckdriver looked at me and said, "I'll be damned"—which I thought was kind of a compliment.

Senator HARRIS. Thank you very much, Dr. Silvert. I appreciate your presentation.

Our next witness is Prof. Myres S. McDougal, Sterling Professor of Law, Yale University Law School.

Without objection we will place in the record a brief biographical sketch concerning Dr. McDougal, and I may say we are honored to hear from you, Dr. McDougal.

Biographical Sketch: Prof. Myres S. McDougal

Sterling Professor of Law, Yale University; immediate past president, The Association of American Law Schools; former president, The American Society of International Law; member, U.S. Panel, The Permanent Court of International Arbitration since 1963.

Background Data: B.A., M.A., LL.B., University of Mississippi: B.A. in Jurisprudence, B.C.L., University of Oxford; J.S.D., Yale University; Honorary L.H.D., Columbia University; Honorary LL.D., Northwestern University.

Teaching posts at University of Mississippi, University of Illinois, Chicago University, Northwestern University, Columbia University, and University of Cairo.

Member of Board of Editors of American Journal of International Law, American Journal of Comparative Law, and Natural Law Forum.

Author: "Law and Public Order in Space" (1964) and others.

TESTIMONY OF PROF. MYRES S. McDOUGAL, STERLING PROFESSOR OF LAW, YALE UNIVERSITY LAW SCHOOL

Dr. MCDOUGAL. Mr. Chairman, and gentlemen, though I have many professional and academic memberships, I appear before you merely as an individual citizen, a member of the legal profession, and a law teacher.

In such capacities, I should like to express my very warm appreciation to this subcommittee for its vision, initiative, and constructive effort in framing bill S. 836 and in holding these hearings.

It has been a great contribution to the common interest merely to focus public attention upon the urgent need to expand our national resources for fundamental inquiry in the social sciences. It will be an

immensely greater contribution if you are in fact able to bring about the establishment of the proposed new Foundation.

You have heard already from other witnesses, including Professor Malone and Dean Pollak, how gratified some of us in the legal profession are by your explicit recognition that inquiry about law is within the domain of the social sciences and by your inclusion of law within the ambit of the proposed Foundation.

It has also been indicated, I believe, that some of us, moved by considerations very comparable to those which have moved you, have been making plans actively to promote the establishment of new agencies, both public and private, designed to bring greater resources to bear not only for fundamental inquiry about law but also for legal education, most broadly conceived, and for law improvement.

The statement which I submitted to you in advance, under the title "Legal Education for a Free Society: Our Collective Responsibility" in an address given last December to the annual meeting of the Association of American Law Schools, which was designed to make a case for the establishment of a new, independent, private foundation exclusively dedicated to the improvement of legal research and education and of legal institutions and process.

Senator HARRIS. May I interrupt you right there to say we appreciate very much receiving a copy of your excellent statement and, without objection, we will place the entire statement in the record at the conclusion of your remarks here this morning.

Dr. MCDOUGAL. I should be grateful for that, sir.

Since most of the considerations which so urgently document the need for such a private foundation equally demonstrate the need for a new governmental agency or for the inclusion of law within the agency proposed by you, I should like, with your permission, in the time that you have allowed me this morning, to adapt my argument in this address to the various issues which have been raised in your hearings and to reshape my argument in strong, more general support for your entire proposal.

Perhaps I should add that I have had the advantage of a preview of the statement made to you by Prof. Harold D. Lasswell, with whom I have been associated in teaching and writing for some 30 years, and that much of what I will say will be merely to add detail or footnote to the very comprehensive perspective which he has outlined.

For the economic presentation of my views I propose to deal seriatim with the following four main themes:

First, the appropriateness of locating inquiry about law within the domain of social science.

Second, the kinds of knowledge needed about law: science in useful conception.

Third, the need for greater knowledge about the reciprocal impacts of law and the other components of social process.

And fourth, the promise and appropriateness of the proposed new National Social Science Foundation.

We begin with the appropriateness of locating inquiry about law within the domain of social science.

In his perceptive statement Professor Lasswell described social science as an activity designed to enhance our "knowledge of how

human beings influence one another" and offered a comprehensive map of this reciprocal influence in terms of community processes, composed of interacting value processes.

From this vantage point, it is not difficult to demonstrate that law is an indispensable component among the events which must be observed by any social science which aspires toward realism or consequentiality.

In any community in which people influence one another—which exhibits interdeterminations or interdependencies—one can observe a process of effective power in the sense that important decisions are made and enforced whether people like them or not.

Some of these effective power decisions may be taken from calculations of expediency, or by naked power, or by mere chance.

Many effective power decisions are, however, taken from what may be called perspectives of authority: they are made by the people who are expected to make them, in accordance with community demands about how they should be made, in established structures of authority, and by authorized procedures. The people who make such decisions have further, enough effective control to put their choices into actual operation in a consequential number of instances.

It is these latter decisions, the decisions which are taken in accordance with community expectations about authority and accompanied by effective control, which today we commonly call law.

Law is, in other words, when comprehensively and usefully conceived, a continuous process of decision in which authority and control are conjoined.

If, further, we look closely in any commuinty at the whole flow of authoritative and controlling decisions called law, we can see that these decisions are again, of two different types.

First, there are the "constitutional"—or perhaps better, constitutive—decisions which establish and maintain the whole process. These are the decisions which identify and distinguish the different authoritative decisionmakers, specify and clarify basic community policies, establish appropriate structures of authority, allocate bases of power for sanctioning purposes, authorize procedures for the different kinds of decisions, and determine the various modalities by which law is made and applied.

Secondly, there is the continuous flow of decisions, emerging from this constitutive process, which shapes a community's public order. These are the decisions which determine the protected features of all the various value processes: how resources are allocated and developed, and wealth produced and distributed; how civil liberties and other human rights are promoted and protected, or deprived; how enlightenment is encouraged, or retarded; how health is fostered, or neglected; how civic responsibility is nurtured, or blighted; and so on through the whole list of values we cherish in a free society.

The point of my present emphasis is the inescapable interdependence of all these different types of decisions and of all the other components in social process.

At one level, the kind of constitutive process a community can achieve determines the kind of public order it can enjoy; conversely, the kind of public order protected—the diffusion of effective power,

the production and distribution of wealth, the human rights honored very vitally affects the constitutive process attainable.

On a more general level, the quality of legal process as a whole, including both constitutive and public order decisions, and the quality of the social process as a whole, including all civic order activities free of community coercion, are no less intimately interdependent.

It is because of this all pervasive interdependence of the events we describe as law—decisions in which authority and control are conjoined—with all the other components of social process that any realistic observer must, I submit, share your conclusion that fundamental inquiry about law is appropriately included within the purposes and responsibility of a new agency designed to advance our knowledge of "how human beings influence one another."

We turn now to our second theme, that of the kinds of knowledge we need about law which must include the clarification of a useful conception of science.

In our discussion above, we have suggested that law is the process of decision which the people of a community establish and maintain for the purpose of clarifying and implementing their common interests. It is that part of social process which we deliberately manage, and sustain through organized community cocercion, for promoting and securing demanded public order goals.

The kind of knowledge that we need for the more effective establishment and maintenance of processes of authoritative decision may be described in terms both of the events, or subject matters, which require observation and of the intellectual tasks, or skills, which must be performed in relation to such events.

The designation of the range of events with which inquiry about law must be concerned, if it is to serve basic community policies, requires that we work with a theoretical map, or focus of inquiry, which comprehensively and economically locates particular decisions in the larger community contexts in which they occur.

In the paper submitted to you in advance I sought to indicate this necessary map or focus of inquiry in terms of certain important, interrelated emphases:

A BALANCED EMPHASIS UPON PERSPECTIVES AND OPERATIONS

Inquiry must extend beyond perspectives, or mere rules, to choices in fact made. Because of the importance of peoples' perspectives, inquiry cannot, however, be content with simple behavioristic concern for operations only.

The focus should be squarely on decision, as including both perspectives and operations. In this way the formal manifest content of perspectives may be pierced for observation of choices in fact made, and perspectives may be realistically studied as factors importantly affecting choice.

ADEQUATE ATTENTION TO BOTH AUTHORITY AND CONTROL

Political scientists too often ignore the importance of authority, in the sense of community expectations about the requirements of decision; while lawyers do not always study control, in the sense of active participation in the making of effective choices.

Both authority and control should be subjected to disciplined and systematic inquiry by employment of all the techniques of modern science.

COMPREHENSIVENESS IN THE CONCEPTION OF PROCESSES OF AUTHORITATIVE DECISION

The entire features of the constitutive process, as we have described it above, are seldom subjected to study. Attention is too often focused upon a single institutional detail, such as judicial review.

Inquiry should be extended to all the features of the process by which law is made and applied, and to the consequences of these features for preferred public order.

DETAILED RELATION OF LAW TO SOCIAL PROCESS

Authoritative decision is a response to events occurring in past social process and in turn has consequences for future social process.

By appropriate employment of "value" and "institutional" concepts, as indicated by Professor Lasswell, the claims which people make to authoritative decision, and particular types of decisions, may be categorized in ways to facilitate the comparison through time and across territorial boundaries, of the factors that affect decision and of the public order consequences of decision.

RELATION OF LAW TO LARGER COMMUNITY CONTEXTS

It is commonplace today that social process occurs on a global scale. Just as we have a global community in science and technology, so also do we have authoritative decision on a comparable scale.

A realistic study will catch all of these different communities.

The global process of authoritative decision operates at many different community levels, and in many different interpenetrating patterns of authority and control, in affecting, and being affected by, both the social process transcending all particular communities and that internal to the different communities.

Inquiry about law which would be consequential in the long run must take into account all these interconnections.

The intellectual tasks which require performance in effective inquiry about law extend, beyond the activities designated by restrictive conceptions of "science," to a whole series of distinguishable, but intimately interrelated, specific activities. One convenient categorization of these tasks is as follows:

THE CLARIFICATION OF COMMUNITY POLICIES

The clarification recommended begins with the postulation of a comprehensive set of community goals, and then seeks the more detailed specification of these goals, at all levels of abstraction, in empirical terms which make explicit reference to events in social process, and again some indication of how to do this.

It is urged that, in the degree that economy permits, every choice be related to its larger community context and all important commu-

nity policies. The procedures recommended for such specification demand knowledge of past trends in decision, past conditioning factors, future probabilities, and possible alternatives, and, hence, require the simultaneous and systematic performance of all the other relevant intellectual tasks.

THE DESCRIPTION OF PAST TRENDS IN DECISION

Past trends in decision are described, not anecdotal, but systematically, in terms of their approximations to clarified policies.

The events which precipate claims to authoritative decision, the factors affecting decision, and the consequences of decision for social process are all described, as indicated above, in the double reference "value" and "institutional" categories which permit effective comparison of decisions and consequences both through time and across community boundaries.

THE ANALYSIS OF FACTORS AFFECTING DECISION

Comprehensive theories and explanation of decision are formulated and tested by the appropriate procedures of contemporary science. Overwhelming importance is not ascribed to any one factor or category of factors, such as those relating to wealth, and inquiry is made for the interplay of multiple factors.

The significance of factors deriving from culture, class, interest, personality, exposure to crisis, and resource environment is explicitly recognized.

Rigor is sought in theoretical models, but not by an overemphasis on the importance of measurement or experiment. Many different observational standpoints and both extensive and intensive procedures are employed in data gathering and processing.

THE PROJECTION OF FUTURE TRENDS IN DECISION

It is sought to make expectations about the future as conscious, realistic, and explicit as possible. The simple linear or chronological extrapolations of conventional legal theory are subjected to the discipline of knowledge about conditioning factors and other pertinent bases of inference. Developmental constructs, embodying varying anticipations of the future, are deliberately formulated and tested in the light of all available information.

THE INVENTION AND EVALUATION OF POLICY ALTERNATIVES

Creativity is encouraged by demand for the deliberate invention and assessment of new alternatives in policy, institutional structures, and procedures. It is recommended that every phase of decision process, whether of constitutive process or relating to public order, be examined for opportunities in innovation which may influence decision toward greater conformity to clarified goal.

Assessment of particular alternatives is made in terms of gains and losses with respect to all clarified goals and disciplined by the knowledge acquired of trends, conditioning factors, and future probabilities.

It should be clear even from this very rough and preliminary sketch of the kinds of knowledge that we urgently require about law that some of the more restrictive conceptions of "science" which have been propounded to you bear a very meager relevance to the realities of the world in which we live.

In the hearings before you science has been referred to as an activity which proceeds by "quantitative measurements" and "objective analysis" and produces "scientific laws" and "uniformities."

It has several times been asserted that there is some mysterious "unity" in all science whether the events under investigation, and the purposes and methods of investigation, are those of the natural sciences or of the social sciences.

Facile distinctions have been made between "basic science" and "applied science," between research which "holds promise of yielding valid scientific generalizations" and that which is "limited to finding solutions for problems peculiar to a particular time, place or event," and between "fundamental science" and "policy-oriented inquiry."

Policy-oriented inquiry has been loosely, and myopically, equated with "mission-oriented research" and "operations," or the taking of specific decisions.

Disdain has been expressed, finally, for inquiry about law and other important subject-matters upon the ground that such inquiry must necessarily be "applied" or "mission-oriented."

Happily, no one in our culture is under the necessity of accepting so restrictive a notion of science or so limited a conception of the potentialities of inquiry about social process.

In his statement to you, Professor Lasswell outlined an alternative, more inclusive conception, today widely accepted, which he describes as "contextual," "policy oriented", and "multimethod." This conception emphasizes the multiplicity of modalities available today both for theory construction and for the gathering and processing of data about patterns of interdependence among conditioning variables.

Quantitative measurement is but one of the instruments of inquiry and knowledge must often settle for generalities, conditioned by time and place and other features of context, rather than vainly aspire for precise and invariable uniformities.

It may be noted that the conception advanced by Professor Silvert in earlier hearings, and invoked by other witnesses, includes "descriptive analyses," "simulation," the examination of "probable consequences," and the indication of "new choices and probabilities."

Indeed, from the accounts of some of the contemporary historians of science, such as that by Thomas S. Kuhn in his "The Structure of Scientific Revolutions," 1962, it may be doubted whether even the natural scientists have ever enjoyed other than in myth a conception of science so exclusive and rigid as that sometimes propounded.

The confusion that infects facile distinctions between "science" and "policy-oriented inquiry" would appear to derive from a simple failure to distinguish observational standpoints and purposes. The standpoint of the scholarly observer is that of one who is primarily concerned for enlightenment about "how human beings influence one another."

Since the very subject matter of his concern is comprised of the subjectivities and activities, the perspectives and operations, of people,

organized as well as unorganized, there is no way that such an observer can avoid the study of policy.

He can, however, advance knowledge about a whole flow of comparable instances in perspectives and operations without making recommendations about, or participating in, the making of any particular decision.

The observational standpoint of the controlling decisionmaker, in contrast, is that of one who is primarily interested in power; that is, in participation in the making of important community decisions, whether in the projection of authoritative general policy or in its specific application.

While the same intellectual tasks described above, the clarification of goal, the description of past trend, the analysis of conditioning factors, the projection of future probabilities, and the appraisal of alternative, are equally indispensable for the scholar and the decisionmaker, there is no inherent reason why the scholar, or others, cannot distingiush between inquiry, even about policy, and decision.

This brings us to our third theme, that of the need for greater knowledge about the reciprocal impacts of law and the other components of social process.

The important point was made by Secretary Wirtz when in his testimony he stated that "the present development of research in the social sciences falls so far short of both its potential and the imperative necessity for it" as to beggar our powers of expression.

It is the lawyer, as a member of the profession especially charged with responsibility for synthesizing available knowledge from all the sciences for the management and improvement of legal process, who is perhaps best qualified to testify about the want of relevant and dependable knowledge.

The cry for such knowledge can be found upon almost any sampling of professional literature, and in the most responsible lay communication, about all our important contemporary problems.

The recent report of the President's Commission on Crime is but the latest example. As one who for more than a third of a century has taught in the fields of international law and property law, I would submit that we continue to work in the darkest night, and have not even begun to bring to bear the resources necessary for the appropriate guidance of decision.

Within the legal profession itself our research steps have been laggard and short. In an often quoted appraisal Prof. Willard Hurst has described most of our studies as "taxonomic enterprises," largely concerned with "doctrinal clarification," which do not come to grips with how "all this official decisionmaking" really works and "what are the values and accomplishments for which it stands, as measured in its working operations."

More recently, Prof. Geoffrey Hazard, as chairman of the Committee on Research of the Association of American Law Schools, has written:

> Indeed, it does not seem too much to say that unless new research departures are made, the law schools and the legal profession may well become ineffective and perhaps redundant in regard to the major issues of the day and of the future.

In mitigation, it can only be said that the resources which our community has made available for research about law have been, as various recent studies have shown, desperately pitiful.

The potentialities that might inhere in an appropriate allocation of resources to inquiry about law, including the interrelations of law and the other components of social process, relate to every feature of constitutive process and to all the values protected in public order.

In his statement before you Professor Lasswell has made eloquent affirmation, illustrated in detail, of many of these possibilities; in an earlier address, entitled "Toward Continuing Appraisal of the Impact of Law on Society" and delivered at Rutgers University last year, he offered a more comprehensive and systematic statement, including suggestions of ways and means.

This latter statement you might wish also to incorporate into your record. In my own paper submitted in advance I sought to relate the potential contributions of future research to all our more important national and international problems of the nuclear space age.

Senator HARRIS. Without objection we will receive that paper into the record.

Dr. MCDOUGAL. In a footnote which risks bathos, I should like to quote a statement, appearing in the New York Times for June 14, 1967, of the New York welfare commissioner.

"Here we are," the commissioner says, "with $900 million for welfare and nothing for research. What business that big would try to operate and not have research? We operate like a corner candy store."

What is good enough for business, and might be good for New York City, could, I submit, be good for the whole country.

We come, finally, to the critical question of the promise and appropriateness of the proposed new National Social Sicence Foundation.

Let me state imediately: I like bill S. 836 when I first read it, and the more I have studied it, the more I have come to admire it.

It seems to me to project an economically designed national agency, with appropriate powers, for what is fundamentally a national problem.

I have read most of the available testimony upon the bill, and none of the criticisms which have been offered seem to me to be persuasive.

The principle of Occam's razor, however sound it may be in relation to the manufacture of philosophical concepts, is not necessarily the soundest guide with respect to the creation of governmental agencies. It is said that President Franklin Roosevelt justified his creation of multiple agencies to do the same job during World War II upon the ground that, if he created enough, some of them would do the job.

The argument that the National Science Foundation alone can do a better job because of some presently existing "unity," or some future achievable "integration," of the natural and social sciences would appear to border upon, if not pass beyond, the mystical.

The more relevant principle for organization would seem to reside in the purposes of inquiry, and the purposes of natural sciences and the purposes of social sciences, when purposes are given comprehensive empirical reference, are certainly quite different.

As various witnesses before you have emphasized, the great advantage of your proposed Foundation would be in its introduction of a new permanent center of responsibility for the whole set of research activities which most directly affect national policy.

Similarly, it has not always been thought that the imperatives of interdisciplinary cooperation require that a single agency be charged with exclusive responsibility, and allocation of resources, for the whole of the world's work, however disparate the purposes, the subject matters of concern, and the methods of the workers.

It is at least conceivable that an appropriate specialization of function in which people who share common purposes, subject matters and methods are given opportunity and resources for working together might produce more of the indispensable cooperation.

The structure of organization proposed in the new Foundation seems to me, again, to be entirely adequate to permit, if not to require, the employment of procedures which will both insure the independence of private scholars from sinister governmental pressures and protect other countries from having "research" carried on within their boundaries by governmental agents disguised in the garments of the academy.

It is barely possible that both the susceptibilities to pressure of private scholars and the sensibilities of other countries about the sources of funds for research have been somewhat exaggerated.

In one particular I would differ from some of my colleagues; it seems to me that section 7(b), which authorizes projects on a reimbursable basis for other government agencies, might serve as useful a purpose in the social sciences as in other areas of investigation.

The fear that this kind of activity might somehow contaminate the purity of all else the agency might do would appear somewhat far fetched.

In conclusion, may I say that I believe that I express the views which would be shared by many members of the legal profession and of the academic community in thanking you for your sustained dedication to this enterprise and in hoping that you will achieve a quick and complete success in establishing the new foundation.

It has been a very great privilege to appear before you.

Senator HARRIS. Thank you very much, Dr. McDougal. The success in the last sentence of your paper will certainly be furthered by your presence and by your very eloquent testimony.

First, you mentioned a paper by Dr. Lasswell, entitled "Toward Continuing Appraisal of the Impact of Law on Society." I have not seen that although we did have some excellent testimony by Dr. Lasswell.

Dr. MCDOUGAL. I will supply it for your consideration.

Senator HARRIS. I would appreciate that. When it is received, without objection we will place that in the record at this point.

(The document referred to above follows:)

TOWARD CONTINUING APPRAISAL OF THE IMPACT OF LAW ON SOCIETY

Harold D. Lasswell

The expanding and interlocking requirements of law, science and policy in the arenas of national, transnational and sub-national affairs can jointly sustain the view that future research on law will be most effective, from every standpoint, when it achieves a continuing comprehensive appraisal of the impact of law on society, as well as of the reciprocal effect of social process on legal process. The present recommendation, therefore, looks to a strategy of concurrent action, individual and concerted, on the part of members of the legal profession, and

especially of law teachers, researchers and advisors, to work with professional colleagues in the social and behavioral sciences, in order to perfect existing institutions—official and non-official—for the performance of the appraisal function with comprehensiveness; competence, reliability, independence, promptitude and economy.

The proposition put forward here is that it is both desirable and feasible to accelerate the pace of research development. The sequence of discussion is: (1) A brief indication of what is meant by comprehensive and continuing appraisal; (2) the grounds for asserting that the appraisal phase of the decision process is important; (3) the current discrepancy between potential and current performance; (4) the adequacy of the intellectual tools available to execute a comprehensive and continuing program; (5) the plan of organization best adapted to the task; (6) the acceptability of the proposal.

1.

Comprehensive and continuing appraisal provides an informed picture of how well the legal system is doing its job. A suggestive point of departure for defining the scope of such an operation is to look into the criticism and the implied criteria of performance that are put forth in lay comment on legal institutions. Most of the questions raised by lay members of the body politic[1] about the functioning of legal order would be covered by the following preliminary list: (1) To what extent is "law in the books" law in fact? (2) How serious are official efforts at enforcement: for instance, how much is paid out as current costs? (3) Who benefits from law enforcement? Who bears the cost? Who are the principal targets of enforcement? For instance, is it true that the politically weak, the uninformed, the poor, the incapacitated, the uneducated, the neglected, the unhonored, the non-conformist bear a disproportionate burden? (4) To what extent are official prescriptions and acts of enforcement approved or disapproved by various groups in the body politic? (5) How are the basic institutions of society affected by the legal system: for instance, the family, education, the professions, the religion, the economy, the mass media, science and health? (6) To what extent are the proclaimed value goals of public and civic order—in our case, the goals of human dignity, not indignity—achieved in fact? (7) How typical are recent changes? In the perspective of history are legal norms becoming more or less accepted, enforced, and complied with? How are the pattern-combinations of causal factors changing that affect these results? (8) If no significant innovations are introduced into official policy, how likely are the impacts of the legal system to change in the years ahead?

It is not necessary to assume that these questions are asked in an orderly manner by the thousands of party leaders, pressure group managers, news correspondents and commentators; or that they are in the minds of the millions of voters who cast ballots in local, state and national elections. We need not suppose that everyone who wins or loses a law suit, or is convicted or exonerated in a criminal action, meditates on a comprehensive image of the law. As trained and responsible observers, however, we have evolved a working model of the interplay of law and society, and we recognize that the discursive questions of lay-observer-participants add up to a continuing evaluation, and search for evaluation, of how well one of our major institutions fulfills its function. The criteria are variously formulated. One demand, at least, is omnipresent. The "law" is asked to dispense "justice," no matter how confused or mistaken, or how prone to "dispense with" justice it may be perceived to be in concrete circumstances.

I join with those who urge that we make a more determined effort to put into operation an inclusive, continuing audit of the aggregate effect of law on the larger process of which it is part, and with which it perpetually interacts. The underlying aim is to provide a reliable basis of judgment for future policy with a view to reducing discrepancies between the articulate goal of justice, or, more generally, of human dignity, and the structure and function of the institutions protected by, and comprising, public order.

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[1] Lay opinions of the bar and of legal institutions have been systematically surveyed from time to time and reacted to. See, for example, Blaustein and Porter, *The American Lawyer—A Summary of the Survey of the Legal Profession* (University of Chicago Press, 1954) and, for instance, the stimulating report by Cohen, Robson and Bates on *Parental Authority—The Community and the Law* (Rutgers University Press 1958).

The present recommendation can be put in context with the aid of two highly generalized models, one of the social process, the other of the decision process.[2] We, refer to social process in any context as the continuing interaction among participants who are seeking to optimalize their preferred events (values) through institutions, affecting resources.

Social Process
Participants → values → resources
→ institutions →

In the interest of comparative research we make use of eight value categories so defined that they can probably be found in every social process. In any case they provide a common frame or reference for conducting a comparative inventory of all situations, whatever the time, place or culture.

At the moment we need concern ourselves with but one of the eight value-institution categories, namely power and the institutions of government and law. The term power is defined as the making of decisions, as the giving, receiving, rejecting, or withholding of support in the process. A decision is an outcome (a vote; victory or defeat in battle), or a flow of outcomes, that importantly affects the social context, and is expected to be (and in actuality is) enforced most of the time, if challenged, by the use of severe sanctions (value deprivations). A decision is authoritative as well as controlling (is lawful) when it is perceived by the participants in the social context as made by appropriate individuals or groups, with permissible objectives, acting in relevant arenas and employing appropriate procedures to obtain permissible outcomes and effects. Power institutions as a whole are the perspectives and operations primarily devoted to decision shaping and sharing; legal institutions are specialized to authoritative decision.

Whatever the context the flow of decision can be conveniently characterized as follows:

Intelligence→ Promotion→ Prescription→ Invocation→ Application→ Termination→ Appraisal

The term "conventional" refers to the perspectives of the participants in a situation. When a structure is *conventionally* perceived as authorized to act in the name of the whole, it is "official" or "semi-official." From a *functional* standpoint, the point of view of the scientific observer, an official institution, defined from the conventional point of view, may or may not be controlling. If not, its power is "pretended." By using relevant methods of investigation functional study may discover that pretended power is actually exercised by another official agency, or by a non-official organ.

In any context it is possible to identify the legal process as the stable pattern of interaction among the outcomes sketched above. The legal process can also be shown to be in more or less stable interaction with all other value-institution sectors of the social process.

In more detail: "Intelligence" outcomes concern information, and include offical votes to disseminate or to refrain from disseminating official reports and plans. Non-official intelligence includes news management. "Promotional" decisions are, for instance, acceptances or rejections of platforms in such semi-official organizations as political parties. "Prescribing" decisions include legislation. "Invocation," or the provisional characterization of a concrete set of circumstances in terms of prescription, is exemplified by the vote of a grand jury. "Applying" decisions, or final characterizations, include many judicial and other administrative outcomes. "Termination" is the ending of a prescription and the making of arrangements to deal with the legitimate expectations built up during the period when the prescription was in force. "Appraisal," with which we are particularly concerned, describes the degree to which official policy has been realized (or failed of realization), and the degree to which officials played a determinating role (taking all other significant factors into account).

2.

I shall not take time to do more than supply a few reminders of the impact, immediate or long term, that the appraisal function, whether performed by official or nonofficial agencies, can have on all phases of the decision process. Even

[2] See Lasswell and Kaplan, *Power and Society* (Yale University Press, 1950), and the elaborations found (since 1943) in the work of McDougal, Lasswell and Associates. A recent example is McDougal, Lasswell and Vlasic, *Law and Public Order in Space* (Yale University Press, 1963).

the most cursory review of the nineteenth and twentieth century history of the Royal Commissions repeatedly employed in Britain to inquire into the operation of the law will amply document the importance of their reports. Whether the topic is the structure of government, the consequences of national policy toward science, the internal and external position of the economy, the health of the working classes, education, family relations, slavery and servitude in the colonies, or the impact of public legislation on private morals, the record is long and significant.

In the United States we are aware of the effect of several Presidential Commissions on the structure of government on the working of the legal arrangements in many fields. There was, for instance, the Commission on Administrative Management (1937), the Commission on Organization of the Executive Branch (the first Hoover Commission, 1940, and the National Commission on Law Observance and Enforcement (the Wickersham Commission on the effects of prohibition, 1930).[3]

The steady expansion of the scientific approach to include the social process has led to an explosive rise in the flood of information purporting to show how criminal and civil prescriptions work in practice, or how statutory, administrative and judicial doctrines and interpretations affect economic or other sectors of American life, or reverberate in the world community as a whole.[4] Schools of law are supplemented by the graduate faculties of the university world, and by schools of communication, business management, public health, education, social work, and religion; and the reports published by individuals or commissions connected with these institutions often contribute to the stream of appraisal[5] Professional associations, private foundations, private research bureaus, add to the flow. Individuals stand out as self-made experts in many fields—the late Zechariah Chafee, Jr., on the media of communication, the Gluecks on law and delinquency, the late Randolph Paul on taxation, and so on.

It is not difficult to think of reports issued under private auspices that have oriented investigation and modificed perspectives in a widening arc. Consider the report by K. C. Myrdal and his associates on *An American Dilemma* (1944); the impact of A. A. Berle and Gardiner Means on images of who profits from the profits system.

3.

Does the fact that appraisal is inseparable from any decision process, and that there are many instances of the effect of appraisal, indicate that no need exists for a comprehensive, continuing institution devoted to the task?

The answer is in the negative. The appraisal function is inadequately performed; contemporary operations fail to provide a continuing flow of dependable information about the probable effect that legal institutions are exerting on social institutions and participants. Undoubtedly some of our legal institutions continue to have undisclosed—often value-destroying—impacts on man in society.

The fact of previous neglect is high-lighted every time a chronic and cumulative situation is dramatized by a shocking incident or a brilliantly presented communication. Shocking incidents, like the effect of various drugs on the human embryo, emphasize the inept functioning of legal arrangements for testing medications. A readable book on water pollution, or more generally on chemical and physical onslaughts on the natural environment, underlines the absence of effective previous appraisals. A hard hitting book on the unsafe automobile casts a curious light on long established legal arrangements for the protection of human beings against private wrongs. A film on the predicament of a group determined to assist in the cure and rehabilitation of drug addicts raises many questions about the present use of our legal institutions to cope with the whole context of drugs in society.

Novels, films and plays that depict the breakdown of elementary order in the schools of various areas, or the wildly destructive conduct of young people from "the best families," or the denial of equal protection of the laws to whole categories of young and old, point to previous neglect, or to ill-timed, poorly presented, incompetent, and fragmentary past appraisals.

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[3] The most recent development in the intelligence and appraisal field is exemplified by the RAND Corporation. See Smith, *The RAND Corporation; Case Study of a Nonprofit Advisory Corporation* (1966).

[4] An indication of the quantitative upswing in legal literature—some of which are pertinent to appraisal—is provided in a Meyer Institute Study (1959) by Allen, Brooks and James. Since 1840 the number of legal periodicals rose from zero to approximately 6500. (LSP Chartroom Collection, Yale Law School).

[5] Consult Rudolph, *The American College and University*. (Knopf 1962); *Berelson, Graduate Education in the United States* (McGraw-Hill 1960).

An occasional malpractice suit calls flickering attention to the conditions surrounding the use of people for scientific experimentation, and questions the genuineness of the protection given to relatively uninformed members of the population. Similarly, an occasional brawl at stockholders' meetings draws momentary attention to the degree of genuineness of the "representative" role supposed to be taken by directors and officers of private corporations; or the degree of coercion used by trade union officials to stay in office. Scandals connected with corruption by public officials, party politicians, pressure organization operators, business executives generate sweeping assertions about the legal system; yet, during intercrisis periods, neglect once more sets in.

Perhaps the most convenient way to remind one another of the insufficiencies of the present situation is to use the social process outline to stimulate the asking of questions that call for comprehensive and continuing appraisal. Inquiry must be made, not only about the value-institutions specialized to "power," but the institutions of "enlightenment" (mass media, science); "wealth"; "well-being" (safety, health comfort); "skill"; "affection"; "respect"; and "rectitude".

Concerning power and political institutions, for example: Are legal institutions themselves moving toward greater or less conformity to the requirements of a public order of human dignity? For example, is power shared as widely as practicable (that is, without heavy cost) at every phase of the decision process transnationally, nationally, subnationally? Do public officials go as far as practicable in making widely available the intelligence reports and plans of the government? In encouraging active promotion of change in order to reduce discrepancies between goals and circumstances? In eliminating from statutes and regulations all prescriptions that, on the face, are incompatible with the overriding goals and adopting new prescriptions when needed? In providing for considerate and prompt handling of complaints about alleged injustices in specific circumstances, and in encouraging the discovery of abuses? In conducting administrative activities in ways that avoid discriminatory treatment? In providing for appraisals of public officials that call attention to the fundamental goals of public order and contribute to allocations of responsibility according to the opportunities seized to further their attainment?

Enlightenment and Enlightenment Institutions

Does the legal system effectively encourage the pursuit of new knowledge by the expansion of the human and material resources, and the making of the institutional arrangements, required to cultivate science and scholarship? To encourage the dissemination of the news and comment needed to provide a sound basis of judgment on public policy? To cultivate a balanced growth of scientific and informational institutions throughout national and transnational communities?[6]

Wealth and Wealth Institutions

Does the legal system contribute to an economy characterized by balanced growth relatively free of arbitrary and concentrated direction? To a highly productive economy that distributes the benefits of modern science and technology widely rather than narrowly?[7]

Well-being and Well-being Institutions

Does the legal system succeed in stimulating and sustaining progress toward safety, health and comfort in every community?[8]

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[6] Some years ago the Commission on Freedom of the Press issued a report, *A Free and Responsible Press* (University of Chicago Press, 1947) proposing a set of criteria for appraising the performance of the media of general communication, and recommending a continuing private agency to investigate and report on the media. If such an operation were in existence, it would be feasible to conduct supplementary researchers to discover how legal arrangements affect the current flow of information, and the structure of the network. A relatively rare exploratory study that is pertinent to some dimensions of the problem is Cornwell Jr., *Presidential Leadership of Public Opinion* (Indiana University Press, 1965). See also Davison, *International Political Communication* (Praeger, 1965).

Enlightenment includes the pursuit of scientific and scholarly knowledge. Contemporary "discovery" of science is reflected in the growth of serious attempts to develop the "science of science," as in Derek J. de Solla Price, *Little Science, Big Science* (Columbia University Press, 1963).

[7] See especially Massel, *Competition and Monopoly; Legal and Economic Issues.* (The Brookings Institution 1962). Studies of the impact of law on economic and socio-political growth in different parts of the world call for a similarly comprehensive and critical review. A serious attempt to bring the political component into focus is Holt and Turner, *The Political Basis of Economic Development* (Van Nostrand 1966).

[8] A painstaking account of formal prescriptions and administrative arrangements is Gorove, "International Cooperation in Promoting Health" (unpublished J.S.D. dissertation, Yale Law Library). Not much was at hand to evaluate actual impact; and the situation is not notably improved despite WHO reporting. Useful field studies in the U.S. include studies of the problems connected with fluoridation, vaccination, and other examples of value conflict. See further on one aspect Klarman, *The Economics of Health* (Columbia University Press 1965).

Skill and Skill Institutions

Does the legal system aid in fostering institutions that provide ever-improving opportunities to all for the discovery, cultivation, and exercise of talent? [9]

Affection and Affection Institutions

Does the legal system effectively assist in the cultivation of family environments that further the formation of personalities able and willing to participate in the development of a society compatible with the requirements of human dignity? Does the system contribute in general to congenial human relationships and to the crystallization of loyalty to persons and institutions who support the fundamental aim? [10]

Respect and Respect Institutions

Does the legal system effectively achieve the liquidation of caste and the introduction of a mobile class structure? Does the legal order encourage the allocation of respect according to basic humanity, and to meritorous contribution to the shaping and sharing of values? [11]

Rectitude and Rectitude Institutions

Does the legal system encourage institutions that clarify and disseminate effective norms of responsible conduct in a body politics that aspires toward the realization of human dignity? [12]

These questions are mostly slanted toward American society. Appraisal is especially relevant, under contemporary conditions, to the globe as a whole, with special reference to the examinaion of whether existing legal arrangements expedite the evolution of a world inclusive system of at least minimum public order; or whether the norms of inclusive, regional or national system, established largely by the industrially developed nations, are being efficiently adapted to the newly accepted policies of stimulating world-wide participation in modern technoscientific civilization.

To chose a sample issue: To what extent is there an emerging acceptance of legal obligation by advantaged countries to assist the less advanced countries to achieve a self-sustaining level of growth, not only in regard to economic institutions, but in legal and other sectors of society? [13]

4.

We come to the question of intellectual tools adequate to the challenge of appraisal. Do we have available a map of the legal and social process that is adapted, or readily adeptable, to the problem? Are there procedures of data gathering and processing capable of providing the empirical information required by the models?

The social and behavioral sciences are sufficiently well developed at this time to provide an inclusive map; and the situation relating to empirical informa-

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[9] Pertinent here is the evaluation of the effects on education at every level, from preschool through advanced professional training, including the career as a whole. Only recently can it be said that historical scholarship has begun to provide realistic and sophisticated background studies. For example: Bailyn, *Education in the Forming of American Society*, (Vintage Books, 1960); R. Thomas, *The Search for a Common Learning-General Education*, 1800–1960, (McGraw-Hill, 1962). As usual the economists are especially helpful: Harbison and Myers, *Education, Manpower, and Economic Growth—Strategies of Human Resource Development* (McGraw-Hill, 1965).

[10] Since Plato and Aristotle the dependence of the "constitution" on the perpetuation of an appropriate "character" has been explicitly recognized. The problem is to form a self system in which the primary ego identifies with the body politic sufficiently to demand of the self and others that behavior conforms to what is required to defend and extend the value position of the body politic. In industrialized societies failures of political socialization in the early years are alleged to encourage "alienation". Transition from traditional to industrial societies is alleged to depend on "empathic" personalities and on "achievement" orientation. The pertinent context for public and civic order policies is sketched in Greenstein, *Children and Politics* (Yale University Press, 1965), Lerner, *The Passing of Traditional Society* (The Free Press of Glencoe, 1958), McClelland, *The Achieving Society* (Van Nostrand, 1961) Hagen, *The Theory of Social Change* (Row, Peterson, 1962), Almond and Verba, *Civic Culture* (Princeton University Press, 1963).

[11] U.S. attempts to dissolve caste perspectives involving the Negro provide a remarkable opportunity to explore the impact of law on society, especially in view of the base line provided by Myrdal and colleagues. See the investigations by Vose, Grimes and many other scholars.

[12] A compact review of relevant theory and research is Moberg, *The Church as a Social Institution* (Prentice-Hall, 1962).

[13] The present posture of the problems involved can be ascertained by examining the papers and discussion at the 1966 meeting of the American Society of International Law.

tion is exceptionally favorable to an inclusive and continuing program. The following expansion of the social process model referred to above puts the decision process, hence the legal process, in a context adequate to our preliminary mapping of the task:

A brief comment about various features of the model: "Participants" are described as value shapers if they play a relatively extensive role in the pre-outcome activities, specialized to a particular value, or in the investment of values during the post-outcome stage. The sharers enjoy values. "Perspectives" are subjective events characterized to bring out the intensity of value demands, expectations and identities; and the stable patterning of these categories is collective myth. Legal institutions are specialized to the myth-formula, which includes the expectations that constitute prescriptions.

Most of our concrete examples will be chosen from what is conventionally called the nation-state, or transnational intergovernmental organizations, or subnational units of the nation-state. It is essential to point out, however, that the outline is applicable to any context whatever, whether the "situation" is primarily territorial or pluralistic. Suppose, for example, that we classify a family (for preliminary purposes) as an affection institution. If we focus on the social process in the family context, we can identify the decisions (the outcomes) that influence important value effects and are expected—usually correctly—to be defended against challenges by the use of severe deprivational sanctions. Some decisions may be made at "official" gatherings.

The "base values" are the assets available to any participant for seeking to influence outcomes and effects; they include all perspectives and capabilities specialized to each value. Authority, for instance, is a base value where the participant perceives himself as the appropriate actor and is so regarded by others. This may include control over specific resource capabilities. Strategies are the ways in which base values are employed to influence the results sought. They are used coercively when the alternatives open to those whom they reach are so restricted that failure to act as indicated is expected to involve severe deprivation. Presumably our legal institutions encourage the use of persuasion rather than coercion in realizing scope values (the ends sought).

"Strategies" involve the transforming of the assets available to the participants into forms that can act on the targets of influence. Claims to a million dollars may be at the disposal of a political party for propaganda purposes; before they can be made effective, an organizational unit must be "assembled" with facilities adequate to the "processing" task of broadcasting.

In reference to "outcomes" the point should be explicit that conventionally labelled decisions in a body politic do not necessarily fit the functional definition, and ultimately require re-analysis. The conventional perspective assumes that only decisions made by official structures are entitled to be called law. From the functional standpoint, however, some of the outcomes do not meet the definition established for purposes of comparative and analytic studies. Research shows that some legislative statutes, administrative regulations, or specific orders are not expected to be put into effect even by the officials who make them; or, even if the initial expectation includes the prediction of effectiveness, it may presently become apparent that the forecast is in error. These official actions are not, therefore, laws in the functional sense. Similarly, research may show that important and enforcible decisions, though made by unofficial agencies in the context, are nevertheless generally accepted as being formulated by appropriate decision makers and procedures. (Some ecclesiastical organizations, for example, may be informally recognized in a particular context as authoritative and controlling in prohibiting trade with particular religious or ethnic groups and imposing very damaging boycotts on offenders). Commitments that are not decisions are choices.

For research purposes it is convenient to begin exploring a process of decision by studying the flow of formal enactments by conventionally recognized official bodies. Final classification of particular commitments as decisions (in our functional sense) depends on the data resulting from a thorough investigation of the social process context. For instance, some decisions are made in unorganized situations and the observer may be able to establish no more than an approximate date. (As when the members of a community begin to boycott property owners who rent to other than WASPS). The problem is to ascertain when the perspectives are stabilized that constitute the prescription.

As indicated before, post-outcome "effects" can be described to show the disposition of the values obtained at the outcome stage. Some are accumulated,

in the sense that they are saved or invested for the future shaping of values of the same category (as when wealth is used to increase wealth; or power to increase power). Some participants enjoy values; they use wealth or power, for example, to obtain another value. (This in turn may lead to secondary accumulation and enjoyment as the new value is invested or enjoyed.)

Effect analysis is also concerned with the continuation or change of the pattern of value distribution, especially in terms of equality-inequality.

Besides value analysis, institutional analysis is necessary in order to discover continuation or change of structure or function; and to locate the result by reference to the zones of innovation, diffusion and restriction of the institutional practice in question.

The social process map can be employed to generate as many models as required by any of the five problem solving tasks. In terms of "goal," for example, it is possible to define in detail in terms of the shaping and sharing of every value what is meant by a legal system compatible with the realization of human dignity. "Trend" models cover the historical sequence of a given body politic; and scientific ("conditioning") models formulate the routines of interdependence among critical variables. "Projective" models are contingency estimates of what the future is likely to be, irrespective of the observer's preferences. Models that outline "policy objectives and strategies" can also be generated in abundance.

Within the official decision process an important inquiry has already been hinted at, namely, the fluctuations through time of "lawful" and "non-lawful" power. Similarly, we are concerned with the fluctuating interfaces of the "public order" and "civic order" (understanding by public order the institutions of authority and the institutions throughout the entire social process which they protect; and by civic order the institutions protected by relatively mild rather than severe sanctions.)

Another comprehensive model might explore the degree to which a society is becoming more (or less) "politicized," that is, a society in which the pursuit of power, lawful or unlawful, is the scope value that employs other values as bases. Each dimension of the social process suggests a lateral model that includes all value-institution processes. (For example, the interplay among participants, perspectives, and so forth.)

Our immediate concern is with the authoritative process of decision, designated as follows:

"Precipitating events" are the interactions in the social process initiating a sequence of activity that presently involves an official decision maker. The "preparatory events" are the interactions prior to submission to an official arena; they include attempts to resolve controversies directly, or preliminary steps to get ready for the official arena. "Parallel" events are events similar to precipitating events in all save that the latter led to an official arena.

Even this simple model is of vast importance for any adequate appraisal of legal process. It draws attention to the interface between the social process as a whole and the routing of some operations through the authoritative agencies of the body politic. What percentage of potential initiatives are *not* taken, and remain among parallel events? We are especially sensitive to the significance of this point when we think of police and courts. Sporadic research supports the common sense view that in many value-institution sectors only a tiny percentage of the circumstances of a probable violation of prescriptive norms are brought to official notice. The appraiser's task is not only to establish the facts at a given time and to characterize them as on a rising or falling trend, but to account for them. Any feature of the social process is open to scrutiny as a possible explanatory factor. In particular, an appraiser can be guided by the broad hypothesis that *the lower the value position of the participant who suffers a value deprivation the less probable the resort to official areans; and, once there, the less likely to obtain a value-indulgent result.*[14]

In this connection we must make an important though often neglected point. From our point of view as scientific observers of events, we cannot rely on official assertions as establishing the facts at the pre-arena phase. The response of courts and other official bodies is itself an object of investigation, not a body of definitive data about other events. Although appraisal institutions will not ignore the data presented to or by final decision makers, they will try to organize independent means of observing the flow of events.

[14] A miscellany of researchers tend to corroborate this broad hypothesis. We need remind ourselves only of the continuing deprivations to which the powerless, the uninformed, the poor, the weak, the untrained, the unloved the disrespected and the heretics are subjected. For a preliminary approach to an appraisal of the working of our "criminal" and "civil" codes see Arens and Lasswell *In Defence of Public Order; The Emerging Field of Sanction Law* (Columbia University Press, 1961). On other dimensions, see Rogow and Lasswell, *Power, Corruption and Rectitude* (Prentice-Hall, 1963).

"Pre-decision events" in the arena are interactions that occur up to the point when the decision makers begin to prepare their response. At the intelligence phase pre-decision includes the claims to authenticate a given set of facts for dissemination; the decision begins when officials commune among themselves at the end-phase of the presentation. At the promotion phase, for example, pre-decision events may be the hearings held by a platform committee and the recommendations that emerge from the committee; the formal decision may be construed as the response of the convention. Similar lines must be drawn by the scientific observer of the prescribing process; he may take the final debate and vote of a legislative body as the decision. Some invocations may be so abbreviated that action is initiated by an official (with no antecedent claims), as when a police officer puts a summons on the windshield of a parked car. Some invocations require elaborate inquiries followed by grand jury action. Applications are similarly varied, ranging from an official who initiates an order to his staff to repair a bridge, even though he has heard no suggestions or protests by anyone, to acts taken after much non-official pressure. Termination may proceed in much the same way that affirmative prescriptions are made. The staff work of an appraisal agency may lead up to a final discussion and vote on a report.

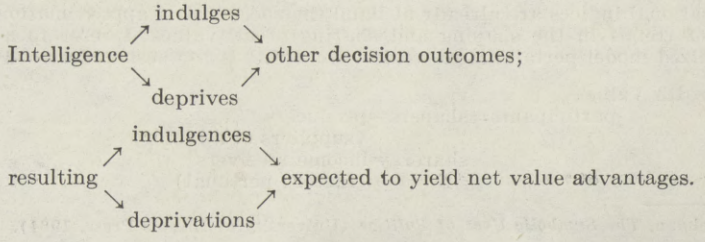
Any attempt to explain response will consider "Co-arena" events that may influence the decision maker. Efforts by propaganda groups to drum up support for any particular participant may influence the radio-TV broadcast on the conversation to which decision makers are exposed at home, or club, or in amusement centers.

The immediate outcome at the decision stage is a plus or minus response that indulges or deprives all the previous participants. Not only the immediate parties are involved, but all who are identified with the assertions of fact, the categories of claim, or the justifications that receive acceptance or rejection. The techniques of content analysis are available for describing (*a*) the statements—or statement equivalents—made in any recordable interaction at any phase of the sequence of pre-arena, or post-arena events; (*b*) the value indulgences (acceptances) or deprivations (rejections; total, partial) of the statements. As indicated the relevant statements are (*a*) assertions of identity and of demand for value indulgence or deprivation (by the decision maker, by others); (*b*) fact-form statements alleged to be relevant to the contingency components of a prescription; (*c*) statements of authoritative prescription alleged to justify the demand under the asserted contingencies; (*d*) other statements that may affect response (such as threats or promises of political, economic, and other value indulgences or deprivations). Each statement can be further characterized: for example, according to alleged authoritativeness in terms of statutes, treaties, legislative intention, official decision or opinion, opinion of commentation and so on.

Decisions and all other participants can be compared according to community (major culture), class, interest and personality factors.

"Post-outcome" events include the fate of non-immediate parties; it also involves subsequent events, whether direct or indirect parties are involved.

The social and decision process maps are handy guides for the generating of models by scientific observers (SO) for the study of appraisal. One may begin, for example, with conventional structures, officially or semi-officially specialized to the seven decision outcomes: intelligence, promotion, prescription, innovation, application, termination, appraisal. The details of the model can be worked out to explore hypotheses suggested by a strong or weak version of the optimalization postulate, according to which participants in any interaction are acting in ways that can be predicted by examining their expected net advantage (in situations where there is opportunity to choose). Quite generally, then, the flow of the decisions taken at any of the seven outcome phases will initiate responses at the other decision phases according to the perception by effective elites at these phases of how they are actually or potentially affected; the resulting decisions will depend on expected net value indulgences. In synopsis:



Assume, for example, that intelligence-planning agencies vote to release a set of regional or national plans. As a result promotional agencies may decide to agitate for the adoption of the plans, if it is believed that the plans are popular, or soon will be; and if the agitators expect to be better off by supporting rather than failing to support these programs. The prescribing structures may legislate the plans, on the corresponding assumptions. The decisions to invoke the execution of the plan may be made by administrative organs grounded on similar considerations; likewise, by the agencies who are to apply the initiatives. A council on statutory revision may decide to endorse the termination of measures that are largely obsolete, but would stand in the way of smooth administration, and arouse criticism of the council for failing to act. Appraisal agencies may decide to give priority to the task of assessing the efficiency with which the new program is carried out, and the degree to which the proclaimed objective—reducing the "flight to the suburbs"—is reached.

A decision model is not limited in scope to a single sequence of interaction among the structures officially charged with decision making and execution. The scientific observer (SO) seeks to describe the *stable* pattern (the system) since these are the institutions comprising the constitutive process of the body politic. One object of the appraisal task is to identify the degree of continuity or change in the decision process, with particular reference, where popular government is the proclaimed norm, to any movement toward or away from democracy. Other objectives refer to impacts on the other sectors of society, and the appraisal according to the strengthening or weakening of institutions that harmonize with the overriding goals.

The problem of identifying the decision process at any given period may be complicated by the circumstance that the level of crisis is so high or low that the potential responses (the predispositions) of the system are not fully revealed. By limiting attention to peaks of general war or to the valleys of depression, for instance, the *SO* may underestimate the strength of the latent predisposition that will later manifest themselves in a return to pre-crisis modes of functioning. In both world wars and in the great depression of the '30's' many analysts were misled by faulty empirical procedures into exaggerating certain "structural" changes in American public order, forecasting an immediate eclipse of congress, of the biparty system, of the courts and so on.

A truly satisfactory model of the decision process specifies the stable modes of interaction in the system in the full range of contingencies in which no "structural" change will occur; and, further, will anticipate the "structural" innovations that will emerge when these contingent limits are exceeded, plus the characteristics of the changes in the social process outside the decision process that will induce their occurrence.

It would be too sanguine to surmise that this degree of accomplishment can be counted on in the immediate future. However, when kept in mind, it may spur achievement, and act as a reminder of the large relevant configuration. Such a contextural reminder may keep us from exaggerated claims and hopes when specific sub-contexts are successfully dealt with for short periods of time.

Fortunately it is not necessary to await a perfectionist millennium before appraisal judgments can benefit from exposure to trend and explanatory information about interdependencies within the decision process, or between decisions and all other value-institution sectors of society. For example, time sequence data about the flow of decision can challenge and clarify conventional preconceptions. Barring relatively unstudied and extreme crisis situations we can expect to accomplish results parallel to the discovery by economists of cyclical fluctuations of various amplitude and period within the production, distribution, investment and consumption process. Hence we will be better equipped to identify a genuine institutional innovation (reformist, counter-reformist, revolutionary—counter-revolutionary) when it occurs, and to speak with more confidence about the incidence of the catharsis effect of the legal system (the tension-removing role as against the institution changing role).[15]

Operational indices are already at hand that permit first approximations to be made of trends in the shaping and sharing of all values. I refer to a highly generalized model pertaining to wealth, since this is the best understood:

Wealth Value—
participants=shapers=producers
(suppliers of a factor)
sharers=income receivers
(factor; personal)

[15] Edelman, *The Symbolic Uses of Politics* (University of Illinois Press, 1964).

Wealth Value—Continued
outcome=gross=units available for disposition
units used up in production
net=gross income
depreciation on culture materials
specialized to wealth
effect=initial wealth
+ or —
net income

Two other values:
Enlightenment Value—
participants=shapers=reporters, researchers, forecasters, storers (librarians, etc.)
sharers=learners (of accumulated knowledge), viewers, readers or listeners to news.
outcome=gross=volume of news reports, research reports, forecasts, storing, exposures to media, exposures to educational presentations
net=gross outcome
loss of knowledge
effect=initial knowledge stored
+
initial level of reporting (expected volume)
+
initial level of forecasting
+
initial level of exposure to media
+
initial level of exposure to educational presentations
+ or —
net outcome
loss of knowledge

Power Value—
participants=shapers=authorities and controllers
+
controllers without authority
=sharers
outcome=gross=favorable position in final alignments
+
pivotal role in pre-outcomes
+
initiating role in pre-outcomes
net=gross
unfavorable positions and roles

effect
initial authority and control position
+ or — outcome (terminal) position.[16]

Structural description goes beyond such functional categories to describe fundamental institutional patterns; in our case a goal model such as a public order of human dignity, is used as the reference model, and the aim is to disclose structural changes that are more (or less) congruent with the goal. The net structural effects at the end of a time period can be expressed for each value as follows:

Participants—
initial individuals and organized groups
+ or — changes (above selected critical frequencies in this and all categories below)
Perspectives—
initial doctrines, prescriptions (formula)
+ or — changes

[16] For the other values see Lasswell, "Decision Seminars: The Contextual Use of Audio-visual Means in Teaching, Research, and Consultation" in Merritt and Rokkan (eds.), *Comparing Nations; The Use of Quantitative Data in Cross-National Research* (Yale University Press, 1966, 499–524).

Situations —
initial organizations (centralized, decentralized; concentrated, deconcentrated; governmentalized, liberalized; pluralized, unitized; individualistic, regimented)
+ or — changes
Base Values—
initial upper, middle, or lower position
+ or — changes

The trend data called for here do not provide an answer to the appraiser's task of assessing the impact of law on society, although the data to delimit the issue; for instance, they make possible a broad analysis of the probable consequences of political instability, or of changes that seem to have begun in some other sector. Available methods do, however, make it practicable to intensify the study of the significant interactions for the purpose of disclosing the sequence of value indulgence-deprivation, and of continuity or change in institutional myths and operations.

The scientific observer (SO) must distinguish between his perceptions of the participant observers (PO), and the perspective that he, acting on the basis of all information, is able to make (the scientific observer, *SO*). The importance of giving full weight to the *PO* is evident, since every value-institution is involved. Consider, for instance, a precipitating event. If the deprivation is a murder, it is obvious that if action is initiated, someone other than the sufferer of the extreme deprivation must move. From the *SO* point of view the perspectives of the target of deprivation (or anyone else) is part of the record of the *PO*'s point of observation, and may or may not correspond to his own viewpoint.

Consider the differences that may be found between the perspective of the deprivation—receiver and the *SO*. Perhaps the recipient of discourteous treatment, for example, may not perceive that he is the target of a deprivation of respect (at least at the conscious level). The *SO* may, however, have no doubt about it.

The decision maker's response may also be differently perceived by *PO*'s and *SO*'s. A court's judgment, for instance, indulges or deprives all who have committed themselves at the pre-arena or pre-decision phase. Not only the plaintiff and the defendant, but their witnesses and counsel, are rebuffed or rewarded; and all who are identified with a category of claim or justification are affected. One neglected and relevant appraisal problem is to ascertain, by proper sampling, the perceived impact of official decisions by every official organ on immediate participants, and to follow these estimates through time. Under the stress of an adverse judgment many assertions may be made about one's future conduct. Re-interviewing may show that these predictions are not fulfilled; in the perspective of time the official result is viewed with equanimity.

Although the foregoing exposition has emphasized the importance of examining value indulgences and deprivations at the decision phase, it should be asserted once more that value analysis is essential throughout the pre- and post-phases as well.[17]

As a means of obtaining immediate information about impact and of formulating hypotheses about coming effects, it will be important to interview panels of experts from the various bars, which are highly differentiated by official agency (the FCC, SEC, etc.) and client (corporation, trade union, etc.). What kind of advice will they give to clients in the light of the decision? When interviewed later, the panel may be asked to report on the type of advice actually given, concurrently a panel of policy makers can report on the advice (as they heard it) and the choices actually made. The *SO* can compare these interview data with other indications of effect.[18]

Note that references to decisions may be mediated to laymen as well as experts through the general channels of communication. In discovering whether "the law" has changed, the frequencies of expectation as to the appropriate prescrip-

[17] For a field study that provides pertinent information about the pre-court interplay of officials and community see Skolnick, *Justice Without Trial; Law Enforcement in a Democratic Society* (Wiley, 1966).

[18] We give prominence to the bar as the most skilled and enlightened interest group that responds promptly to the flow of official decision. Note that panels of stable personnel can be matched with panels whose personnel varies. Panel technique can be adapted to business corporations—in fact, to every continuing organization in society—for the purchase of accessing the impact of current as well as old official prescriptions on the policy making process within each. Trend information of great importance is available in the researches of many historians, notably by Willard Hurst and those whom he has inspired.

tion can be summarized for expert and lay components of the context by utilizing all sources of inference about such expectations (content of periodicals and other media, reports of panels of experts and policy makers selected by territorial and pluralistic position and so on).[19]

As indicated before, we are particularly interested in the impact of a decision, or stream of decisions, on the official process itself. (The effective allocation of authority is the "constitutive" process). A given result usually is perceived as a success or failure for specific individuals, factions, programs and strategies inside an agency ("liberals" versus "conservatives", "spenders" versus "savers", "doves" versus "hawks", and so on).

Similarly an agency relatively specialized to a decision phase, like prescription, may go up or down in popularity and other measures of influence in relation to agencies of the same kind. ("Senate" versus "House"). Further, the agencies specialized to one decision phase may rise or fall when compared with another ("Congress" versus "Court").

It is ultimately necessary to describe the changes in the authoritative and controlling codes of the legal system, and of assessing both concurrent effects throughout the social process, or subsequently. Hence information about any changes of expectation about authoritativeness that result from a fresh flow of decisions must be put in the context of *all* the prescriptive codes that the *SO* regards as presumptively applicable to a given interactive situation (in power, enlightment and all other categories). The relevant data can be obtained by several methods, including direct interviewing of participants at the seven phases of each organized or unorganized policy process. Formally:

Outcomes	Effects
constitutive code	co-effects in
supervisory code	pre-outcome time;
regulatory code	subsequent effects
enterprisory code	(at each outcome phase
sanctioning-corrective code	of policy processes
	throughout the social
	process)

By way of quick characterization, we have noted that the constitutive code covers the allocation of authority and control. The supervisory code includes the prescrptions applied when private parties fail of agreement about their obligations and turn to community decision makers. The regulatory code refers to the prescriptions designed to maintain the social process within structural limits ("freemarket," "free forum" and so on). The enterprisory code covers the arrangements for the administration of community wide operations by the government (operations that are perceived to involve to an important degree the shaping of values other than power: e.g., postal communications, health installations, schools). Sanctions are the measures (whether deprivational or indulgent) that are utilized for the purpose of obtaining conformity to prescription. Corrective measures are aimed at deviants who are insufficiently exposed to the norms of the body politic, who are psychophysically incapable of perceiving or conforming, or who are characterologically handicapped by severe internal conflict.

An auxiliary model that underlines a principal dimension of law in society describes the degree to which sanctioning and corrective policies (expressed in prescriptions) are effective, and the consequences of the degree of effectiveness or ineffectiveness achieved:

TABLE 3.—*Sanctioning-corrective policies (prescriptions)*

objectives	degree of risk	time; later time)
prevention	of base values	provocations reduced
deterrence	committed	deviations contemplated,
restoration	base values	not executed
rehabilitation	lost	deviation blocked
correction	value realized (or	deprivations compensated
value cost	unrealized) (same	modifications achieved

Policies of prevention modify institutional practices in order to reduce provocations to deviate from norms.[20] During any given period this may include meas-

[19] An exploratory study is Newland, "Press Coverage of the United States Supreme Court," 17 *Western Political Quarterly*, 15–36, and "Legal Periodicals and the United States Supreme Court," 3 *Midwest Journal of Political Science* (1959) 58.

[20] See an exploratory use of such categories, for instance, in McDougal and Feliciano, *Law and Minimum World Public Order, The Legal Regulation of International Coercion* (Yale University Press, 1961). Consult Arens and Lasswell, "Toward a General Theory of Sanctions," 49 *Iowa Law Review* (1964) 233.

ures to induce employers to improve the conditions of work. The official value cost would include any personnel and facilities devoted to an educational campaign; or grants in aid to provide recreational facilities near congested factories and homes. The success or failure of the policy can be assessed in part by changes in environmental conditions that are the result (direct, indirect) of official action. (Estimates can be made of the value gains resulting from increased security, less the official and non-official value costs incurred.)

Policies of deterrence aim at increasing the perceived cost of contemplated deviation among potential targets of sanction. Multiplying the number of patrolmen, increasing the number of persons brought in for questioning, are among the routine measures aimed rather expressly at obtaining the result sought. A drop-off in "precipitating events" may be attributable to such strategies, and the realized values (official, non-official).

Policies of restoration are called into operation when violations begin, or begin to increase; and the obvious purpose is to bring the impermissible value destruction to a halt, and to restore a situation in harmony with public order. In international politics this is the use of armed forces to repell a territorial aggressor with the least possible loss of lives, material resources, and institutional disruption.

Rehabilitation continues the policy of restoration, seeking to replace destroyed values.

The aim of correction is to modify individuals who are threats to public order as a result of underexposure to culture, incapacity or conflictual character; and the results are likely to be open to professional evaluation.

We note finally that all policy objectives, whether sanctioning-corrective or not must eventually be appraised according to a cost-effectiveness model.[21] Highly generalized:

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[21] The forthcoming *International Encyclopedia of the Social Sciences* will give an up-to-date account of the methods now available for model building and empirical research. See especially the techniques outlined in *Communication Sciences and Law: Reflections from the Jurimetrics Conference* (Allen and Caldwell, editors, Bobbs-Merrill, 1965). Among the many valuable chapters are Caldwell, "Logic and the Legal Context," and Cowan, "Decision Theory in Law, Science and Technology." An important innovation in the technique of content analysis is Stone, Dunphy, Smith, and Ogilvie, *The General Inquirer: A Computer Approach to Content Analysis.* (The M. I. T. Press, 1966). A convenient summary of technique is in *Interviewing—Its Forms and Functions*, by Richardson, Dohrenwend, and Klein (Basic Books, 1965). See Smigel, "Interviewing a Legal Elite: The Wall Street Lawyer," 64 *American Journal of Sociology* (1958) 159–164. On surveying: Hyman, *Interviewing in Social Research* (University of Chicago Press, 1954). The most sophisticated quantitative tools that have been applied to the study of court decisions are by Schubert, especially the elegant use of multiple factor analysis in *The Judicial Mind: The Attitudes and Ideologies of Supreme Court Justices*, 1946–1963. (Northwestern University Press, 1965).

An important trend description of changes in the predispositions of the court can be inferred from Smidhauser's summary of the social background of *The Supreme Court* (Holt, Rinehart and Winston, 1960).

Decision studies typically focus on the flow of commitments (votes, fights) among decision makers, analyzing the unanimous and split alignments in an attempt to explain response (R) according to explanatory models that identify relevant environing factors (E) or predispositional factors (P). The most inclusive model explores a hypothesis derived from a strong or weak form of the optimalization postulate according to which participants in any interaction act according to expected net value advantage (in situations in which there is capability of choice). Sample sub-hypotheses refer to past or current exposures to participants of the same or different community, class, interest, or personality group; to words (or word equivalents) and deeds perceived as involving value deprivations and indulgencies according to the component of the self (e.g., a "liberal" communication to or by a participant may be selected by the *SO* as an indulgent statement in terms of those exposed to an urban community, and a negative for the rurals; as indulgent of those exposed to upper class New England culture; or of those who have been exposed to an interest group concerned with individual rights against interference by officials, or of generous, outgoing personalities (or of a combination of such factors). The specification of factors may include "time, space and figure" characteristics that are taken as value indulgent or deprivational (for instance, long sessions in a hot room may increase the likelihood that a decision maker will revert to the more intensely held components of the self-system, and act with exceptional speed to decide against an alien who is represented by low class counsel who summons low class witnesses and cites unacceptable authorities in an aggressive personal style). See Nagel's approach in "Testing Relations between Judicial Characteristics and Judicial Decision-Making," 15 *Western Political Quarterly* (1962) 425–37. A study of trends in interofficial perspectives is Tanenhaus, "Supreme Court Attitudes Toward Federal Administrative Agencies, 1947–56—An application of Social Science Methods to the Study of Judicial Process," 14 *Vanderbilt Law Review* (1961) 473.

TABLE 4.—*Value Cost-Effectiveness*

objectives	value cost degree of risk of base values committed base values lost	value realized (or unrealized) (same time; later time).

The foregoing indications of theoretical models now available sustain the conclusion that comprehensive intellectual tools are now at hand to apply—and improve in the course of application—to the study of law's effect on society. A further, intimately related step is necessary. It is important to emphasize the repertory of empirical procedures for making primary observations and for processing data in ways that relate them to the theoretical models. An exhaustive inventory would, for example, itemize the methods of survey research, of content analysis, of elite (and non-elite) comparison, of intensive interviewing and testing. Processing technique includes use of the computer, and of mathematical and statistical procedures for the manipulation of data to exhibit correlation and interdetermination.[22] In this dimension, too, we are comparatively well-equipped for a more deliberate and coherent approach to appraisal.

5.

What pattern of organization and policy integration is best adapted to the task? Arrangements must be made to articulate several data gathering and processing operations with one another. For example, "item data" will be needed for the entire social context, national or not: or figures of population, resources, and interaction. The expression "item data" is intended to imply that the information is obtained in a relatively routine manner and involves the use of comparatively non-intensive procedures for relating the *SO* to this field of observation. Data about number of reports, promotional broadcasts, bills introduced and passed, arrests, cases disposed of by the courts fit this category.[23]

It is also essential to obtain "distribution data on perspectives," since so much depends on the expectations, demands and identities of the participants in the social process. Interview findings yielded by survey research exemplify what is meant. In principle it is practicable to sample the population and show who, located where, occupying what status in the social process of any type of community, entertains what perspectives, with what intensity. Perspectives can also be inferred from analyses of the content of mass media, since the selection of news and comment at least indicates what perspectives are publicly shared by the medial controllers.[24]

Hypotheses stimulated by item and distribution data on perspectives can be supplemented by "intensive data" from selected communities, pluralistic groups, and individuals. The reference is to information obtained by participant observers, by interviewers who conduct prolonged interviews, or by givers of tests.[25]

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[22] The cost-effectiveness model is an input-output design that must be supplemented by explanatory models in order to provide policy guidance. Input-output flows are not usually constructed to include inferences obtained by surveys, for example, of perspectives. Hence techniques are not developed to obtain information about the events available at the focus of attention of an actor, the events actually perceived of those available, and the changed identifications, expectations and demands resulting. Modern techniques of context analysis were evolved to overcome this limitation in Marxist political science, economics, sociology and jurisprudence, and to correct the built in distortions of a system that left out crucial variables in human interaction, and hence was notoriously poor as a projector of policy. See Lasswell, "The Qualitative and Quantitative in Political and Legal Analysis," in Lerner (ed.), *Quantity and Quality* (Free Press, 1961), 103–116.

[23] See Russett, Alker, Jr., Deutsch, and Lasswell, *World Handbook of Political and Social Indicators* (Yale University Press, 1964).

[24] Studies of innovation, diffusion and restriction of political myth can be conducted in social contexts that are national, transnational, or subnational. Research is now under way to intensify the provisional results reported for a sixty year period in Lasswell, Lerner and Pool, *The Comparative Study of Symbols* (Stanford University Press, 1952), and other publications of the study of world revoluntionary movements.

[25] See the acute discussion of interviewing problems in the "professional interviewing a professional" relationship in Weyrauch, *The Personality of Lawyers; A Comparative Study of Subjective Factors in Law, Based on Interviews with German Lawyers* (Yale University Press, 1964). A study concerned with small group dynamics is Danielski, "The Influence of the Chief Justice in the Decisional Process," in Murphy and Pritchett (eds.), *Courts, Judges and Politics* (Random House, 1961); also, Bevan, Albert, Loiseaux, Mayfield and Wright, "Jury Behavior as a Function of the Prestige of the Foreman and the Nature of His Leadership," in *Journal of Public Law* (1958) 419.

The data obtained by the procedures mentioned must of course be processed to bring out correlations and also to disclose causal connections. Trend and conditioning models of the impact of decision on the social process can be kept up to date by the development of storage and retrieval networks that service all users.

Another means of obtaining data is relevant here, namely planned innovation. We refer to *prototyping*, in which a new institutional practice is undertaken primarily for the advancement of knowledge. *Interventions*, by contrast, explicitly enter the cross currents of a community arena. At first glance an innovation may seem to be an intervention because it is introduced by an official (as when prisoners are regrouped in cottages). But inquiry may show that the initiative was taken by a scientific observer who predicted that such a change would reduce destructive tension and contribute to genuine correctional change, and a few officials were enough interested quietly to go along with the plan. If an innvoation escapes disturbing political attention during its tryout phase, it is possible to evaluate the new social practice satisfactorily. The consequences of interventions, though also open to appraisal, are usually complicated by "uncontrolled" power variables.

Prototyping differs from laboratory or true field experiments since prototypes are planned for the purpose of evaluating institutional practices. Practices are not reduced to congeries of variables; they are taken as a whole, and if regarded as successful, may spread relatively intact through society.

The method of prototyping is a particularly useful means of obtaining appraisal data, since efforts to introduce a prototype bring into the open predispositions to which standard measuring methods do not apply. For example, the attempt to introduce a new practice may disclose much deeper unwillingness to share responsibility than can be convincingly demonstrated from questionaire results or from unvalidated predictions based on interview data. A savagely strong, though largely unconscious, determination not to allow "immoral" persons to achieve autonomy, may influence guards, and higher staff members in prisons or hospitals. This may be matched and sustained by an equally intense and unrecognized demand on the part of the offenders or patients *not* to share responsibility for collective acts. Prototypes may disclose the negative influence of unconscious character traits, and generate retraining and other programs designed to change the sanction process.

In prototyping the *SO* is usually a participant and is therefore subject to *the challenge of continuing self-appraisal* in the situation according to his effectiveness as an instrument for realizing the objectives to which he is consciously dedicated. Prototyping is a means of introducing into society a built-in reminder of the importance of keeping the self as well as the collectivity under perpetual observation.

I have indicated that prototyping is a method of scientific inquiry. It is more. The disclosure of previously unmeasured predispositions in their precise relationship to one another is an important contribution to trend knowledge. Hence projections can be more critically based; goal values, objectives, and strategies are more open to clarification.[26]

If the several operations joined in a comprehensive and continuing appraisal function are to be smoothly coordinated with one another, a balanced network composed of diverse agencies must be evolved. Official organs of appraisal are indispensable components of the process of governing; however, a set of complementary agencies is an essential means of offsetting the self-serving tendencies so deeply rooted in any largescale governmental activity. In coping with the problem our society has evolved a complex mutually influencing pattern of private channels, some of which are profit making, some not. I desire to emphasize the role that can be taken by private, professional persons and agencies in the proper exercise of the appraisal function.

Although the point is often obscured by other considerations, the distinctive contrast between a profession and a vocational skill is to be found in the com-

[26] A prototype is analyzed in Rubenstein and Lasswell, *Power Sharing in a Psychiatric Hospital* (Yale University Press, 1966); see Chapter 5 on "Experimentation, Prototyping, Intervention" in my *Future of Political Science*, (Atherton, 1963). An ingenious model for comprehensive and continuing research is outlined by Brodbeck and Jones, in "Television Viewing and the Norm-Violating Practices and Perspectives of Adolescents: A Synchronized Depth and Scope Program of Policy Research," in Arons and May (eds.), *Television Research* (Appleton-Century-Crofts, 1963).

bining of skill with an enlightened view of the aggregate impact of the process with which the skill is concerned. We have no trouble agreeing that a medical profession exists, no matter what its abuses. Knowledge of health is not only used as a means of serving clients one by one; it is a guide to appraising and affecting the health level of the social context.

It is taken for granted in our society that the latent and partly explicit responsibility of a profession can be exercised through a network of specializations that leave many, if not most, members free to serve clients for fees that are set according to market considerations. By contrast, some members of the profession limit themselves to a fixed income, and engage in the maintenance and expansion of personnel (teaching), the improvement of knowledge and procedure (research), and direct service of the whole (e.g., public health or justice). Some individuals play multiple roles in teaching, research, private practice and public service.

The suggestion here is that lawyers and social scientists, in particular, take the initiative in improving the appraisal of legal institutions. The existing network of universities and professional associations can be much more effectively utilized than is done at present. Appraisals can be expedited if a supplementary network of law, science and policy (LSP) centers deals directly with such matters. These centers would work closely with professional associations and private foundations. In order to serve the enlightenment needs of a democratic polity, it is important that the appraisal centers remain independent of, though certainly not hostile to, government. A considerable degree of independence among private and official instrumentalities is indispensable to an uncoerced, competitive flow of appraisal statements made available to elite and rank and file opinion elements throughout the body politic. No matter how great the competence of any center, official or private, genuine power sharing makes it necessary to win public confidence and support by years of effort to serve the community.

LSP centers can stimulate political leaders to improve governmental agencies of appraisal, while at the same time encouraging competent independent appraisal by providing for an ample release of data from official sources. The centers can operate with relatively small permanent staffs; principally, however, we would expect them to serve as gathering places for competent persons on short term appointments, who take leave from universities, government service or private practice. They would become clearing houses for, and coordinators of, research projects of relevance to appraisal involving students who are available for summer experience, or who are taking a pre-or-postgraduate semester in the field. As a means of encouraging parallel initiatives the centers would take responsibility for distributing data whether collected from outside sources, or obtained by original research; the aim would be to assist teaching, advisory and research activities at every level.

As a means of ensuring disciplined consideration of the changing context the centers would utilize and encourage the use of continuing seminars in which individuals of similar intellectual interests would focus on an area, a group, or a topic. The continuing seminars would take full advantage of audio-visual and computer aids, creating a permanent setting in which cues are provided to past, present and future. *A vast network of private institutions of appraisal can be generated with the aim of achieving a full complement of counterpart organizations devoted to appraisal.* Every official agency requires such a counterpart.

Our society has some experience that can be drawn upon in choosing the form of organization adapted to the distinctive problems of private appraisal. It is probable, for instance, that two independent though cooperating branches are needed if such appraisal operations are to succeed. The "policy" branch can take public responsibility for defining the criteria to be applied in the act of appraisal and for release current results and interpretations. The "research" branch must be responsible for the operational indices chosen to give effect to the concept terms used in the generalized criteria agreed upon with the policy branch. Such specific indices are indispensable to the gathering and processing of data. "Freedom of footnote" can be permitted as a means of allowing differences within the organization that cannot be resolved before publication to be made known to the critical listener, viewer or reader. As the years pass the nuances of the task of appraisal will be more widely understood by experts, political leaders and the public at large.

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Finally a word about the likelihood that this recommendation will be realized. It is clear that a pre-condition is popular, not totalitarian, government, since a competitive arena is essential in which alternative statements are tested against one another.

Another pre-condition is a reservoir of competent professional specialists, and a level of theoretical and operational development that is commensurate with the challenge. The thousands of lawyers and social scientists now in active career, or in training, indicate that with improved voluntary coordination, the appraisal function can be effectively performed. The rapid expansion of computers has provided an instrument of data storage, retrieval and analysis of unexcelled usefulness.

Fortunately, counterpart organizations of appraisal are in various degrees of development. Law school faculty members and graduate school faculties are increasingly specialized to the study of every value—institution sector, and to the timely appraisal of performance. Consider the law teachers and political scientists who follow the Supreme Court; the specialists on legislation who examine the Congress as a whole, or influential committees; scholars who keep an eye on Federal departments, commissions and agencies; the reviving concern with state and local government; the expanding study of foreign policy and transnational relations; the proliferating research on communication; political parties, promotional associations, and so on.[27]

In law school teaching the starting point may be the traditional formulas of contract, tort, crime, property, or constitutional law. But the content reflected in teaching materials is changing. In 1910 the case books were snippets cut from appellate court justifications. Fifty years later these snippets are surrounded by material from briefs, legislative debates, administrative records, treatises on economic and other social processes, and on social and individual psychology. Increasingly the legalistic words are shown in context, and the context tends to be more or less deliberately selected to show representative situations in the value-institutions of the total process. By a process of adaptation, largely unconscious, the frame of reference has been building up to motivate and to execute a continuing appraisal operation conducted by non-official counterpart structures. The trend needs to become more explicit, and to be more effectively conjoined with field research.

The trend is even more evident if we examine the proliferation of law school teaching to include courses that relate directly to specific institutions (especially business corporations and other economic institutions). Or to problems (like the law of government regulation of the market, the attack on poverty, or planning at the urban or regional level).

In many schools the students are beginning to take the initiative to bridge the gap between what they find in the books and their curiosity about what difference, if any, the statutes or the cases make in the actual treatment of suspects, for instance, or the disposition of controversies.

Occasionally, too, there is evidence of deliberate attempts with future contingencies in mind, to study the past and the immediately current flow of events. Strictly speaking the anticipation of the future and the development of plans are part of the intelligence phase of the decision process. It is obvious, however, that all phases are interdependent and especially that the study of past or present events gains relevancy when it is stimulated by anticipation of salient contingent occurrences.

I refer especially in this connection to the science and technology that is rapidly emerging for the control of body and mind. We are at the threshold of genetic engineering, of machine simulation of living forces, of contact with life in outer space. Since sanction law depends on conceptions of responsibility, the pressing question is how to define our notions of responsibility.[28] Already the essential principles of content and procedure are reasonably clear. It is more obvious than ever that when we modulate legal institutions we are making an interactive adjustment of one part of culture to other parts. If we prescribe norms having little acceptance, and for which few law enforce-

[27] I refer especially to the structure and techniques of the Committee for Economic Development (CED).

[28] A few reminders: The work of Pritchett, Schubert and many others on the Supreme Court; of Robinson on the flow of congressional foreign policy decisions; of Pool and Abelson on electorate simulation, of Campbell and Associates on electorate responses.

ment facilities are made available by the community, the only sensible thing to do is to change the norm. If, however, the deviations are less common, community support is greater, and facilities for enforcement more abundant, the deviants can be conveniently divided in two categories: those who have standard exposure to the culture and standard capability; those who lack standard exposure or capability.

The former category includes those who have taken a rationally calculated chance of deviating from the norm and of coming out relatively better off in terms of all their values than by conformity. It also includes those who have been exposed to what is regarded in the culture as an extremely provocative environment, either because the deprivations are uncommonly large (the unfaithful spouse) or because the opportunities for gain are exceptionally great (the poorly paid cashier). In this category also comes the individual who is made a target of community counter-deprivation even though the deprivation that he imposed on others was neither sought nor ordinarily foreseeable (liability without fault). Public policy may insist upon responsiblty as the most economc means of spreading deprivation among the capable, or of avoiding the politically disruptive consequences of having no eligible target who can be reached by permissible procedures.

Those who lack exposure to culture norms (supported by learning sanctions) include individuals from geographically or socially isolated groups, especially when the formative environment approves of norms that contradict the norms of the larger community. The category also includes those who are incapable of learning because of psychophysical defect, or whose personality structure, whatever the initial environment, is extremely conflicted. There is a further group whose members may or may not fit readily into the previous sub-divisions. They have rejected the established ideology and identified themselves with the ideology of another body politic whose interests they try to serve by violating the local norms.

The first set of deviants includes the ordinary targets of sanction; the second set poses a corrective problem. They must be kept from acts that damage community values until they have been re-educated to share common norms, or modified to overcome psychophysical defect, or characterologically reoriented (to remove, for example, compulsions to kill or cheat, or to establish internal restrictions on "acting out").

The foregoing distinctions have been phrased with primary reference to individual deviators. The prime target in many situations is the policy process of a particular organization (governmental, business, and so on). The "responsibility issues" are parallel. Are the value deprivations (of individuals; of institutional practice) resulting from acts by the organization the result of a policy process with standard access to knowledge of community norms and to capabilities (resources) and character; or, on the contrary, is the policy process lacking in knowledge; has it fallen in the hands of the senile or the characterologically disturbed (the unscrupulous or the demented)? In the latter case the sanctions appropriate to the situation may be corrective measures, ranging from substitution of personnel to mild or drastic reorganization, or termination).

These distinctions are matters of content; there are accompanying principles of procedure. The officials who are authorized to enforce community prescriptions, including sanctions, need to be chosen from among the culturally oriented, the psycholphysically capable and the characterologically sound; they are most likely to act in harmony with such overriding goals as the realization of human dignity. These procedures for selecting responsibility-assigners are essential components of an inclusive conception of responsibility. Additional arrangements are required to bring to the focus of attention of decision makers the data most relevant to the assignment of responsibility and the execution of the ordinary or corrective measures called for by the two categories of deviants mentioned above.

This means that the appraisal (and intelligence) phases of the decision process must become so comprehensive, selective, up to date, and reliable that information such as the following is at hand: the degree of exposure or underexposure of the different age groups to the various prescriptions of the community (includes summaries by territorial and pluralistic categories—the latter including class and interest environments); the degree of psychophysical incapacity and characterological conflict (by similar sub-divisions of society); the degree of success or failure attending the past use of ordinary and corrective sanctions directed at individuals, or aimed primarily to affect the decision process of organizations.

Besides procedures for obtaining such information the agenda of community decision will require procedures for obtaining alternative interpretations of the relevancy of the information to the details of a particular case. This will be increasingly important as information retrieval procedures permit simulation of alternative policies open to the community decision maker in reference to individuals and organizations.

The conception of responsibility outlined here is applicable to all participants in social interaction, including new forms of life obtained by managing the genetic constitution, by improved self-educating machines, or by contact with space types. If any new participant imposes deprivations on other participants in the social process, a problem of correction may arise if the entity has had insufficient opportunity to learn (and unlearn) appropriate norms, if its basic design or operation is defective, or if extreme internal conflicts are present. Territorial or pluralistic measures of isolation may be necessary to protect community values and institutions (including exclusion from the decision process of the whole).

Our world is already reaching out to scrutinize and perhaps control our spatial habitat on an ever-enlarging scale; and our world has the tools, as yet uncoordinated, to conduct a continuing self-appraisal of the reciprocal impact of its legal and other social institutions, assessed according to a conception of the dignity appropriate to the potential of all that learns (and re-learns), and that contributes to the creative realization of an ever more efficacious set of institutional guesses about the optimalization of humane values. The appraisal phase of decision can aid in effectuating a minimum, and hopefully an ultimate optimum, system of inclusive public order throughout the widest possible domain.

In a "data rich civilization" like ours the demands and the techniques exist for obtaining ever more detailed information about the entire social process and for appraising the impact of past policy on values and institutions. There are obvious dangers to democratic institutions and to the realization of human dignity in every sector. If our knowledge of past politics is a valid basis for inference it indicates that whoever controls information (enlightenment) is likely to control public order. The implication is that a monopoly of information can be a cause as well as a consequence of oligarchical or monocratic control; hence power sharing depends on maintaining shared information for appraisal and intelligence purposes in the decision process.

It is therefore timely to insist on prompt measures to make sure that the computer revolution will be captured for popular government.[29] This depends on obtaining shared access to social process information and to the skills and channels required to present competitive objectives and interpretations of the significance of policy appraisal. This is partly a matter of preserving substantial equality of access among the organs of government; however, this depends, in turn, on the informed vigor with which political parties and pressure groups make themselves effective. And this in no trivial degree depends on perfecting a network of private professional lawyers, social and behavioral scientists who succeed in consolidating a vast, loosely organized federation of counterpart organizations who provide an ever more comprehensive, empirically valided image of the impact of declared policy intentions and strategies on the life of man in society. If unintentional effects are eroding the factors in support of a public and civic order of human dignity, these can be brought to the notice of those in the body politic in time for them to act before ignorance, indifference and special interest have brought about the consolidation of a structural change that is beyond recall. The task of providing for a continuing appraisal of the impact of law on society is an essential, feasible and urgent component of the decision process of a civilization whose higher aspirations, however ineffectively achieved, are to respect life. Such is the emerging opportunity open to law, science and policy.

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[29] A sample of current views on some aspects of the topic can be obtained by examining the Isaac Ray Award Books chosen by the American Psychiatric Association (1953). Lee Levinger has played an important part in mobilizing professional interest among lawyers and law teachers in the use of computers. Part V in Allen and Caldwell (eds.) *Communication—Sciences and Law; Reflections From the Jurimetrics Conference* outlines the technical side. (Bobbs-Merrill, 1965.) See also *Jurimetrics* ed. by Baade, Basic Books, 1963. The universities with common interests in exchanging data have established an inter-university program; The University of Michigan is one of the leaders in taking initiatives for the development of storage and retrieval services. On the current intellectual ferment see Mayo and Jones, "Legal Policy Decision Process: Alternative Thinking and the Predictive Function," 33 *Geo. Wash. L. Rev.* (1964) 318.

Senator HARRIS. In your address to the Association of American Law Schools you quote a statement by yourself and Professor Lasswell as to the ultimate aim of legal education and it is as follows:

> If legal education in the contemporary world is adequately to serve the needs of a free and productive commonwealth, it must be conscious, efficient, and systematic training for policy making.

To what degree, Dr. McDougal, do you think we are approaching the realization of that aim in legal education in this country?

Dr. MCDOUGAL. I think only very, very modestly, sir. Many legal educators today subscribe to this conception of law and to this goal. We have had increasing clarity of goal. There is, however, still a very widespread conception that law is something autonomous and unique, that is different from policy. This is a very esoteric conception that many of us find difficult to understand.

Even among the people who accept a policy-oriented conception of law there is, further, not very much activity as to implementation.

Professor Brown of the Yale law faculty has pointed out that there are not more than 500 people in our whole country who are trained to do consequential research about law.

These 500 are mostly professors in law schools who have to make their living by teaching and doing related work for many hours a week. There is very little money and very little encouragement for such people to make the kind of inquiry that could be made possible under your proposed bill.

Our legal education is, in fact, in a very bad way. Law schools largely assume responsibility for only 3 years of a man's training.

The transition to the profession, refresher training and specialization is left to an uncoordinated group of agencies—national, State, and local—with very little planning on a national scale.

The materials that are available for use in teaching are dependent upon the quality of research that has been done in the law schools. The whole enterprise, I think, flounders upon a lack of resources and a lack of properly trained people.

We have neither the resources nor people to do the kind of things that could be done if our national community did treat research in law with the same dignity that it treats inquiry in the medical sciences, natural sciences, and even in the humanities.

My answer to you is: though we have some increasing clarity of goal, we have had very little progress toward such goal.

Senator HARRIS. My own law review, the Oklahoma Law Review, on which I worked during law school, published this quarter as the lead item an article concerning civil rights of mental patients, written by a social psychologist, Dean Leon Ginsburg, and just yesterday I received an inquiry from the Oklahoma Law Review asking if I might be interested in writing an article on law and the social sciences.

I graduated from the University of Oklahoma Law School in 1954 and I think both of those articles would have been pretty much out of the question for a law journal at that time, which does show a ferment taking place—particularly when you see a lead article written by a nonlawyer on a subject that has to do with social science.

Do you see it quite in that way?

Dr. McDOUGAL. I think we are just at the beginning. I attended a meeting called by the Meyer Institute not long ago on the implications of scientific change for legal developments. One of the speakers was a Dr. Quarton, a psychoanalyst, who talked on the implication of many new kinds of experiments upon human beings. We have just begun the study of the problems that the new medical techniques will raise for a society that cherishes privacy and human dignity as well as knowledge.

I think the example is given as a very hopeful illustration but it is just a first step among many long steps we should be taking.

Senator HARRIS. Is there any source of funds now for law professors, as such, for research in the law as a social science?

Dr. McDOUGAL. Very, very limited. The only foundation which is exclusively devoted to law is the Meyer Institute and it is a creature of four big schools of the eastern establishment: Harvard, Yale, New York University, and Columbia. Its funds are relatively limited. It is supposed to go out of existence upon the expenditure of certain funds. The Ford Foundation includes law in "public affairs." It is one of seven subdivisions in a series of subdivisions, and the amount made available for the whole of law is pitifully small. No other foundation, further, even begins to approach the Ford Foundation in what has been made available.

We have had a study made of available sources, and I hope that Dean Robert McKay, of New York University, will testify before you about the details of this.

There are very few sources of funds. We have very great difficulty in getting funds even for the simplest things.

For example, this summer our law school association is carrying on a seminar at the University of Denver to train young law teachers in social science techniques. It was with the greatest of difficulty we were able to finance that even for 1 year.

This is just one example of many I could give you.

Our national community simply has not made available the resources that are commensurate with the need and what could be done.

I realize we, as law teachers, have not sold the community on the notion that we can contribute more. Part of our job is to establish an image of capabilities of doing better.

Senator HARRIS. Back to your point about the law schools training policymakers. It turns out that way, whether by accident or however, because if you look at the legislative bodies around the country, or the chief executives, you always find a large percentage come from a background of legal discipline.

I believe there are 68 lawyers who are Members of the Senate.

Why do you think that is?

Dr. McDOUGAL. As I indicated earlier, the lawyer is the fellow who is supposed to have the special skill of bringing all kinds of knowledge to bear in establishing and maintaining government. If you take the legal profession in a functional sense—not simply the people who have gone to law school or taken a law degree—the lawyer is a specialist upon the authority component of social process. It is his job to manage the organization of authority for community ends.

I would like to underscore and footnote what I have just said. It seems to me that all law is inevitably policy in the sense that it has

consequences for the production and distribution of values in the community.

All policy is not, however, necessarily law. Some decisions may be taken by violence or by calculation of expediencies or just by rolling the dice.

The people who castigate policy-oriented research do not seem to understand that all decisions in authoritative process do have policy consequences. The only difference between observers of such process is in the degree to which they explicitly recognize that their inquiry is in fact policy-oriented.

The policy consequences of inquiry are always present whether the observer knows this or not.

The man who says he is not interested in policy-oriented research is deliberately blinding himself.

Senator HARRIS. Legal education, it seems to me, tends to say to the lawyer that he is some sort of catalyst in a legal situation. He is, in effect, an unmoved mover. He is outside the process.

It seems to me he is, in the process, of policymaking all the time whether he consciously realizes it or not and it seems to me that training for this purpose has to be more consciously directed to account for that fact in legal education.

Dr. MCDOUGAL. If we could improve our research, then we could improve our teaching, and, hence, the quality of lawyers.

Senator HARRIS. That is why I am asking you about legal education because I think high quality research inevitably has a great impact on education and scholarship, itself.

It affects the efficiency of the whole governmental process, our constitutional structure, the way we organize our resources and plan and develop them, the civil liabilites we can afford, and so on.

Dr. MCDOUGAL. The potentialities are simply limitless.

Senator HARRIS. Don't you think, too, another reason, perhaps unconsciously, that lawyers constitute a great percentage of those in political office is that whether they realize it or not, they are trained for adversarial roles which is a central fact of the political arena. And, it seems to me, if there is an ultimate truth in any given situation the best way to get at it is through an adversary type proceeding. You might add that the lawyer-client relationship is almost like the Apostle's, where one lays his hand on another and he receives greater power than the giver had.

It seems to me lawyers, in that situation—the client doesn't buy his soul, but his reputation, according to certain ethical standards. The same is true really, in the political process, where the people give him more responsibility than they have in their power. He doesn't just represent them, he does other things, he leads, for example.

Dr. MCDOUGAL. I think I would agree with you.

I would add to the adversary and client relationships the tremendous confidence we have in our society in the whole constitutive processes of government. In all these processes authority is a most important element: The expectations of people about who should make a decision, by what criteria, by what procedures, and so on.

The lawyer is the fellow trained to work with authority and the people who have not had this training are at some disadvantage with respect to the people who have.

I think this is one reason why we get more lawyers. This is the skill for which they have been explicitly trained. Other people pick it up by experience but the more explicit the training, the better.

Senator HARRIS. I wonder if we were to focus on law as a social science, if we would not have, almost inevitably, considerable impact on the way law courses are taught.

I know that once you get into the case method early in law school and then go on to such courses as international law, or legislation, or even equity, you become aware of a difference because they are not nice, easy, doctrinal case method-type courses.

Wouldn't you necessarily change somewhat the way some courses are taught?

Dr. MCDOUGAL. I think great change would be inevitable. The case method is just the beginning of realism. The appellate opinion is but the bare bones of the case. If a case were studied as social science requires, inquiry would extend to all of the events that give rise to the controversy, to precisely how the controversy is presented to decision makers, to the possible consequence of alternative decisions, and to the consequence of the decision in fact taker.

The more knowledge we have about such matters the better we can make our law, the better law we can teach.

I think you are quite right: More knowledge might change our methods of teaching, the contents of what is taught, and the consequences of the teaching.

Senator HARRIS. As I have said earlier, I think when Dr. Hazard testified, perhaps the most depressing course I ever took was one in criminal law which was almost totally legally oriented and it seemed out of touch with the real needs of society. It seems to me a contradiction in that legal education is to train policymakers.

Dr. MCDOUGAL. I think the President's report on the Crime Commission is documentation of that.

Senator HARRIS. Let me say this is a very stimulating discussion for me and an honor to have you here. I appreciate your testimony and also your participation in this.

Dr. MCDOUGAL. I appreciate the opportunity and I assure you that many of us will help in any way we can, even to the point of organizing support.

(The statement previously referred to follows:)

STATEMENT OF PROFESSOR MYRES S. MCDOUGAL

LEGAL EDUCATION FOR A FREE SOCIETY: OUR COLLECTIVE RESPONSIBILITY

Some twenty-five years ago a colleague, Professor Harold Lasswell, and I suggested, in the article "Legal Education and Public Policy: Professional Training in the Public Interest",[1] that a first indispensable step toward the effective reform of legal education in our country was the clarification of ultimate aim. The ultimate aim we urged was that "if legal education in the contemporary world is adequately to serve the needs of a free and productive commonwealth, it must be conscious, efficient, and systematic *training for policy making*." [2] "The proper function of our law schools is," we insisted, "to contribute to the training of policy-makers for the ever more complete achievement of the democratic values that constitute the professed ends of American polity." [3] The principal impedi-

[1] 52 Yale L. J. 203 (1943).
[2] Ibid., 206.
[3] Id.

ments to our schools accepting and implementing such a goal were, we found, in derivation from a continuing narrow conception of the role and nature of law and legal institutions, both a shapeless curriculum, largely organized about time-worn and overlapping technical legal concepts rather than in relation to community values, and a pervasive lack of emphasis upon many relevant skills in thinking, observation, and management. "What is needed now," we concluded, "is to implement ancient insights by reorienting every phase of law school curricula and skill training toward the achievement of clearly defined democratic values in all the areas of social life where lawyers have or can assert responsibility."[4]

It must of course be conceded that, in the twenty-five years that have elapsed since we first offered this appraisal and recommendation, enormous changes—many for the better—have occurred in American legal education. The important questions which I would today raise with you, however, are whether these changes, as momentous as they have been, are of the character and magnitude necessary in a national community increasingly aspiring—under increasingly difficult conditions in both the lesser communities which constitute it and the larger communities of which it is a member—toward freedom, security, and abundance, and whether we as a collectivity of legal scholars are effectively seizing all the opportunities and initiatives open to us for improving the quality of legal education. In seeking to make my contribution to the general theme of reevaluation about which our program for this meeting is built, I propose, hence, briefly to explore:

first, our present state of clarity about goals in legal education;

secondly, the broad outlines of the progress we have made toward adequacy in serving such goals;

thirdly, the major contours of continuing inadequacies in achievement;

fourthly, and in more detail, the factors which will affect our future achievement and the present configuration of these factors;

and finally, certain alternatives which may be open to us, in the management of such factors, to improve the quality of our performance and achievement.

CLARITY IN GOALS

Happily, it does appear that we are today moving toward a more effective consensus about the major goals of legal education. It is no longer revolutionary to note the inescapable interdeterminations of legal process and social process and to suggest that, while not all policy may be law, all law—when law is appropriately conceived as decision conjoining authority and control—is irretrievably community policy. The recognition is widespread, to add detail, that the kind of constitutive process a community can establish and maintain very vitally affects the freedom, security, and abundance of its public order, and that the quality of public order a community can attain, in turn, largely conditions the character and economy of its constitutive process. In our contemporary community, further, people have largely ceased to think of law as serving only the rather primitive function of maintaining minimum order, in preserving the peace and minimizing unauthorzed coercon, and have come generally to think of it as a positive instrument for promoting optimum order, in securing the greater production and wider distribution of all community values.

It is from this heightened perception of the interdeterminations of legal process and social process that we find emerging a more realistic perception of the social function and responsibility of the lawyer. One widely accepted conception of any profession today is that it is a group which possesses a special skill and has an enlightened view of the goals and aggregate consequences attending the exercise of its skill. From this perspective, we can observe that the legal profession, when functionally rather than conventionally regarded, is composed of the members of our community who have a special skill in the management of processes of authoritative decision and whose distinctive social role is to establish and operate such processes in accordance with basic community policies. A representative, even if extraordinarily eloquent, statement of this now popular conception of the distinctive role of the lawyer may be taken from Mr. Justice Fortas' recent dedicatory address at Rutgers:

"A lawyer is not"—Mr. Justice Fortas stated—"merely a craftsman—or even an artist. He has a special role in our society. He is a professional. He

[4] Ibid., 207.

> is not merely a practitioner of a difficult, exacting and subtle art form. He is a professional, specially ordained to perform at the crisis time of the life of other people; and almost daily, to make moral judgments of great sensitivity. He is the principal laboratory worker in the mixing of governmental prescriptions. His is an important hand at the wheel of our economy because, as lawyer, he has a profoundly important voice in business transactions. And, of course, he is the custodian of the flaming sword of individual justice and personal liberty, as well as of the public order." [5]

It is from this more comprehensive, more realistic, conception of the social role of the lawyer that, as the late Albert J. Harno insisted,[6] our increasing consensus about the major goals of legal education derives. If it is the distinctive function of the lawyer—as official, advocate, and counsellor—to establish and manage processes of authoritative decision, then it must be the overriding goal of legal education to contribute to the enlightenment, and to afford the training in specific skills, necessary to the effective performance of this function. There would, indeed, appear to be widespread agreement today both in the active profession and among legal scholars that the principal tasks of contemporary legal education, in implementation of this overriding goal, extend to three different, but related, types of activities:

1. Professional Training

The transmission from generation to generation of our accumulated knowledge about the management of legal process and training in the specific skills required for high quality professional performance.

The relevant time span extends from the prospective lawyer's first selection of career through pre-legal and law school studies, and transitional and refresher training, to the most intense specialization.

2. Research and Inquiry

Fundamental inquiry about the operations of legal process and the interrelations of legal process and social process, designed to contribute to both the quality of professional training and the improvement of legal institutions and process.

It is axiomatic that what we teach, and the improvements we recommend, cannot rise above our own knowledge.

3. The Improvement of Legal Institutions and Process

The anticipation of emerging problems and recommendation of measures for solution.

The taking of initiative in the promotion of improved policies, structures and procedures. It was suggested by Dean Page Keeton, in his distinguished presidential address in 1961, that a fourth task, that of "acting as spokesmen for the essential and fundamental characteristics of a free society", should be added to this list.[7] In broadest shared perspectives, however, such spokesmanship would not appear to be a separate, distinguishable task: it is rather a pervasive responsibility which must infuse the competent performance of all the other specified tasks. The policy impacts of the lawyer, and the parallel clarifying role of the scholar, extend, beyond great causes and apex operations, to the whole continuing flow of activity and decision at all levels of authority.

PROGRESS TOWARD GOALS

The progress that we have made in recent years in putting these major goals of legal education into controlling effect in this country, and the role of our Association in contributing to that progress, are matters of great pride for us all. In the quarter of a century under review we have seen great schools created or developed over the entire country, from the deep South to the far West, and the once dominant large Eastern schools are now but equals among many. Enough partial successes have been achieved in the performance of the various indispensable professional and intellectual tasks to suggest that, with appropriate financial support and more effective planning on a national scale, still more comprehensive and cumulative successes might be achieved in the future.

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[5] Fortas, The Training of the Practitioner, Dedicatory Address, Rutgers University, School of Law, September 10, 1966.

[6] Harno, American Legal Education, 46 A.B.A.J. 845, 847 (1960); Legal Education in the United States (1953). This reference is a brief tribute to the memory of a great educator and a warm friend.

[7] Keeton, Legal Education, The Legal Educator and the Scientific Revolution, AALS Proceedings (1961) 81.

The more important advances which potentially affect the quality of professional training in all our schools are easily identifiable. A full itemization would include, at least, the following: the more frequent organization of curricula and courses in a framework of social-process events or problems, rather than in the traditional focus upon complementary and ambiguous legal concepts; the introduction into casebooks, or other teaching instrumentalities, of materials designed to facilitate a more contextual evaluation of problems and proposed solutions; the development of new interdisciplinary courses and seminars, drawing upon skills from many fields other than law; a more conscious and systematic effort to afford training in the multiple skills required for the many different professional tasks of the lawyer; and, finally, the development of new and more effective teaching methods, building upon contemporary technologies and techniques and the findings of behavioral science.[8]

Similarly, a considerable number of successful projects in fundamental, policy-oriented research, completed within recent years, offer convincing evidence of the important contributions our scholars might be able to make under more propitious conditions.

In its highly insightful report for this meeting, the Committee on Research offers a partial itemization: "In legal research, the fruits of certain major research undertakings have begun to appear: The University of Chicago jury project, the Columbia Project for Effective Justice, and the American Bar Foundation studies in the administration of criminal justice, and several studies of automobile claims have produced important published results. A number of smaller scale projects which have recently appeared are of equally interesting consequence—for example, the bail studies, Professor Gellhorn's comparative study of the Ombudsman and analagous agencies, Professor Goebel's edition of the Hamilton legal papers, Professor Beutel's study of bad checks, Professor Dunham's study of property transmissions at death, and the recent U.C.L.A. Law Review study of homosexuality and the law, to name only a few."

The continuing contributions of our law schools to the improvement of legal institutions and process are, finally, written large in the activities of law reform commissions, governmental committees, and other recommendatory groups and in an unceasing flow of publication and private promotion.

INADEQUACIES IN ACHIEVEMENT

In our less self-congratulatory moods, however, we all recognize that the progress we are making toward the shared, major goals of legal education is much too glacial. We continue to be beset by too many conspicuous inadequacies in achievement really to enjoy complacency. Despite the spread of great schools across the country, as my immediate predecessor, Dean Vernon Miller, was wont to point out,[9] and as the report of the Committee on Smaller Law Schools' Special Opportunities and Needs for this year emphasizes, there remain several different levels of legal education in our country. Even within our Association there are "big-budget" schools and "little-budget" schools, and though our Association standards are not high, there are many schools and agencies dispensing legal education which we do not regard as meeting such standards. Most importantly, the "little-budget" schools and the non-member schools and agencies are training most of our country's lawyers, and all of us together are not training enough lawyers of any kind, much less with the appropriate skills, to meet our national community needs.

The principal inadequacies in our contemporary professional training derive both from a poor integration of the law-school and post-law-school experiences made available to prospective and neophyte lawyers and from certain abiding weaknesses in the content provided for these experiences. The total formal education of lawyers remains, unfortunately, divided between two different groups of institutions: the law schools, which assume a responsibility only for the first three or four years of training, and a whole conglomerate group of national and local organizations, upon which is imposed responsibility for guiding transition to the profession, refresher training, and specialization. Within our law schools themselves, despite all the movement made toward the functional reorganization of courses, we still have not established comprehen-

[8] The range and potential significance of these interacting advances are indicated in more detail in the reports prepared for this meeting by two committees, the Committee on the Curriculum and the Committee on Teaching Methods.

[9] Miller, Law Schools in the Great Society, AALS Proceedings, Part Two (1965) 33.

sive and homogenous curricula which can map and guide inquiry and training about the whole range of important contemporary community problems. Even with the considerable expansion of interdisciplinary effort, the introduction of social process materials to facilitate contextual analysis remains, similarly, largely superficial and fragmentary. Our expanding emphasis upon training in new skills and upon employment of new techniques of instruction is still but a shadowy approximation of what would appear possible and needed.

Despite all our high aspirations, our schools continue to be, as Professors Casner and Kaplan summarize, "conspicuously deficient" in "cultivating long perspectives in the minds of their students" and in giving them a large view of the law" and of "its place and functions in society".[10] All these inadequacies of the law schools would, further, appear to be but worse confounded in most of the agencies engaged in the legal education which follows law school.

The relatively laggard state in our schools of policy relevant research about law is of too common knowledge. The essential point was made sharply and precisely five years ago by Professor Willard Hurst:

"This series of developments—the great modern treatises, the invention of the law review, the uniform laws movement, and the Restatements—share a limiting factor, useful and great as their accomplishments have been. In their main emphasis, these developments have been essentially taxonomic enterprises. They have been concerned chiefly with doctrinal classification, with developing large frames of ordered concepts, to bring great bodies of otherwise scattered official determination into meaningful relations in terms of values served and rules and procedures to implement values. But all of this went on with relatively little inquiry into the kind of questions which Holmes had raised in *The Common Law*. How does all this official decision making really work and what are the values and accomplishments for which it stands, as measured in its working operations?" [11]

In the same vein, the report for this meeting of the Committee on Research, already quoted above, after noting the insistent new challenges of our time to legal order, concludes:

"Indeed, it does not seem too much to say that unless new research departures are made, the law schools and the legal profession may well become ineffectual and perhaps redundant in regard to the major legal issues of the day and of the future."

Leadership in law improvement, for final illustration of continuing inadequacy, still too often founders upon the lack of properly tested knowledge, failures in the organization of cooperative effort, and the indifference of an otherwise overburdened academic community.

FACTORS AFFECTING THE FUTURE

When we turn from description of where we now are in legal education to exploration of the factors likely to affect our future, we can, I believe, observe at least some modest bases for optimism. Legal education, anthropologically viewed, is a distinctive social process, occurring in a larger community context, and it is affected by factors both internal to itself and having impact upon it from the external context. Comprehensively stated, the factors internal to legal education include the participants in the process, with all their special characteristics and distinctive perspectives, the structures and organizations established, the resources secured and put into use, and the strategies or techniques of inquiry and instruction employed.

The most critical of these factors, however, would appear to be the perspectives of the participants: the demands they make upon themselves for inquiry and teaching, the communities they identify with, and the expectations or understanding they have about law and its potential role in community process. Similarly, the factors external to legal education would include, if comprehensively formulated, all the significant features of the whole "big, blooming, buzzing" earth-space community process, but the most critical factors would, again, appear capable of economic specification in terms, simply, of the demands which the members of the relevant external communities make upon legal education and of the resources which they make available for such education. The resources which

[10] University of Michigan Law School, Conference on Legal Education, The Law Schools Look Ahead (1959) 98, 99.

[11] Hurst, Perspectives Upon Research Into Legal Order, 1961, Wisc. L. Rev. 356, 362.

community members make available for legal education must of course, in realistic derivation from the maximization postulate, be a function of the net advantages to public order which they expect to gain from such subsidization.

The factor affording the best hope for future improvement of legal education, and for persuading the general community that such improvement is feasible and imminent, would appear to be that comprised of the changing perspectives of those of us most directly engaged in legal education.

The explicitly policy-oriented nature of the demands which many contemporary legal educators make upon themselves with respect to both inquiry and teaching has already been sufficiently indicated in our description above of the increasing consensus about major goals. The more recent activities of this Association, and the generous support accorded by many leaders of the American Bar Association, offer ample documentation of the increasing number of people who can identify themselves, beyond their own particular locality or school or organization, with the larger community interest in the whole of American legal education and, hence, concern themselves with national, and even international, goals and aggregate consequences. Most importantly, however, the perspectives of many contemporary scholars would appear to be converging upon the clarification and employment of a new and more comprehensive theory *about* law—jurisprudence or philosophy of law—which could greatly facilitate the acquisition and communication of policy relevant knowledge about the reciprocal impacts of legal process and social process.

Heir to many historic developments in jurisprudence and social thought, and formulated by different scholars in many different equivalences of language, this emerging theory about law seeks, first, clearly to distinguish the observational standpoint of the scholar from that of the more active participant in processes of decision; secondly, to achieve a focus of inquiry which comprehensively and economically locates the processes of authoritative decision, to which lawyers are specialized, in the larger community processes in which they occur; and, finally, to encourage, and specifiy procedures for, the systematic, disciplined, and contextual performance of the whole range of intellectual tasks indispensable to rational policy choice and implementation.

In its search for a focus of inquiry which can increase the policy relevance of both inquiry and teaching, the emerging, contemporary theory about law to which I make reference projects certain important, interrelated emphases:

1. *A balanced emphasis upon perspectives and operations.*—Both the traditional overemphasis on perspectives, as expressed in rules, and the behavioristic exclusive concern for operations are rejected. A focus is sought squarely upon *decision*, as including both perspectives and operations. In this way the formal, manifest content of perspectives may be pierced for observation of choices in fact made, and perspectives may be realistically studied as factors importantly influencing choice.

2. *Clarity in conception of both authority and control.*—Authority is defined, empirically, in terms of the expectations of community members about the requirements of decision, and control as participation in the making of effective choices. Law is regarded as decision in which authority and control are cojoined.

In this conception, both authority and control can be subjected to systematic and disciplined inquiry by employment of all the techniques of modern science.

3. *Comprehensiveness in conception of process of authoritative decision.*—Every community is observed to maintain a continuing constitutive process of authoritative decision which identifies appropriate decision-makers, clarifies basic community policies, establishes structures of authority, maintains bases of power, authorizes implementing procedures, and projects all the many different types of decisions necessary to the making and application of community policy. It is this process which secures and protects the community's public order in the sense that it makes the decisions which affect the shaping and sharing of wealth, enlightenment, respect, health, and all other demanded values.

From this perspective, law is not confined to what courts do and vacuous distinctions between "legal" and "political" become untenable. Inquiry is appropriately extended to all the features of the process by which law is made and applied and their consequences for preferred public order.

4. *The relation of law to social process.*—Authoritative decision is regarded not as something which happens spontaneously or autonomously, but as a response to events occurring in social process, which is affected by these and other events in social process, and which has, in turn, consequences for the future distribution of values in social process.

By appropriate employment of "value" and "institutional" concepts, the claims which people make to authoritative decision, and particular types of decisions, may be categorized in ways to facilitate the comparison, through time and across territorial boundaries, of the factors that affect decision and of the public order consequences of decisions.

5. *The relation of law to its larger community context.*—It is recognized that social process today occurs on a global scale, and that just as we have a global community in science and technology, so also do we have authoritative decision on a comparable scale. The global process of authoritative decision is seen to operate at many different community levels, and in many different interpenetrating patterns of authority and control, in affecting, and being affected by, both the social process transcending all particular communities and that internal to the different communities.

From such perspective, international law and comparative law offer an indispensable circumference for inquiry and teaching which would be consequential, and afford promise of more effective appraisal of contending ideologies and constitutive processes aspiring toward completion on global scale.

The intellectual tasks which the new, emerging theory about law recommends for performance with respect to the area of inquiry so identified are not confined to the lawyer's traditional skill in logical derivation, or even to modern scientific skills, but—in persistent effort to increase the policy relevance of teaching and inquiry—extend to a variety of distinguishable, but intimately interrelated specific skills:

1. *The clarification of community policies.*—Clarification, as recommended, begins with the postulation of a comprehensive set of community goals, and then seeks the more detailed specification of these goals, at all levels of abstraction, in empirical terms which make explicit reference to events in social process. It is urged that, in the degree that economy permits, every choice be related to its larger community context and all important community policies. The procedures recommended for such specification demand knowledge of past trends in decision, past conditioning factors, future probabilities, and possible alternatives, and, hence, require the simultaneous and systematic performance of all the other relevant intellectual tasks.

2. *The description of past trends in decision.*—Past trends in decision are described, not anecdotally, but systematically, in terms of their approximations to clarified policies. The events which precipitate claims to authoritative decision, the factors affecting decision, and the consequences of decision for social process are all described, as indicated above, in the double reference "value" and "institutional" categories which permit effective comparison of decisions and consequences both through time and across community boundaries.

3. *The analysis of factors affecting decision.*—Comprehensive theories in explanation of decision are formulated and tested by the appropriate procedures of contemporary science. Overwhelming importance is not ascribed to any one factor or category of factors, such as those relating to wealth, and inquiry is made for the interplay of mutliple factors. The significance of factors deriving from culture, class, interest, personality, exposure to crisis, and resource environment is explicitly recognized. Rigor is sought in theoretical models, but not by an overemphasis on the importance of measurement or experiment. Many different observational standpoints and both extensive and intensive procedures are employed in data gathering and processing.

4. *The projection of future trends in decision.*—It is sought to make expectations about the future as conscious, realistic, and explicit as possible. The simple linear or chronological extrapolations of conventional legal theory are subjected to the discipline of knowledge about conditioning factors and other pertinent bases of inference. Developmental constructs, embodying varying anticipations of the future, are deliberately formulated and tested in the light of all available information.

5. *The invention and evaluation of policy alternatives.*—Creativity is encouraged by demand for the deliberate invention and assessment of new alternatives in policy, institutional structures, and procedures. It is recommended that every phase of decision process, whether of constitutive process or relating to public order, be examined for opportunities in innovation which may influence decision toward greater conformity with clarified goal. Assessment of particular alternatives is made in terms of gains and losses with respect to all clarified goals and disciplined by the knowledge acquired of trends, conditioning factors,

and future probabilities. Special procedures for encouraging creativity include expansions and contractions of the focus of attention, alternation of periods of intensive concentration and inattention, free association, and experiment with random combinations.[12]

The comprehensive goal values which most contemporary scholars postulate, for clarification and implementation, are of course the values, first clearly expressed in Western European civilization and now slowly diffusing about the globe, which we commonly characterize as those of a free society or of human dignity. These values, which in their most abstract formulation stipulate the greatest production and the widest possible sharing of all the representative values of our culture, today infuse both authoritative prescription and private utterance, and are continuously being defined and redefined, in both decision and scholarship, for relation to particular problems and choices by application of the various relevant intellectual tasks. Fortunately, many of us increasingly recognize that, however much we may aspire to be detached or neutral, our inquiries and appraisals must of necessity have value consequences, and, hence that it is our opportunity and obligation, as specialized intellectuals who are both scholars and members of the legal profession, not merely to relate law to some kind of policy, but rather, and further, to clarify and promote the policies, institutional structures, and procedures best designed to serve the particular kind of public order we cherish.

If we turn from our own internal perspectives to the factors in external context which will in the future most directly affect the quality of legal education, a factor of critical significance would appear to be, as suggested above, the demands which the various communities of which we are members—international, national, and local—will make upon us for improved performance. These demands can scarcely be expected to be less enormous or less intense than the demands which will be made upon law itself. In our recently emerged Nuclear-Space Age[13]—with its expanding and uniformizing civilization of science and technology, its exploding and increasingly migratory populations, and its ever accelerating rate of change in all features—enormous demands are already being made, and can be expected to intensify, in all our communities for improved, more adequate, law with respect to every feature of both constitutive process and public order. In the larger earth-space community these demands are most insistent with respect to such problems as security or minimum order, the minimization of unauthorized violence and coercion; the peaceful change of archaic and inefficient territorial groupings into viable, integrated regional communities; the establishment and maintenance of a more abundant international economy, with a greater production and wider distribution of goods and services; and the more effective promotion and protection of basic human rights, both within the different territorial communities and across their boundaries.

In our own national community, as in other such communities, comparable demands are no less insistent with respect to such problems as the minimization of criminal violence and coercions and control of civil disobedience; improving the efficiency of constitutive process and securing wider participaiton in all effective power processes; the establishment of appropriate community and resource planning and the maintenance of an abundant internal economy, the fruits of which are widely shared; facilitating education and encouraging the acquisition and dissemination of new knowledge; increasing the protection of basic human rights and civil liberties; the promotion of congenial personal relationships and fostering of the loyalties necessary to serve public order goals; the cultivation and dissemination of effective norms of responsible conduct; and so on. It should require little argument that, if all these demands are to be met by improvement in processes of authoritative decision, rather than by assertions of naked power, the parallel demands from all our communities upon legal education for fundamental research, for the training of more and better lawyers, and for leadership initiatives can only be of a magnitude we have not hitherto known.

The unhappy paradox is, however, that the different communities which have so much at stake in legal education have not, historically, been willing to make available to it resources commensurate with the demands made upon it. It

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[12] The sketch here was drawn upon McDougal, Jurisprudence for a Free Society, 1 Georgia L. Rev. 1 (1966).

[13] This appellation is employed in a perceptive statement in Seaborg, Science, The Humanities and the Federal Government—Partners in Progress, XVII ACLS Newsletter 1 (May 1966).

hardly needs documentation to this audience that financial support for legal education throughout our country, whether in state supported schools or private schools, has always been small, and remains insubstantial, both in relation to need and in comparison with the support made available to the physical sciences and the other social sciences. For all the major goals specified above, our law schools have been and are, when high standards of performance are stipulated, relatively impoverished institutions. In more particular, a recent study by Dean Robert B. McKay, made under the auspices both of this Association and of the American Bar Association and through the generosity of the Walter E. Meyer Institute of Law, confirms that during the past decade the support made available for the fundamental inquiry indispensable to both effective teaching and rational law improvement continues to be very modest and comes mostly from a single source, the Ford Foundation. It would not appear that we have been overly successful in persuading our various communities that the net advantages to public order to be gained from our more extensive subsidization are likely to be in fact what they are in potential.

ALTERNATIVES FOR IMPROVEMENT

The important question to which we must now, in conclusion, come is that of by what alternatives, in the management of the factors recounted above, can we improve our performance and increase our contribution to the kind of public order we postulate and demand. For an enterprise embracing as many different activities and affected by as many different variables as "legal education", promising alternatives are of course legion, and different appraisers prescribe many different remedies. As has been remarked about making love to an octopus: it is difficult to know how best to catch hold of the damn thing. From the perspectives sketched above, however, three specialized types of activity, and a proposal for the establishment of a new organization exclusively dedicated to the problems of legal education, would appear to offer greatest promise of immediate, high return in improvement. What is involved in each of these possible alternatives may be briefly indicated.

First, we might intensify our efforts, as Professor Lasswell and I twenty-five years ago recommended and our presently preferred theories about law require, to reorient the basic curricula of our schools toward a more comprehensive and systematic coverage of all the more important contemporary problems of our different communities. The consequences of our basic curricula, and of the principles of their organization, for the effectiveness of our work cannot be overestimated: they map our inquiry and affect what we learn; they organize and condition the student's experiences in his most formative years; and they mold the abiding predispositions of the whole profession. One of our most urgent needs is for still more experimentation in the testing of new ways of organizing the different segments of a curriculum, and of relating the various segments to the whole, for the purposes both of bringing to bear upon every segment the findings and techniques of modern science and other knowledge and of facilitating a genuine, contextual analysis of all problems through employment of all the different, relevant intellectual skills. The entire program for this meeting of our Association has been organized, and the reports of various particular committees have been designed, as you could scarcely escape observing, to stimulate our thinking about this need.

Secondly, we might seek to institutionalize, on a national scale, continuous intelligence and planning functions with respect to legal education and related activities. In our present ignorance about what in detail we are doing and of its consequences for public order, it is difficult for us either to make rational plans for improvement or to persuade our different communities to make available the resources necessary to support projected improvement. What is badly needed is no "one-shot" study, like the famous Flexner report on medical education or the somewhat less influential Reed report on legal education, but rather the establishment and maintenance of a comprehensive overview, with continuing audit and assessment in terms of national community needs, of total professional performance in relation to legal research and training and the improvement of legal institutions and process. Unfortunately, no existing agency or group has either the capabilities or responsibility for taking on this function. One purpose of your Executive Committee in establishing its new Special Committee on Appraisal was to obtain somewhat more precise information about the role of this Association itself in American legal education. The work of this Committee—without adequate resources, time, or staff—has, I believe, been highly suggestive of what

might be accomplished by an appropriate organization with broader goals and more adequate resources.

Thirdly, we might make a much more deliberate and organized effort to secure the additional resources we so urgently require. It is probable that funds of the magnitude necessary for effective pursuit of all our purposes can come only from the federal government, but other sources might be persuaded—in aid of our independence—to make substantial contribution. Both private philanthropy and the federal government appear predisposed to make huge sums available to medicine, the phyical sciences, the humanities, and the other social sciences; it can scarcely be conceded that such donees either have, or can make, a better case for support than we. Some years ago Mr. Ross Malone, when president of the American Bar Association, made a suggestion, still not acted upon, for the establishment of a national legal education fund, comparable to the National Fund for Medical Education found so successful by the doctors, to which members of the legal profession and others could contribute for disbursement on a national scale.[14] During the recent Congress proposals were made for the establishment of a National Foundation for the Social Sciences, which would include law, and there was even some talk about the need of a special national foundation for law. In this context of community predisposition, it would appear that we could have only our poverty to lose by strong, affirmative action.

The proposal for the establishment of a new, private organization exclusively dedicated to legal eduction and law improvement has origins in several simultaneous initiatives and has been under discussion during the past year both in our Special Committee on Financial Resources and in an informal group of officers and representatives of this Association and of the American Bar Association. The proposal expresses both a conscious awareness of past limitations and a deep concern and motivation for future improvement. While all formulations are still most tentative and will require further discussion in various groups before any definitive step can be taken, the alternative which at the moment appears to achieve the highest degree of consensus among the discussants would project a new, independent, private foundation, in which all branches of the profession and the public would be represented, and which would be charged with the whole variety of functions necessary to the effective pursuit of our contemporary goals in legal education and law improvement. The fact that it may be necessary to have recourse to the federal government in order to secure funds of the magnitude required to serve all goals is thought merely to enhance the need for private initiative, planning, and participation in control. In emphasis upon its comprehensiveness in purpose and its national perspectives, it has been suggested that the new foundation should be named the American Law Foundation.

American Law Foundation

The broad outlines of what a new *American Law Foundation* might undertake can perhaps be most economically indicated by a seriatim enumeration of the specific functions contemplated for it.[15] It would of course be expected that the foundation, like any other wise husbandman, would build toward adequacy block by block, or step-wise, as resources become available to it, but the functions, at present largely unperformed by other agencies, which have been suggested for inclusion in its charter are somewhat formidable in total proportion:

1. *Intelligence and Planning.*—The central task of the ALF would be to establish and maintain a comprehensive overview, with continuing audit and assessment in terms of national community needs, of professional peformance in relation to all the major purposes of legal education and law improvement.

The ALF might, for example, be constituted a continuing commission of inquiry and recommendation about the quality and conditions of legal education, including both that offered by law schools and that acquired from other agencies and through later experiences.

The ALF might, most importantly, afford a voluntary forum in which the most experienced and responsible members of the profession, from all branches, could share views, meet with experts from other disciplines, and increase their awareness of problems and possible solutions.

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[14] Ross L. Malone, Our First Responsibility: The President's Annual Address, 45 A.B.A.J. 1023 (1959).

[15] The itemization which follows builds upon the suggestions of a number of people and has been previously distributed to the informal ABA–AALS group of discussants.

2. *The Assembling and Management of Financial Resources.*—The ALF would assist in the search for, and assembly of, funds adequate to serve all the important purposes for which it is established.

A primary function of the ALF would be to assist the law schools and other relevant agencies to increase their own resources.

The ALF would, however, seek resources for its own operations, and it could serve as an economic granting agency in the funding of various types of activities.

The ALF might thus, as broker for the great multi-purpose foundations for the federal government, offer a simple and economic procedure for the processing of applications from individual scholars or others for relatively small, but still important, projects.

The ALF might, similarly, in an effort to encourage diversity afford occasional support for especially daring individuals nad institutions and for projects which do not fit into the generally accepted patterns.

The ALF would make the necessary studies and prepare plans for encouraging the federal government to assist in the provision of the funds necessary for strengthening the legal profession and the improvement of legal institutions and process.

3. *The Training of Qualified Personnel.*—The ALF would plan for, and undertake to secure the establishment of, programs to increase our resources in personnel qualified for teaching, research and leadership in law reform.

The ALF would conduct, or stimulate the conduct of, workshops and seminars designed to enable established teachers and scholars to increase their mastery over the new techniques made possible by advancing science and technology.

The ALF would promote the establishment of fellowships and other forms of assistance designed to encourage new recruits for careers in research, teaching, and law improvement.

The ALF would establish, or promote the establishment of, appropriate programs for the training of law librarians and other experts on the storage retrieval, and dissemination of knowledge.

The ALF would conduct, or stimulate the conduct, of workshops for judges, legislators, and administrative officers, from all levels of authority.

4. *The Promotion of Research and Law Improvement Activities.*—The ALF would encourage the most promising initiatives, wherever they may be found, for the conduct of relevant research and the undertaking of appropriate law improvement activities.

The ALF would encourage both individual and group or institutional, including governmental, undertakings.

The ALF would maintain a staff, with appropriate interdisciplinary skills, to assist in the formulation and execution of projects.

The ALF would seek to identify the problems to which interdisciplinary efforts can make needed contribution and to establish appropriate teams for inquiry.

The ALF would especially promote the dissemination of the results of inquiry and the establishment of a better network of information throughout the community of interested parties.

5. *The Conduct of Research.*—While the primary objective of the ALF would be to encourage research by others, it would itself undertake important projects which could not be expected to interest other agencies or organizations.

The ALF would, thus, conduct such necessary studies as those relating to the role of the profession and its modalities in organization—including admission to practice, the establishment of national standards and procedures, accreditation of schools, the promotion of specialization, and so on—and those relating to the "unauthorized practice" of law or the rendering of professional services by lawyer "equivalents" or "ancillaries".

6. *Engaging in Law Improvement Activities.*—The ALF would undertake operations of an experimental, model, or prototyping character designed to encourage others to emulation.

The ALF would promote the dissemination to non-lawyers of increasing awareness of the intimate interrelations of legal process and social process and of the fruits of inquiry about this interrelation in specific instances.

The ALF would conduct, or stimulate the conduct of, workshops and seminars designed to improve more general education about the role of law in society.

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The time, a distinguished English international lawyer has insisted, is always ripe for something that needs to be done. "Time" he wrote, "'is a forelock and,

after great wars and great upheavals, that forelock hangs out like a bellrope and needs to be pulled." [16] It is not my suggestion that the alternatives outlined above comprise all the opportunities open to us, as a collectively of legal scholars, for increasing our contributions to, and discharging our responsibility for, the clarification and maintenance of a public order of freedom and human dignity. It is my suggestion only that, in this age of nuclear-space upheavals and of ever increasing demands by all our communities upon law, the time is most ripe for us to adopt and make effective, if not these, some equivalent or comparable alternatives.

Senator HARRIS. I am very sorry, but we must recess now. We will be back in one-half hour.

(Whereupon, at 11:15 a.m., the subcommittee recessed to reconvene at 11:45 a.m. the same day.)

Senator HARRIS. The subcommittee will be in order.

Our next witness is Dean Robert R. Sears, of the School of Humanities and Sciences, at Stanford University.

Without objection we will place in the record a biographical sketch prepared concerning Dean Sears whom we are pleased to hear from at this time.

Biographical Sketch: Dr. Robert R. Sears

School of Humanities and Sciences, Stanford University, Stanford, California. A.B. Stanford University, 1929; Ph.D. Yale University, 1932. Instructor, University of Illinois, 1932–36; Assistant Professor, Yale University, 1936–42; Professor, Director, University of Iowa, 1942–49; Professor, Harvard University, 1949–53; Professor, Stanford University, 1953—.

Member of: American Psychological Association; Western Psychological Association; Society for Research in Child Development. Author: Objective Studies of Psychoanalytic Concepts, 1942; Patterns of Child Rearing, 1957; Identification and Child Rearing, 1965.

TESTIMONY OF DR. ROBERT R. SEARS, DEAN OF THE SCHOOL OF HUMANITIES AND SCIENCES, STANFORD UNIVERSITY, PALO ALTO, CALIF.

Dean SEARS. Thank you, Mr. Chairman. I can summarize the first three pages of my statement very briefly and they stem from Professor McDougal, toward the end of his paper, in which he commented—there was no really well-established source in Federal Government support for the social sciences.

I think this represents really the major problem in social science behavioral science support in the Federal Government.

There is not any single agency which has primary responsibility for managing, effectuating the kind of development we need in the social sciences.

If you read through the list of all the enormous variety of research that has been supported by many different Government agencies you get an impression social science is really scattered all through the Government. There is an enormous amount of research support.

The fact of the matter is much of this is mission oriented and does not contribute basically to the development of science as a whole, but is designed to solve problems that are particular to a specific time and place.

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[16] W. Harvey Moore in discussion of "International Law and Rights of the Individual", 31 Tr. Grotius Soc. 106 (1945).

This is not to say there is not some support for pure social and behavioral science in the National Science Foundation, the U.S. Office of Education, the National Institutes of Health—they all provide grants or contract support for various aspects of social science research, but the fact is that they are limited by their requirements, by their missions themselves, to health or natural science areas and by and large they support the kind of social science research that is relevant to them.

I will address myself first to some of the problems I have seen arise with respect to the Federal support of social and behavioral science research.

Obviously no one person can be sufficiently familar with all the social science fields, nor with all the Federal agencies which have provided support for them, to speak with full authority on these matters.

My own comments come from the vantage point of my experience as a research social psychologist, as a one-time director of three child development research laboratories, those at the State University of Iowa, at Harvard and at Stanford, and during the last 6 years as dean of the School of Humanities and Sciences at Stanford, which comprises all the departments in the fine arts, humanities, and natural sciences, as well as those in the social sciences.

On the governmental side, I have served on several study sections for research, training, and facilities in the National Institutes of Health, beginning shortly after World War II, when Federal support of psychological research through NIH was just beginning, and have consulted occasionally for the National Science Foundation and the U.S. Office of Education. I may add that my own research, which falls in the category of social child psychology, has been widely and effectively supported by all three agencies at one time or another.

It seems to me the major problem we have with respect to Federal support of social science research is that no single agency has primary responsibility for planning and effectuating such support.

I have read much of the testimony presented before your committee at earlier hearings by the directors and administrators of the many agencies that either engage in social science research themselves, or support it by grants and contracts to such nongovernmental agencies as universities and research institutes, and I must say that, for almost every social science research discipline or field I can think of, one example of Federal support may be found.

This broad scattering of research subject matter is scarcely surprising in view of the complex social issues which must be dealt with by the many executive agencies of the Government.

By the same token, much of the research is mission-oriented; it is applied research designed quite appropriately to solve the immediate problems of our society.

Much of the research for which the U.S. Office of Education contracts is of this character. Research on teaching methods, for example, is likely to be aimed quite deliberately at the testing of new methods that can be applied at once in the schools we have today, to the children who are now in them, and with regard to the subject matter we currently find most important.

The Office has sponsored relatively little research, so far as I know, on the fundamental social psychological processes which determine

children's responsiveness to their teachers, the kinds of changes that teachers can make in the achievement motivation of children, or the relation of different types of social groupings within a school on the learning process itself.

Not all social science research support goes to mission-oriented work, of course. Both the National Institutes of Health and the National Science Foundation have supported by grants a substantial amount of university research that can properly be described as "pure"; that is, as directed toward the testing of theories, the discovery of fundamental principles, and the extension of knowledge for its own sake.

While applied or mission-oriented research sometimes uncovers new principles, and thus contributes to the development of the science as a whole, research guided by theory and the desire for further understanding is a crucial element in the total mixture that is required for the healthy development of any science.

Pure science must be supported in parallel with applied science, for inevitably much applied research is responsive only to the needs of a particular time or social problem.

Often it does not drive the scientist to areas of research that have no immediate usefulness but which are fundamental for the science as a whole. It is in Federal support of fundamental research in the behavioral and social sciences that the most serious problems arise.

I believe the main agencies contributing to this purpose are the National Science Foundation, the National Institutes of Health, and the U.S. Office of Education.

None of the three is primarily responsible for the social sciences. Each has its main orientation toward other branches of science or practice.

In respect to the National Institutes of Health, social science research support, through both training grants and direct grants for research, is limited to those behavioral sciences that can be most easily related to the improvement of health.

The inclusion of mental health among the health sciences has provided a fairly wide spectrum of support through NIH, of course. Sociology, anthropology, most branches of psychology, and even certain relevant parts of economics have been so supported.

The National Science Foundation has moved gradually into the social sciences for basic research support, but the distance is still small in terms of any widespread coverage of the field.

The Office of Education, likewise, has made an effort to support basic research on the learning process and cognition, but this represents only a small fraction of the total area of psychology that might appropriately be supported.

Two problems exist under the present circumstances. There are large areas of the social sciences which receive virtually no support at all, and this inevitably has an influence on other parts of the social sciences, very much to their detriment.

For example, I can find almost no source of support for the study of history or the study of law, even in its crucial international and comparative aspects.

This gap has a significant effect on psychology, political science, and sociology. There is no cross-fertilization among these fields. Such significant areas of investigation as could result from the combining

of history and psychology, for example, for a study of the role of great men in determining historical trends, or the application of the new mathematical theory in sociology to an understanding of historical change, are unlikely to be developed as parts of science.

The other problem arising from lack of a primary home for social science has to do with the nature of research that currently gains support. What research an agency supports seems to be determined by the attitudes and values of those sciences for which the agency is primarily responsible.

To a considerable extent, the highest administrative echelons in NIH and NSF are manned by medical men and natural scientists respectively.

It is they, under their congressional mandates for operating their agencies, who influence the directions of scientific support. The National Science Foundation has clearly made an effort to support social science in certain branches, but it is noteworthy that the kind of social science that is most heavily supported is that which most resembles the natural sciences.

For example, in 1965–66—and I secured these data from the hearings of your subcommittee, sir—NSF made 140 grants for research in the field of anthropology; of these, 63 were in archeology, an enormous proportion if one considers the relative size of this field in comparison with social anthropology in universities.

Under the label of the "History and Philosophy of Science," only three out of 49 grants were made for studies relating to the history and philosophy of the social sciences.

In political science, there were only 17 grants all together, and of these only two related to studies of international problems, an area within which there is beginning some of the most interesting and potentially profitable work of a social science character.

The support of social psychology is quite satisfactory, but it is notable that psychology is the one field of social science besides economics that has become reasonably sophisticated in the techniques of the natural sciences, that is, precise formulation of hypotheses, experimentation, statistical analysis of data, and conscious efforts to replicate findings.

Economics, though not an experimental science, has become highly mathematized through the use of modern econometric methods, and thus it also gains a full measure of respect—and hence grant support—for its similarity to the natural sciences.

This divided responsibility among agencies for support of the social sciences seems to have produced a state of affairs in which certain areas receive virtually no support at all.

I have mentioned the field of law as Professor McDougal did, particularly comparative law, and history as stepchildren who gain no support.

Social anthropology and political science are very weakly supported as well.

Further, the type of support provided by the present resources is curiously oriented to those features of the research that are most similar to the features of research in the major fields for which NSF and NIH have primary responsibility.

Research support from both agencies provides large sums for laboratory facilities and for the use of computers. Neither, to my knowledge, has a vigorous and active program for the support of library facilities. Yet in law, history, political science, and indeed in many of the areas of the social sciences, libraries play essentially the same role for the scholar as do laboratories for the medical and natural scientists.

A couple of million dollars spread among a dozen major law schools for improving their library resources, particularly in the document and international fields, would probably do more for legal scholarship than an equivalent amount spent in the fellowships and faculty research leaves, and it should be remembered that libraries represent a permanent resource for future generations of scholars.

Now, I would like to comment on a related problem, namely, the level of support that presently exists. I suppose all of us have pondered from time to time on what influence massive financial support for science has on the development of the sciences themselves.

The lack of a major agency whose primary responsibility is to oversee wisely the development and support of the social sciences has led to a pruning and chopping of research costs by the social scientists themselves.

This has had a significant effect on the very direction in which the sciences are developing.

For example, little if any research support is presently available for truly long-term studies. The longitudinal study of children from birth to late adolescence may well be one of the most important methods of research to be refined and further developed during the next half century.

There appears to be no substitute for longitudinal studies when one is dealing with the very complex elements that enter into the determination of motivation, social adjustment, educability, and intellectual growth.

I would expect an agency devoted primarily to the social sciences to perceive this need and to devise mechanisms for the support of such research. In both biology and the behavioral sciences, "'development" is becoming more and more a significant term to describe areas in which valuable scientific discovery may be expected in the immediate future.

In the fields of economics, social anthropology, sociology, and psychology, development necessarily implies long-term observation and study of human beings. This will be an expensive kind of science, not only in money but in the creation of trained personnel who can be relied on to give continuity over year of data collection. The current predilection for 1, 2, and 3 year grants simply will not develop the whole body of a social science which is crucial for the modern world.

Another effect of these short-term grants has been to produce a tendency toward research in the microcosm. Both sociology and social psychology in recent years have been turning toward the small laboratory experiment. The extensive study of large groups in naturalistic settings, and the longitudinal study of human or social development, have been largely ignored.

Funds are widely believed not to be available for these more expensive types of research. The very nature of psychological and socio-

logical theory is thus being influenced in some degree by the character of the funding operation.

There would be no great harm in such one-sided development were it not for the apparently inevitable tendency to value most that which we are doing and doing well. The current prepossession with small-scale laboratory investigation is leading to a derogatory attitude toward other needed methods.

Another effect of the limitation of funds is to be seen in the inadequacy of many research studies that would require large samples of individuals or groups, for example, measurements made by a national survey of opinion, or the comparative study of political processes in such different kinds of communities as, say, self-contained farm-centered communities, suburban "bedroom communities," and new and old industrial communities, or ones which vary in the age homogeneity of the populations.

It is not enough that studies of these types of communities be performed on one of each kind, because obviously there are many idiosyncratic characteristics that may well obscure the differences stemming from the basic dimensions that I have suggested.

Yet the cost of interviewing, and of coding and interpreting the interviews, in any community study large enough to provide sound data is quite substantial in terms of the available resources in present agencies.

If we really want to understand the social processes that are the product of such a variable as oldness and newness of a community, or the high and low age homogeneity of a community, it would be necessary to do identical studies on a broad sample of 15 or 20 of each of such types of communities rather than just one of each kind.

In this connection, it is worth noting one other fact about the social or behavioral sciences that differentiates them from the natural sciences. The state of theory is still relatively primitive. We have not yet discovered the elegantly simple formulations that have made physical theory, for example, such a splendid example of what scientific theory can really become.

At the present stage of social science theoretical development, it is necessary, for many problems, to measure very large numbers of variables in order to discover the major factors contributing to a given phenomenon.

For example, to discover the effects of certain types of child rearing practices on the development of destructive aggressive behavior in children, one must take into account the effects of many other influences besides child rearing. The type of community, the level of the aspirations that characterize the immediate cultural group, the amount of control by older persons, the level of threat for aggressive behavior as represented by community customs and laws, and a host of other factors contribute to the final outcome of how many children become how destructively aggressive and how many do not.

Probably it would be discovered, were we to do such a study, that no one of these types of influence contributes a major part of the variance to the final behavioral outcome.

However, if we wish to find out exactly how much influence each thing has, and in what way it exerts the influence, then we have to measure all of them.

Also, we have to measure them on a sufficiently large number of communities, that we can be sure we have the full range of variability that occurs in our culture.

In these examples I have given, the main point at issue is that the present resources do not seem to permit large enough studies for the production of sound data. Much of our effort is wasted because there are too few cases to provide adequate measures of all the necessary variables.

One final example will illustrate the absurdity to which we are sometimes driven by small samples.

A psychologist once wished to compare the differential effects of men and women as group leaders of children in a nursery school setting. In order to get a reliable measure of the children's responses to the leader, it was necessary to have about 25 children in each group.

To procure these measures, three or four part-time research assistants were needed. The financial support for the research permitted the performance of the experiment on only two groups, one with a man serving as leader and the other with a woman.

Since we know the idiosyncratic effects of individual persons, just as we know the idiosyncratic characteristics of individual communities, it was sheer nonsense to pretend that this piece of research exemplified the difference in effects of men and women. This experiment confused sex of leader with the individual personal characteristics of Miss Jones and Mr. Smith.

The behavior of the children was well measured, but the experiment was completely wasted, because there should have been at least 25 group leaders; that is, men and women, just as there were 25 children in each group, and for the same reason; to obtain a variety of stimulus persons and thus avoid idiosyncratic effects.

The sheer addition of dollars to the research budgets of the social and behavioral sciences will not produce improved and broadened research immediately. An important and unfortunate side effect of the small size of research grants, and the tailoring of research methodology to the available funds, has been the heavy reliance in universities on the use of part-time graduate students as research assistants.

The relatively brief duration of grants or contracts, and the constant necessity for preparing new and continuation proposals, with all the hazards of possible failure to secure funds, has meant that, by and large, the social sciences have not built up a corps of trained technicians and research scientists who can make a career of assisting in research or of directing it.

There is no parallel in psychology, sociology, anthropology, communication or other behavioral scientific fields to the great number of research associates and research technicians who maintain research programs in physics, chemistry or other natural sciences year in and year out either with autonomy or under the supervision of top-level scientists.

In the social sciences, far too much time is wasted by able scientists in the sheer day-to-day management of their research enterprises. I am convinced that much of this wasted time stems from the lack of opportunity for behavioral scientists to build proper designs for their research on a large enough scale that it becomes feasible to develop a

much larger number of people, a technical cadre, whose primary functions are to maintain laboratories, research programs, data collection and data analysis.

The econmics of present support for the pure science type of research in the social sciences is simply not appropriate for training and maintaining the employment of such a corps of research people.

Finally, there is risk of a major distortion in the direction of development of the social sciences by the fact that so much research is supported by mission-oriented agencies. It is true that the resources available to these agencies are often sufficient to permit the kind of large-scale investigations I have been advocating.

But unfortunately there is a strong natural pressure to limit such research to the agencies' missions. This is entirely proper, and no one could criticize the agencies for sticking to the jobs they have been instructed to do.

At the same time, we must not be under the illusion that because we are able to study some aspects of poverty, or of disadvantaged children, or of slum areas, that we are thereby securing research on general social theories.

The limitations created by the missions leave us without comparable research and theoretical formulation of problems relating, for example, to character development and development of thrift in the population as a whole, the development of language in all kinds of children, or the understanding of family organization and motivation in residential areas of all kinds.

The social scientist must understand language development as a whole, not only the language development of disadvantaged children, he must learn about the development of self-denial, habits of thrift, and other aspects of behavior related not only to poverty but to the successful massing of wealth as well. To apply expensive research methods only to today's problems will not provide the basic structure of science which will enable us to solve tomorrow's problems when they arise.

Now, if the structure of governmental support does happen, in some ways, to distort the development of the sciences, leaving social sciences behind while the natural and biological sciences progress apace, the fault surely does not lie with the National Institutes of Health or the National Science Foundation.

I have been impressed repeatedly with the conscientious efforts these agencies and their many administrators have made to equalize this unfortunate situation.

There has been a gradual increase in support for the social and behavioral sciences by both agencies over the years. The difficulty lies rather in the fact that there is no overriding agency which has as its primary mission the development of the social sciences.

I believe that a National Social Science Foundation would fill this serious gap, a gap that may be unrecognized by many nonsocial scientists who are unfamiliar with what is needed in this field.

If a National Social Science Foundation were headed by a director who was himself a scientist sophisticated in the methods and problems of the social sciences, I think there would be more sensitivity to the magnitude of research efforts that are needed and to the peculiar

requirements that make the social sciences different from the natural sciences in many respects.

In supporting the proposed Foundation, I do not mean in any sense at all to suggest that there should be a transfer of financial resources from the present agencies to the new one.

The total support available should be increased many times. I would not even recommend that all new funding be centered in the new Foundation. I think there should continue to be an increment in support through both NSF and NIH. Each agency has developed a style of support that has been very valuable in strengthening certain aspects of the social sciences.

While I consider the strong NSF emphasis on laboratory methods in psychology, econometrics in economics, and archeology in anthropology to create something of an imbalance in the present state of social science research support, I laud the emphasis as contributing a valuable element to social science development.

We need more, not less, help from both NSF and NIH, and we need the kind of special view that each takes of its opportunities for support.

There is still another, and to my mind perhaps more important, reason for keeping a substantial amount of support for basic social science research in NIH, NSF, and the U.S. Office of Education.

When there is only a single agency involved in a great undertaking, there is the inevitable risk of its becoming stodgy and inflexible, unimaginative and self-satisfied.

Because of the magnitude of the Federal Government's role in supporting research, the word "monopoly" would not be inaccurate to describe such a situation. Competition is the life of trade among Government agencies as well as among private businesses.

Our American culture has long since discovered the vitalizing principle of free enterprise, the stimulation of open competition, and the dangers of monopoly. I believe it makes little difference whether we apply our convictions to ranching, steelmaking, and book publishing, or to the Federal Government's research support enterprise.

In industry, competition produces better goods for the consumer; a manufacturer dares not indulge his personal fancy for one kind of product at the expense of his customers' needs, or he will go broke.

The same holds true for the governmental industry of research support. Fads and fancies come and go, in science as well as in other branches of life. A single monopolistic agency could permit a single point of view to dominate its support policies, and those scientists who did not subscribe to the faddish interests of the moment could be effectively stymied in their efforts to offer new, creative, productive directions to science.

It is essential that diverse viewpoints be given free way, not only among the scientists whose research is supported, but among those responsible and able science administrators who can bring differing programs to the benefit of science and society through their management of a variety of agencies.

There is one difference in the application of the principles of competition and free enterprise to a Government operation and a field of private business.

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The market itself will provide strong and stable leaders in private industry, leaders who will care for the needs of customers no matter what those needs are.

In Government, the Congress must establish such leaders. The establishment of a National Social Science Foundation would effectively do just that for the suppport needs in the field of the social sciences.

Senator HARRIS. Thank you for a very good statement, Dean Sears.

I appreciate the time and thought that has gone into it. I think you make some very good points, as for example, an examination of the types of social science research which up to now have been funded by the National Science Foundation.

I want to say that I share your view about the praiseworthiness of the National Science Foundation and the National Institutes of Health concerning what they have done up to now in support of the social sciences.

I think no one could have criticized the National Science Foundation had they done nothing or relatively nothing; they could simply have said that their mandate does not include this type of research support but they have seen the need for it and they have moved into it.

I think you have pointed out that there are real gaps in their efforts. History—law—you mention the great emphasis on archeology in the field of anthropology, something which we have noted previously in these hearings.

The emphasis on psychology. The emphasis on economics, because all those things probably tend more nearly to be a "science" to natural scientists and I think that is quite understandable, but it leaves out a lot of activity that ought to be supported.

You mentioned, for example, their support for computers and computer facilities and that there is less support for library facilities.

Again, I think that has to do with a view of what "science" means. I do not mean to say that is not understandable, but I do think it is not a sufficient effort and the insufficiency of that effort is really too great to continue tolerating.

It is a miniscule amount if we compare it with the kind of tremendous problems that we have in the modern world and the kind of effort we need.

I liked what you said about how greater research effort in the field of law or history could cross-fertilize these other social science disciplines.

One argument against the creation of a separate National Social Science Foundation has been that it might inhibit multidisciplinary efforts between the social sciences and natural sciences.

I don't agree with that. I take it you don't either.

Dean SEARS. No.

Senator HARRIS. I think one argument for a separate National Social Science Foundation would be greater interdisciplinary effort within the social sciences than we now have.

You also talked about the need for much broader and longer duration studies and the need for a systems approach in social science.

I also see a need for that and I think that is the kind of thing we could look for a social science foundation to support.

What do you mean when you say "the longitudinal study of children from birth to late adolescence may well be one of the most important methods of research developed during the next half century"?

Dean SEARS. A longitudinal study of children is nothing new; it started 40 years ago.

Senator HARRIS. I am thinking of the average citizen. When you say now that we need greater support for the social sciences, what kind of things might we do that we are not now doing?

Dean SEARS. I would say from a longitudinal standpoint one of the great problems lies in the question—what are the sequential effects of things that happen to a child at a given age? How do these affect his parents, his siblings, the other members of the community, and how do these people in turn react and thus have an effect back on the child?

It is a reciprocal thing, the relation between the child and the human parts of his environment.

When we look at a child, age 5, or age 10, just at a given moment we can make correlations about what happened to him in the past and what he is like at the moment.

What we cannot see is what the effects of the child's behavior are on the rest of the world around him and what those effects are on the people that led them to do certain things to him.

So we need to trace through really from birth, first starting with the constitutional characteristics of the child and then up through his earlier childhood, in his school period and through the secondary school period, in order to find out the growing effect of him on his environment and the backlash of that on his personality development.

When I say personality I mean to include all the qualities—intellectual development, creative capacities, educability, character development.

Senator HARRIS. Very good.

I might say, also, I agree with you that what we need is a multiplicity of sources of support for the social sciences. I think I hardly need to say that my own intention in regard to the Social Science Foundation is not that it be an exclusive source, but an additional source and I think we would want to spell that out more clearly, either in the legislation itself, or at least in the report, that is, that we intended NSF and certainly the mission-oriented agencies—NIH and the Office of Education and all the rest—would continue to support research in their fields of interest.

I think, for example, the areas that NSF has already staked out for itself in the social sciences would be things they would continue to support.

Dr. Hayworth has indicated before this committee that they will continue to do that and that they hope to expand what they are doing. I think that is very important.

I do not think the Social Science Foundation would be excluded from being in the same field, by that fact.

Somebody raised the question before this committee as to whether or not that wouldn't be duplication.

I think you would have to define what you mean by duplication. I think pluralism is rather a built-in strength and I cannot really conceive that two social anthropologists would do exactly the same work or that their results would be so duplicated as to be a waste of money. I don't believe that would happen.

I think we would want to spell out the need to protect diversity of support and that certainly is our intent.

Dean SEARS. Even in mathematics my mathematical friends assure me it is always wise to have several mathematicians trying to solve an apparently unsolvable problem. It is like Mr. Roosevelt's dictum concerning Government.

Senator HARRIS. Yes.

What is encompassed in the title—School of Humanities and Sciences at Stanford?

Dean SEARS. Practically everything.

Senator HARRIS. That is, then, the same as we called the school of arts and sciences.

Dean SEARS. Arts and sciences. I one day made the mistake of counting the number of budgets for which the one school is responsible and it reminded me of the problems of the Senate.

Senator HARRIS. Do you have anything further to add?

Dean SEARS. No, sir.

Senator HARRIS. I want to say I appreciate very much your presence and I think your testimony will be extremely helpful and the manner in which it is organized I think is very good.

Dean SEARS. Thank you.

Senator HARRIS. Our last witness for the morning is Prof. Myron Glazer.

Dr. Glazer is an assistant professor in the department of sociology and anthropology at Smith College in Northampton, Mass., and without objection we will place in the record at this point a biographical sketch concerning him, and one concerning his wife, Penina Migdal Glazer.

Dr. Glazer, I want to say we are pleased you are here and pleased you waited past the recess.

Biographical Sketch: Dr. Myron Glazer

Assistant Professor, Department of Sociology and Anthropology, Smith College, Northampton, Massachusetts.

B.A. City College of New York, 1956; M.A. Rutgers University, 1961; M.A. Princeton University, 1963; Ph. D. Princeton University, 1965. Research positions: Internship Rutgers University, 1958–59; Assistant in Research Princeton University, 1959–62; Research Specialist O.A.S., 1962; Assistant in Research Princeton University, Center of International Studies, 1964–65; Associate Researcher, University of California, Berkeley, 1966; Associate Researcher Harvard University 1967–68. Teaching Positions: Assistantship Rutgers University, 1960; Assistant Professor, Sociology and Anthropology, Smith College, 1965—.

Co-author: "Politics and Education: The Case of Chilean University Students". Member of American Socioligical Association and Latin American Studies Association.

Biographical Sketch: Penina Migdal Glazer

Doctoral Candidate, Department of History, Rutgers State University, New Brunswick, New Jersey.

B.A. Douglass College, 1960; M.A. Rutgers State University, 1961. Teaching Assistant, Rutgers State University, 1962–63; Social Studies Teacher, South Brunswick High School, 1961–62. Fellowships, Louis Bevier Fellowship, 1960–61. Honors: Phi Beta Kappa; Emily Hickman Award in International Relations.

Publication: "The New Left: A Style of Protest," *Journal of Higher Education* (March 1967).

TESTIMONY OF DR. MYRON GLAZER, ASSISTANT PROFESSOR, DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY, SMITH COLLEGE, NORTHAMPTON, MASS.

Dr. GLAZER. I am very pleased to be here and let me begin by first thanking Senator Harris and the other members of the subcommittee for extending an invitation to me, since I have followed the course of these hearings with great interest.

The problems with which these hearings have dealt are of the first order of importance to all social scientists and particularly to those who are concerned with overseas research.

I am in complete agreement with Senator Harris' statements concerning the contributions which basic research can make to the education of our citizens, and, I might add, to those of the countries in which we engage in field investigations, as well as to promote mutual understanding among nations.

In considering my testimony, I felt a discussion of my own experiences in conducting and completing a research project in Chile would be most appropriate and I think this is the most pertinent starting point for my discussion of S. 836.

I would like to summarize some of the major points of my prepared statement and then proceed to a discussion of the bill, itself.

Senator HARRIS. Without objection we will place the entire statement in the record at the completion of your presentation and then you may summarize or excerpt from it as you wish.

Dr. GLAZER. Thank you.

Let me emphasize immediately that I do not believe my experiences in conducting field research are unique and as such underscore how important it is for social scientists to support legislation which can alleviate the difficulties of doing such work.

I would now like to turn the clock back almost 4 years to September of 1963 when my wife and I first arrived in Santiago, Chile. We were there to do the research for my Ph. D. dissertation on Chilean university students.

By the way, as a very brief intellectual background, 2 years earlier I completed a master's thesis on the development of the professional self-concept among physics graduate students at a U.S. university and what I wanted to do in part was to compare the experiences of these students with those of Chileans studying for a variety of careers at the national university.

Senator HARRIS. The American students were physics students?

Dr. GLAZER. Yes, they were.

Senator HARRIS. And the Chileans were from various disciplines?

Dr. GLAZER. It was a study that took place in four schools and one of the schools was the school of physics which was chosen specifically because I thought I would make some comparisons with the previous study.

In planning this study, before we got to Chile, it became apparent that it would be extremely useful to raise questions about the political attitudes and involvement among Chilean students, since these often had an important impact on their years of study.

Senator HARRIS. Could I interrupt?

How were you funded on your Chilean study?

Dr. GLAZER. I am coming to that.

It was apparent these political factors would have an important impact on the years of the student's life in addition to the factors related to professional training.

We knew prior to our arrival in Chile, on the basis of speaking to people and reading, that problems of sociological theory or traditional methodology were not the major problems we would face in attempting to implement our study.

No research could be successfully completed in any school of the University of Chile without consent from all major student political groups, and I refer to the Christian Democrats and students who supported the left, the Social-Communist coalition, FRAP, Frente de Accion Popular.

Were either of these groups in the highly politicized university to oppose such a project seriously, it could instruct its members not to cooperate with our request for interviews, to give false replies, or it could completely destroy the project by demonstrating against our presence at the university.

Furthermore, tacit approval alone would not be sufficient. Student leaders had to help us obtain lists of enrolled students, to secure room in which to conduct the interviews, and where necessary, to encourage students to cooperate with us.

Therefore, it was absolutely essential to have the assistance of leaders if we were to succeed in our attempt to interview several hundred students. We were very much aware that some students might be especially reluctant to cooperate with us during the months preceding the Chilean presidential election scheduled for September 4, 1964.

We arrived 1 year before. Some Chileans might ask—What are these North Americans doing in Chile, especially at this time? We wanted to make sure that people they knew could give them a forthright and satisfactory answer to this question.

Our first problem, then, was to identify ourselves clearly. This is always a first order of business for anyone doing research and S. 836 should help a great deal in this endeavor.

We emphasized that I was a graduate student from Princeton University, supported by funds from the Henry L. and Grace Doherty Charitable Foundation.

To underscore our independence, we had no contact with the U.S. Embassy in Santiago aside from registering with them, and accepted no formal affiliations with any of the local or international social science agencies located in the capital city.

As a first step in getting the research started we met several Socialist student leaders. We were very pleased by their reception. They received us warmly and welcomed the opportunity to befriend students from the United States.

While we disagreed in some of our discussions about American foreign policy, we shared similar concerns regarding the social problems confronting Chile and the importance of North Americans understanding the life situation and views of Chileans who desired vast social change.

Our mutual enthusiasm for folk music and good wine enhanced many enjoyable evenings together.

Unfortunately, although we established good relationships with several leading Socialist students, we did not sufficiently obtain the understanding and cooperation of the Communists.

This was to haunt us later. Finally we met a variety of Christian Democratic students and professors and won their endorsement.

Some of them, I might add, always seemed a little reluctant to embrace us too warmly lest they be accused by their more radical peers of softness toward North Americans.

In preparation for the opening of the school year in March 1964, we devised a lengthy interview schedule which we discussed intensively with many Chileans. As a result of their suggestions, we made certain revisions.

Their involvement with our work minimized any accusations that our queries had been devised in Washington. During this period we also hired three Chileans to help us with the interviewing. Their efforts, we hoped, would facilitate the collection of the data and its preliminary interpretation.

In summary, the most important part of the project was completed before the actual data collection had begun. We had established our identity and were accepted as people who could be trusted because of our concern with Chile and our hope that the research might help both Chileans and North Americans to understand better the attitudes of young Chileans.

I hope these observations do not seem immodest, but we are convinced that it was only this trust which enabled us to continue our work.

Where such confidence was not present, we were exposed to the very same kind of accusations that later destroyed Project Camelot.

There is no doubt in my mind that our independent sponsorship minimized the impact of the subsequent violent accusations leveled against us.

In mid-March of 1964, our interviewing began.

We were initially quite successful and we began to feel that all our cautions had perhaps been unnecessary. Then two events occurred which drastically changed the political climate in Chile and directly affected our efforts. They are spelled out in my written statement and I shall only briefly recite them here.

First, the presidential campaign officially began, fully 6 months before election day. The entire Chilean landscape was charged by the atmosphere surrounding the struggle for political power.

The U.S. and American interests were constantly discussed by those involved in the process of deciding their votes.

Secondly, the overthrow of President Goulart in Brazil emphasized the continuing power of the military in Latin America. The specter of alleged U.S. intervention was raised by many Chileans.

The impact of these events was immediate in two of the schools in which we were interviewing. In the highly politicized school of history—the school trains future secondary school teachers—the Communists became extremely suspicious of our presence and attempted to convince their fellow students that we actually were CIA agents.

The thrust of their argument rested on the belief that U.S. military and intelligence agencies were mapping plans for intervention in Chilean domestic affairs were a leftwing government to come to power.

I must say that we felt very much exposed and vulnerable to the sudden turn of events. There is nothing like an unjust accusation to make one feel at once extremely self-righteous and yet very defensive. We felt betrayed by the cruel hand of fate.

Fortunately, the Socialist student leaders and one of our interviewers were able to prevail upon the Communists and other students and apparently convinced them of our integrity.

Our problems in the school of physics were more unexpected and yet potentially more disastrous. Once again, the question of identification was central. What were we really interested in? What part were various U.S. Government agencies playing in our efforts? What harm could we do the science students if they sought visas and fellowships to study in the United States?

Again, it was obvious that, as suspicions burgeoned, it became almost impossible to eradicate them. In this instance, the efforts of many of our friends proved unsuccessful. Only a direct confrontation convinced the future scientists that our research would not result in any dire consequences for them. It was obvious, however, that many of them remained wary of our intentions. Our mistakes in seeking help from their professors—it was the only school in which we had done that—and in not sufficiently acquainting student leaders in that school with our interests almost proved our undoing.

External events had kindled the flames of suspicion, and I am certain that to this day some of the students in the school of physics continue to believe that they had met their first live CIA agents.

These events made us very sensitive to the problems of conducting research in potentially hostile environments and to the significance of sponsorship.

The consequences of the Camelot failure and the subsequent disclosure of CIA ties with student and scholarly organizations, as well as many others, have been to reduce the ability of North Americans to command respect and cooperation on the basis of commitment to science and international goodwill.

I would now like to turn to these matters for a moment.

There are three points which need to be stressed if we in the academic community, supported by our Government, are going to be able to segregate our professional role and interests from what are considered by some to be the demand of fighting the cold war.

First, we must be aware, as I think we are, that we face a crisis of credibility. The thrust of my testimony to this point has been directed toward describing how delicate and precious is the ability to convince others that we are what we say we are, that we do what we claim to do. I believe that the bill which is currently under consideration by this committee can make an important contribution toward this end.

Secondly, we must be vigilant concerning the direction of social science research. The needs and demands of military and intelligence agencies should not be a determining factor in what kinds of projects have the best chance of securing financial support.

The military's considerations in selecting certain problems are the implementation of military policy, a criterion quite different from those traditionally used by scholars. The enormous sums sup-

plied by them can have a decided influence on the course and accumuulation of knowledge, especially in areas of comparative studies in which policy makers are now most interested.

The selectivity of projects along lines of military or so-called "national" interest may actually lead to distortion of available data.

Many findings might be seriously qualified, modified, refuted, or perhaps validated by research which is proposed by scholars but for which they are unable to obtain financial support.

I think this issue has been dealt with by previous witnesses today.

Here, then, is the crux of the problem.

Who decides, and on what basis, the course of the development of social science? A National Foundation for the Social Sciences can be one step in giving social scientists a greater say on such matters.

And finally, of the three points, and this is a view to which some but certainly not all of my colleagues would adhere, a reduced reliance upon military support would minimize the extent to which social scientists are identified with the policy followed by our military and intelligence agencies.

Too often, I feel, those policies are interpreted by our Latin American and other friends as being against the best interests of their nations. This is not the proper place to debate the legitimacy of their evaluation, but it is the opportunity to stress how essential it is for social scientists to maintain their independent identity as scholars committed to an international community.

We believe that the National Foundation for the Social Sciences can provide funds needed for basic research, can help indicate to our colleagues and respondents that we are doing all in our power to prevent the spurious use of academic credentials, and can further signal, for all who care to listen, that it is still very much possible in this country to segregate the various functions of public and private life.

We also believe, on the other hand, that because of the intent of the bill not to interfere with the availability of military funds and the comparatively small funds which the proposed foundation would have available, that many of the problems raised by Project Camelot will continue to plague us.

Further condemnation of U.S. social scientists doing field research with military sponsorship will no doubt occur.

In addition, and this has been observed by at least one previous witness, it is difficult for those in other countries to distinguish clearly among various U.S. Government agencies. Many people will continue to believe that all American social scientists are completely involved in devious intrigue.

It will, no doubt, take time and patience to educate and convince our informants and respondents that a grant from the National Foundation for the Social Sciences is the mark of the independent researcher who is completely free of any obligation to report back, consult with, or make his data available to, any but educational institutions.

In this regard we should like to raise the issues of the dangers inherent in section 7(b) of S. 836, the section referring to contract research.

This provision may raise important questions in the minds of local people—that is, people in the field in other countries—about the intention of the bill.

It may be extremely difficult for them to know whether a particular researcher is engaged in his own work or is under actual contract to a Government agency. In either case, I assume, according to this bill, he will be able to say that he is a fellow of the NFSS.

It is essential, at a minimum, that no military-oriented projects be permitted. Our obvious concern is that credentials which identify a researcher as an NFSS fellow be a distinct mark of an investigator engaged in basic research.

One important contribution to this goal of maximum credibility would be a provision in S. 836 referring to the desirability of American social scientists to participate in the training of their local counterparts, wherever possible.

Certainly this is not always feasible, and almost always it is time-consuming, but the rewards accruing in good will and the subsequent availability of such people as future colleagues make the effort of extreme importance.

Furthermore, the bill, in our judgment, must include a provision that the results of all research are to be made available to local colleagues, informants, and respondents, in order to avoid the charge of exploitation.

This should include the raw data and certainly publications based on the research.

As an old movie buff, I cannot help recalling the pertinent scene in the "Treasure of Sierra Madre"—it's one of my favorites.

Senator HARRIS. It is one of my favorites, too.

Dr. GLAZER. It is one of the closing scenes, the three gold prospectors have been extremely successful and after dividing the last of the ore, Humphrey Bogart—he's the villain in this one—suggests that they pull up stakes and head back to the pleasures of civilization the very next morning.

The old prospector, Walter Huston, disagrees with Bogart. They cannot leave the mountain so quickly and pitilessly. They have done her an injury in return for the good which she has bestowed upon them. They must stay, the wise old prospector says; they cannot leave until they have returned her to her original condition.

They have taken a great deal from it and it is their responsibility to put something back or at least leave it the way they found it.

I think our responsibility is greater but of the same nature; that is, we who have benefited so much from our stay in other countries and the friendship of so many good people must repay them with the fruits of our labor, a harvest for which they are directly responsible. In my own case we have made our published work available to many of those who helped us.

As other articles in Spanish appear we plan to send these to Chile. Our goal, and I think this is part of the decision to testify here today, is to encourage other Chileans on the basis of their experience with us to be willing to cooperate with other U.S. researchers that go down there.

Finally, I would like to make a plea that within the provisions of the bill a place be found by which the training of graduate students can be encouraged.

It is apparent that the availability of financial support for the writing of Ph. D. theses varies greatly by field. Students in the

physical and even social sciences can often find fellowship money to facilitate the completion of their degrees.

Qualified students in other fields such as history, which is my wife's case, usually find it much more difficult.

It would certainly not be amiss for S. 836 to mention specifically that a small portion of its funds be allocated to the training of those who shall become our future social scientists.

I would like to thank the committee once again for its consideration in soliciting and listening to our views.

Senator HARRIS. I agree with the point you made about intellectual colonialism, as some have called it. I think it is imperative that we help to build social science research resources in the country being studied and that they be part of the development of the study and a part of it at all points.

We have said in this bill that whatever is done by the Social Science Foundation has to be wholly unclassified and wholly public, and I think we are going to need to spell out, as you suggested in your second point, that in the foreign area of research we ought to try to leave them better off at the end of a project insofar as doing their own social science research than they were when it started.

Dr. GLAZER. May I inject a point here?

Senator HARRIS. Yes.

Dr. GLAZER. You might be interested in knowing that one of the criticisms, one of the accusations, one of the points, which some of the students felt would be most telling at the school of physics when this whole business began about our identity was the following question:

Would you allow a similar Chilean social scientist to do the same kind of a study in the United States?

And this was raised, if I recall correctly, both before and during this confrontation we had with all the students in the school. Actually they really asked the wrong person, because my wife is studying history and she was able to indicate that some of the best work done on the United States has been done by foreigners.

I think we should keep this in mind. It is very easy to get blinded by our own size and our own resources and our own ability. It is easy to assume that it is quite appropriate for us to go down to other countries and do work. I say "quite appropriate" because we are brought up on this, there is no question, we may think, that we have the right to move into a country to do these studies. When we leave, it might go a long way if we encourage our local colleagues to come to the United States to do research.

First, in terms of being able to get cooperation on our own work down there and, second, in helping to dispel some of the ignorance about the United States in these countries. All you have to do, if you want to have an earth-shaking experience, is to speak to Latin American students and ask them what they know about this country. I am sure more than one intelligent person will paint a beautiful picture of what this country was in 1890.

And when you tell them that their image might have been true then but it is not true today, the response that you get is one of polite listening. They say they will accept it but are you sure you are really right?

This kind of encouragement of social science resources in other countries, I think, will go a long way.

Senator HARRIS. I think the increase of knowledge is to our benefit wherever it takes place and I think this Foundation, in whatever it does, ought to take that into account.

What you say is true.

I have spoken in private meetings with students and all other types of people in most of the countries of Central and South America and, unfortunately, I find a surprisingly erroneous view of the world situation and of the United States, and its role in it, just on the facts, and I also find a rather shoddy, ideological base that has not been really thought through very well in many, many instances. I also find, as you have indicated, that on a higher level, from our State Department, when you ask them: Well, tell us what Mr. So-and-So says publicly?

Now, privately they will tell you he is a good deal more friendly to us, and privately he says he supports what we did in the Korean war or what we are doing in Vietnam, but publicly he has to take a much more anti-American position.

And that seems to be a satisfying thing to some of our official representatives abroad. It is a very disturbing thing to me.

Why does he feel that he must be an anti-American publicly when that is not in accordance with what he believes privately?

I think that illustrates a depressing situation exists in that country. I find with students, where you think you have a hard-core, anti-American student as, for example, some of the Communist students you ran into in Chile, there is a great deal of subtle pressure on them to be outspokenly anti-American. I don't know the Spanish word for those who are too friendly with North Americans.

Dr. Ebbin has told me the word used in Brazil is "entreguista" but I heard it in Chile and it means a Yankee lover, and it is that kind of pressure that causes the fellow who does not really feel so strongly anti-American to nevertheless conform to it. I think a lot of this is just a reaction to an emotionally charged word like "intervention"—and they feel that even though you may be a very sincere North American, you do not realize that the intelligence and military agencies of your Government are really in charge of your national policies.

So I feel that this happens over and over and I think you have substantiated a good deal of what I have found on a more superficial level. As I reviewed your study in depth of the situation in Chile, I was reminded of my own experiences.

That is a situation which has to be corrected and while the creation of a National Social Science Foundation is not going to do it, it seems it is a step in the right direction.

On the third point you made we had in mind, in addition to fostering research, that the National Social Science Foundation would attempt to foster scholarship and training in the social sciences. We have not spelled that out very well in the bill and it will be spelled out more precisely, so I agree with you on that point.

Have you anything further to add?

Dr. GLAZER. No. I just would like you to keep in mind and perhaps raise the issue with other people, if you think it appropriate, about

this question of credibility and about the kind of actions that could be taken to repair some of the damage which has been done.

A lot of the research that the bill proposes to support will occur in the United States.

This is one aspect of it which need not concern me at this moment but there will be many overseas types of projects. I think that in establishing these projects one question should remain very much as a part of the thinking.

How can we, by what methods, let other people know that this National Social Science Foundation means something special?

I'm sure many people will ask: Isn't that part of your intelligence activities or the State Department or what have you?

This is not going to be easy at all and I personally do not have any answers.

The only suggestions I have are to write to people in Chile, to write also to some of the local Chilean papers and to make known our concerns and how the provisions of this bill can meet some of them.

This is something you and people who are involved with oversea research will have to keep in mind.

I think this is the gist of my experience: All the sophisticated theory and methodology doesn't mean anything when you get down there and cannot do the work.

When an individual says: "You don't convince us you are sincere," sometimes it is impossible to do anything about it.

Yet we can provide credentials that mean something, maybe not the first or second time, but I think you have a research resource that you could call upon.

I think there are people in the academic community with overseas contacts and these people could serve as one vital and personal link to inform others about the new Social Science Foundation.

Senator HARRIS. Thank you very much.

Dr. GLAZER. As I have said, both my wife and I went to Chile to do the study and it is only appropriate that this statement is a joint one by us. I have sent you material on her and I would not like to leave her out of this part of my work, even though she was unable to be here today.

Senator HARRIS. I appreciate that very much, as one who bridles at the good deal of nonsense that exists in the world, less and less, fortunately, in this country, that women and men should not take part in political or almost any kind of serious activities together.

(The joint statement referred to follows:)

JOINT STATEMENT BY MYRON GLAZER, ASSISTANT PROFESSOR, DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY, SMITH COLLEGE, AND PENINA MIGDAL GLAZER, DOCTORAL CANDIDATE, DEPARTMENT OF HISTORY, RUTGERS—THE STATE UNIVERSITY

The academic community has recently been shaken by a series of events which have indicated the significant influence exerted on social science research by the Defense Department and the C.I.A. The recent exposure of the connection between Michigan State University and the Central Intelligence Agency had a devastating impact. Although the involvement ended several years ago, current overseas projects sponsored by Michigan State University have recently come under suspicion and many of its faculty members are deeply troubled that their work may be adversely affected through no fault of their own. Moreover, a recent series of books and articles has alleged other types of involvement between the C.I.A. and academic institutes, intellectual publications, and organizations.

The demise of Project Camelot, a six million dollar study of social change in Latin America also provoked great concern. Its public condemnation occurred after social scientists and political figures in Chile challenged the legitimacy of an Army-sponsored investigation of popular revolutionary movements. The Camelot affair resulted in a fresh wave of suspicion of United States motives throughout Latin America and seriously damaged a variety of studies having no military support or affiliation.

As a result of these events, many scholars and public officials have begun to examine the more fundamental problems inherent in the relationship between universities and government. The ensuing dialogue has delineated some of the major issues involved. The social sciences, in particular, now confront a crisis of credibility and the necessity of clarifying the ethical implications inherent in military sponsorship of overseas research.

The suspicion of American researchers was clearly present when we conducted an investigation in Chile prior to the Camelot incident. Our experiences offered significant insights into the ever-present challenge of doing research in Latin America and the absolute importance of establishing and maintaining mutual trust. We hope that a presentation of our experiences will underscore for this Committee how essential it is to provide non-military sources of support for field investigators. We shall also argue that potential collaborators and respondents in other countries must be convinced of this country's desire and ability to segregate rigidly scholarly from intelligence activities. This is a most difficult task. The bill under consideration, S–836, makes an important step in this directon.

When we arrived in Santiago in September 1963 to do a study on the professional and political attitudes of Chilean university students, it quickly became apparent that the nature of political alignments in the University could have serious implications for our work. We were primarily interested in finding out the background characteristics of Chilean university students, the extent to which they were committed to their professional work and concerned with national development, and the depth of their involvement in university and national politics. No research could be successfully completed in any school of the University of Chile, however, without consent from all the major student political groups. Were any party in the highly politicized university seriously to oppose such a project, it could instruct its members not to answer questions, to give false replies, or, if necessary, could call demonstrations and strikes, thus catapulting our research to university-wide or national attention. Furthermore, tacit approval alone would not be sufficient. Contacts were needed who would help us obtain lists of enrolled students, arrange meeting places, and encourage active cooperation. It was absolutely essential to secure the assistance of leaders if we were to succeed in our attempt to interview several hundred students. The greatest degree of support was required if we were to win the confidence of students inclined to be suspicious of North Americans and wary of their interest in Chile during the year of a crucial presidential election.

In order to allay any potential suspicions we clearly identified ourselves and our sponsors. We emphasized our independence as graduate students from Princeton University who were supported by funds provided by the Henry L. and Grace Doherty Charitable Foundation. Thus, we had no contact with United States embassy officials and accepted no formal affiliations with any of the local or international social science agencies located in the capital city.

The results of our initial efforts were excellent. The Socialist student leaders were very friendly. The Christian Democrats also offered assistance and even the Communists, who were most anti-American and reserved, appeared unlikely to condemn our research. This warm reception continued into the post-Kennedy assassination period. As a result of his death, sympathy and goodwill for North Americans increased. The flags flown at half-mast, even in tiny rural villages, seemed a poignant reminder of the sincere affection felt for the young president in la esquina del munda (the corner of the world).

We were greatly encouraged and eager to start on the actual research. We decided to interview in schools which were training students for a variety of important careers—engineering, medicine, physics, and secondary school teaching of history. Student leaders were asked to obtain class lists and to find space in which we could conduct the interviews.

The students who cooperated most readily could not easily be categorized by school or political group, but were those deeply concerned with their country's problems. It was apparent that, in spite of its enviable political stability and

democratic traditions, Chile was deeply torn by great social cleavages. Our study, travel, and conversations had convinced us of the great potential of this beautiful country. Nevertheless, extensive land reform, expanded industrial production, and increased school construction were among the essential concomitants of expediting national development and social justice.

Indeed we spent long hours with our friends talking about our reactions to life in Chile. All of us lauded the friendly people, the delightful climate, the lovely women, and the enticing wine and pisco. We discussed our initial shock at the other aspects of Chile—the slums, the garbage pickers and the beggar children. Reading about Santiago's 500,000 slum dwellers who inhabit the shacks made of wood, tarpaper, tin, and cardboard is insufficient preparation for the exposure.

By the time the school year opened in March 1964, we had obtained the services of three Chilean interviewers. Two of these people had helped in drawing up the questions and were to prove essential in warding off later suspicions about the study. The initial interviewing went extremely well, and on the first day we spoke to thirteen students at the School of Engineering. Beginner's luck, but encouraging.

Meanwhile, the presidential campaign officially began and a series of dramatic events lent an exciting background to our research efforts. An unexpected defeat in a provincial by-election led to the dissolution of the incumbent right-wing coalition. The struggle now lay between the center-left Christian Democrats and the far-left Marxist parties, the FRAP (popular front). New emotions swept the nation, fear among the conservative groups and hope and exhilaration among the reformers and revolutionaries who realized that the presidency was within their grasp.

Political realignments occurred swiftly and the battle lines were drawn. "Revolution in Liberty" demanded the Christian Democratic Eduardo Frei. "Revolution without Blood" asserted the Socialists and Communists. Banners, posters, and murals covered every available wall. Speakers took to the radio and streets. Chile was caught up in a fierce struggle for political power. Charges, denials, and counter-charges were intensified by the two political forces. Each labeled the other as tools of foreign interests. The FRAP demanded the nationalization of American copper mines which were central to Chile's economy. Its spokesmen accused the United States of blatant imperialism and scorned the Christian Democratic program for its emphasis on gaining greater ownership. The Christian Democrats and their conservative allies bitterly denounced the FRAP, claiming that it would destroy Chile's basic democratic institutions in the guise of promoting economic reforms. Genuine criticism and outright slander merged to the point where one was almost unidentifiable from the other. Since the programs of the two parties were very similar, political style, public reputation, respectability, alleged international support, and position on the copper question became central. The United States itself thus became an issue. Indeed, when Senator Jacob Javits demanded to know what the policy of the Johnson Administration would be were the FRAP legally elected, both the Christian Democrats and their opponents strongly reacted against any implied policy of intervention.

In this atmosphere screaming headlines in early April announced that the Brazilian military had moved to overthrow the legally constituted government of Goulart. Within days he was forced to flee in exile to Uruguay and stories of repression against Brazilian liberal and left-wing groups began to circulate in Santiago. It was reported that not only Marxist but also Christian Democratic and other moderate professionals and students were being rounded up. Many Chilean students believed that the C.I.A. had been involved in the Brazilian upheaval. Students condemned the enthusiasm and speed with which the United States government had recognized the so-called revolutionary regime, and interpreted this as a change in United States foreign policy, symbolizing the death of the Alliance for Progress. Criticism came not only from the Chilean Socialists and Communists but also from the Christian Democrats and many independents.

The students pointed out the serious implications of the situation for Chile. Was it not possible, and even likely, they argued, that the United States would act similarly were a leftist government to gain power in the September presidential election? American policy in all of Latin America was coming under heavy attack. It was seen as encouraging the use of military force in overthrowing popularly elected governments. We were also deeply concerned about the implica-

tions of the Brazilian situation for United States foreign policy toward Latin America. But we did not realize that it would have a direct and instantaneous impact on our study.

The repercussions began in the School of History as one of us was interviewing a member of the Communist executive council. He challenged our motives and demanded a copy of the interview schedule so that his colleagues could ascertain the "real" goals of our research. The question which most concerned him was: "Do you think that any group, no matter how much you are in disagreement with its policy, should be allowed to take office if it wins in the next presidential election?" The student believed that this question had been designed by United States intelligence agents. This information could be used "to neutralize democratic elements" in the event of future military intervention.

His suspicions could have had very serious consequence. The Communists were strong in the School of History and could have prevented the successful completion of our work. We immediately asked one of our interviewers, who was a friend of the Communist student, to explain our research. The interviewer later reported that he had allayed the student's worst suspicions by stressing that Chileans had been involved in every stage of the project's planning and execution.

Rumors persisted, however, in the School of History. Some students accused us of being actual C.I.A. agents. Others asserted that the American Embassy was secretly sponsoring the study. Still other students saw us as dupes and believed that the data would ultimately be confiscated by the United States government for its own purpose. Many rejected our explanation that we were attempting to secure a representative sample and accused us of trying to ferret out those with the most radical opinions. No amount of rational explanation seemed acceptable to them. We carefully explained the drawing of the sample and even showed them the statistics book used as a guide. In fact, the majority of the students interviewed were neither activists nor leftists. But no amount of evidence could convince those who had already prejudged the issue. These attacks appeared insurmountable at the time and the life of the study was in serious jeopardy.

One of the major factors that prevented the utter collapse of the project was the extensive conversations with Socialist leaders within the School in which we carefully retraced the purposes and goals of our study. We dissected the various accusations at length and convinced the Socialists that these were completely without justification. In this instance the intensity of anti-American feelings generated by recent events were overcome. The Socialist leaders used the great prestige which they enjoyed to persuade the student body to continue to cooperate with our study. The Communist leaders and other influential students, fortunately, seemed to take their cue from the Socialists. Although they did not commit themselves to a policy of active assistance, they refrained from an official condemnation of the project.

Even more serious difficulties arose shortly afterwards in the School of Physics which trains students for a variety of scientific careers and which ordinarily is a non-politicized institution. After two successful weeks in which thirty of the forty students in the School had been interviewed, we found ourselves with a dramatically changed situation. Several students had complained to one of the professors that they had been deceived by the nature of the study. They had thought that there would only be questions on their professional views and values, and, having little knowledge of social science, could see no reason why political questions, or inquiries related to their parents' beliefs, had been included. Only a few students had been involved in these discussions, yet it was clear that suspicion was rapidly spreading throughout the rest of the small student body.

The following day the student council president at the School informed us of their decision to hold a general meeting of the entire student body. At that time the officers were to place before the group the alternative paths which the students could take. These would include continued cooperation with the study, discontinuation of such cooperation, taking the case to the FECH, the all-university student federation, or placing it in the hands of the Rector of the University.

That evening we spoke to the vice-president of the FECH, who was one of the most important Christian Democratic leaders in the university. He volunteered

to call the council president at the School of Physics to say how nonsensical the suspicions were. We also spoke to several FRAP leaders and asked if they, too, would call the president at the School of Physics. Our goal was to attempt, in every way possible, to reassure him of our motives and to indicate that we had active support from students of all shades of political opinion. It began to appear that the worst might be over.

Our friends related, however, the president's total unwillingness to accept their reassurances and his adamant determination to make this into a university-wide political issue. Here was a perfect way to thrust himself from the relative obscurity of a minor political post to university-wide and perhaps national recognition.

Such ambition seemed possible in the contemporary political situation. Left wing as well as Christian Democratic organs had vehemently denounced any possible military coup in Chile. Members of parliament made speeches challenging the activities of the large United States resident community, accusing it of connections with intelligence agencies. This atmosphere increased the anxiety of the fearful, the hostility of the suspicious, the credibility of the manipulators, and undermined the neutrals or sympathetic among the students.

About half of the physics students attended the meeting and it soon became clear that three or four students were the most active and suspicious. It was frightening how previously friendly faces had been transformed by the group hysteria. We tried to play down their concern by appealing to their feelings as scientists. We stressed how difficult it was for physics to gain acceptance in Chile. Could they now impugn the motives of other students? To accuse us of espionage was absurd. At this point one student indicated the basis of his fear. Although the students' names were never solicited by us, it would be an easy matter to piece together his identity. In a poignant statement filled with reproach he said, "I helped you, and answered your questions, and now you don't know how sorry I am. You have my life in your hands." We tried to calm him with the assurance that the original interviews would be destroyed, and that there was no interest in the response of individual people. Our report would indicate only the reactions of the entire group.

As a result of the discussion, the students voted that further cooperation was to be a matter of individual choice. No action would be taken against us. The decision reflected the conflicting nature of the students' attitudes. In private conversations after the meeting, several students indicated that they were ashamed of what had occurred. We must not think that they usually treated people in such a manner. Their personal fears were at variance with their customary hospitality.

What was the cause of the hysteria? Why had it erupted in a school which is highly unpoliticized, and where our interviewing appeared to be progressing so well? It is essential to understand that in Chile there are very few jobs in the field of physics. It is important for a young scientist desiring to do significant research to obtain a graduate fellowship for study abroad. Many students reported that they knew people who had been denied visas to travel and study in the United States. They had heard that the United States Embassy had extensive files on the political attitudes and activities of many Chileans. How could they be assured that their support of the left wing, or their criticism of the incumbent Chilean regime, would not result in their failure to secure a United States visa? In this situation general suspicions of United States motives had been exaggerated by fears for their future professional opportunities.

In the following week, the storm of controversy seemed to subside. While interviewing a history student, however, we were asked whether our study was sponsored by the United States Embassy. The student told us that her brother had been working for a commercial polling corporation and had learned that the Embassy had commissioned a survey of student political views. We were deeply concerned with the further confusion of our research with that of an operation supported by American authorities, and we were most unhappy by a turn of events which might reinforce the assertion that United States agents were actively using social science techniques in their intelligence activities.

Since we had no contact with the Embassy, we asked a friend if he could inquire into the existence of such a project. He spoke to the appropriate officer who seemed stunned. The official admitted that there was such a study but said the sponsorship was highly secret. The Embassy was now interested in conducting genuine social science research to perform its tasks more effectively.

Our friend declared that this type of activity was creating extraordinary difficulties. The whole basis of scientific research rests upon honest declaration of sponsorship and making data available for others. Secret and classified studies violate this principle. How can Chileans or others, he asked, determine whether a study is legitimately sponsored by a social science organization, or clandestinely supported by the United States government for other purposes?

Most social science research necessitates not only theoretical and methodological sophistication, but also the cooperation of informants and respondents. Respect, good-will, and confidence, the major ingredients of high reputation, are priceless in every field work investigation. We believe that our Chilean experience so clearly indicates how easily they may be forfeited. To fail through one's personal blunders is regrettable. To experience near-disaster because of the follies of our colleagues is a risk which we all rightfully seek to minimize. In this sense, the Camelot Project was of direct concern of very member of the university and national community. Our own brief experience with the Camelot Project is worth noting as an introduction to the broader issues which now have arisen so clearly—issues to which S–836 is directly relevant.

When a team of Camelot researchers visited Princeton University in October 1964, seeking an evaluation and advice relating to their projected research activities, they were presented with a variety of theoretical suggestions. Near the end of the meeting, which included over a dozen staff members of the Center of International Studies, we cautioned the Camelot scientists about the extreme dangers they faced in attempting to implement their project in Latin America. Having just returned from Chile, we related how closely we had come to failure. The burden of military support for a project dealing with the causes of revolution, we stressed, would be unbearable. Neither Chileans nor other Latin Americans would gracefully cooperate with North Americans under contract from the Pentagon, intent on learning about the techniques of counter-insurgency.

The response from one of the Princeton participants clearly implied that sophisticated investigators could well handle such a simple technical problem by disguising the source of support. The Camelot members never responded. The hour was late and perhaps they felt the warning too obvious to necessitate a reply. In any case, we were angered by the implied deception and the cavalier response to what we knew was a major criticism of the project.

Exactly nine months later the research effort was still-born in Chile. Indeed, the first Camelot sociologist on the spot had attempted initially to disguise the source of financial support. When he was severely challenged by local social scientists, not only about the source of Camelot's funds, but also its alleged intervention in the internal affairs of other countries, the truth could no longer be denied. As a result of the subsequent furor, exacerbated by the reaction to the Dominican intervention, the project was soon cancelled by the Defense Department.

The personal agony of the social scientists associated with the Camelot venture can well be imagined. Indeed, our own fate is entangled with it, providing an excellent example of professional interdependence. Project Camelot was destroyed, and, in its aftermath our personal credibility seems to have been challenged in two notable episodes. Over a year ago, the Chilean Communist Party published a pamphlet in connection with the parliamentary hearings on the affair. It emphasized the number of American researchers in Chile and strongly implied that these men are involved with intelligence agents of the United States. These accusations had gained a measure of plausibility as a result of Camelot. Our project was cited.

A second incident occurred at a large dinner party in Santiago, where the Camelot affair was the major topic of conversation. A former student at the School of Physics related with apparent satisfaction that he now knew the forerunner of Camelot. It was a project conducted in his school just a year before, by two Americans claiming to be graduate students with no government affiliation. He carefully related the situation, convincing all present of the validity of his observations. As he concluded his lengthy discourse, another guest spoke. He realized how logical it seemed to argue that the two studies were inter-related. The facts, however, did not support the interpretation. The project in the School of Physics was well-known to him, since he had worked on every aspect of it. The North American students were not guilty.

But as the Queen's messenger rarely arrives to save a condemned Macbeth so is it unlikely that good friends will often arise in our defense? How many

other evenings have occurred like this one? Future research for us in Chile will be far more difficult because of Camelot. We cannot simply claim our innocence; we will be judged as representatives of our country and profession. Thus, we are obligated to ourselves, to our colleagues, to our Chilean friends, and to our country to debate the issues involved and contribute toward their solution. Three major components must be isolated if we are to unravel the complex situation with which we are faced: a) the crisis of credibility, b) the undermining of scholarship and basic research, and c) the kinds of national policy with which scholars are identified.

The problem of credibility is the most obvious question to arise and the one which frightens most of the social scientists who have become aware of Project Camelot in Chile, Operation Sympatico in Colombia, or Michigan State University's projects in Saigon. Much has been said about this by witnesses at earlier hearings.

Yet a second related question we are now facing is more complicated and subtle. Are we witnessing and participating in a dramatic change in the concept of basic research? Traditional scientific investigation has meant the disinterested accumulation of a body of knowledge, judged by other scholars whose first commitment is to a search for greater understanding of reality. However fallible the various individuals may have been, the international scientific community has insisted upon open and free communication and the exclusion of non-scholarly purposes from determining the course and evaluation of research. Is it possible to call research inaugurated at the request of military and intelligence agencies disinterested accumulation of knowledge? The corruption of this concept is most evident when contract research is involved. In Project Camelot several men, in their role of university professors and claiming a commitment to basic research, accepted the task of designing a research project to answer certain questions, many of which were determined by the Army. The Army's considerations in selecting these problems are implementation of military policy, a criterion quite different from those traditionally used by scholars.

What is the case with those who design their own research and then apply for government grants? What if the grant is given but requests are made for certain small changes? Don't others have a right to know under exactly what kind of conditions a government grant was applied for and awarded?

Beyond the question of the impact on the individual researcher lies another aspect of this problem and one which is applicable even to those scholars who may be unaware of the military or C.I.A. source of their sponsorship, as is sometimes the case when money is channeled indirectly through university institutes or foundations. The enormous sums supplied by these military and intelligence agencies may have a decided influence on the course and accumulation of knowledge, especially in areas of comparative studies in which policy makers are now especially interested. The selectivity of projects along lines of military or "national" interest may actually lead to distortion of available data. Many findings might be seriously qualified, modified, or in some way validated, by research which is proposed by scholars but for which they are unable to obtain financial support. Here, then is the crux of the problem—who decided, and on what basis, the course of the development of social science?

The answers to these questions are extremely complex but are at the heart of the dilemma. Certainly there are a variety of serious and scholarly investigations which have received support from the Air Force or the Navy. Indeed, many social scientists attest to the high degree of independence which is granted by these agencies. Important studies might have been delayed or not undertaken had it not been for the willingness and the ability of these institutions to define the research in the "national interest." Recently, one of us has become associated with a project, which was initially funded by highly respected private foundations and which now received partial support from the Defense Department. We have been informed that there was no obligation to orient the research in any manner and that no restrictions whatsoever have been set concerning the publication of the material. It is quite likely that the investigation will fill an important gap in the literature.

The problem remains. Why should any military branch have vast sums at its disposal to support social science? Why should these funds not be distributed by competent social scientists familiar with the progress of research and concerned with an orderly development of the field? A national foundation for the social sciences would be a major step in this direction. We are all familiar with the

argument that many congressmen will be loathe to allocate large sums for research. That view is now directly challenged by S–836. Our task is to support those striving for more enlightened policies, rather than to accept the realities which have been most blatantly exposed by the recent debacles. These are not isolated incidents but part of a total pattern. There is no surer way to guarantee continued explosions of overseas research projects than to ignore the roots of the problem. The development of basic social science research must be controlled by practitioners and not by even the most well-meaning government functionaries concerned with military and intelligence needs.

Contemporary social science research is a highly competitive enterprise. The era of the lone independent scholar working in his laboratory or study is over. Those in possession of computers, assistants, and consultants are now in the strongest position to achieve professional recognition. Precisely because honorable men are susceptible to a variety of temptations and rationalizations, it is essential to channel this competition carefully. The problem of finances is central and here the most extreme caution must be exercised. The universities and professional associations, in conjunction with individual scholars, must more fully assume their responsibility in preventing the corruption of academic values by supporting legislation which will underwrite basic research.

Finally, the great concern which many social scientists have voiced for the underprivileged masses of Latin America and elsewhere often runs counter to the policies and actions of our military and intelligence agencies. The professional writings of most scholars consistently affirm the importance of social change, and indict, as obstacles, the great inequalities in wealth, the maldistribution of the good things that any nation may offer its citizens, and the desire of elite groups to maintain their privileged position. While deeply concerned with the importance of disciplined, scientific investigation, many scholars working in the field of comparative studies, support programs of land redistribution, increased educational opportunity, tax reform, unionization of workers, and a variety of other actions clearly associated with structural change. Most social scientists have committed themselves, whether implicitly or explicitly, to an international public. Those who are critical of certain aspects of the present military and interventionist posture of the United States should be most wary of being associated with a policy they oppose.

In summary, several challenging issues face the academic community and all Americans who value scholarly endeavors, professional ethics, and the respect of other nations. It is necessary, then, for social scientists and others to strive for a greater degree of public support, which will underwrite the independence of research. It is also vital to secure the goodwill of those who have provided essential assistance in field investigations by making explicit the determination of scholars to prevent the dubious use of academic credentials. Scholars must be concerned with their respondents who have placed faith in them, with their profession which is built on the premise of open research, motivated by scientific questions, and with their commitment to international humanitarian values.

We will appreciate the opportunity to comment directly on the provisions of S–836 at the hearings.

Senator HARRIS. We will recess until 6 p.m. this evening.

(Whereupon, at 1:05 p.m., the subcommittee recessed to reconvene at 6 p.m., the same day.)

EVENING SESSION

Senator HARRIS. The subcommittee will resume hearings on S. 836 a bill to establish a National Social Science Foundation.

Dr. Harold Guetzkow.

Dr. Guetzkow is co-director of Northwestern University's international relations program. Without objection, we will place into the record the biographical sketch prepared concerning him.

Biographical Sketch: Dr. Harold Guetzkow

Gordon Scott Fulcher Professor of Decision-Making in the Departments of Political Science, Psychology, and Sociology, and Co-Director, International Relations Program at Northwestern University, Evanston, Illinois. A.B., University of Chicago, 1936; Ph.D. University of Michigan, 1948.

Field: International Relations.
Background Data: Professorships at University of Michigan (Department of Psychology) 1945–50; Carnegie-Mellon University (Graduate School of Industrial Administration) 1950–56. Fellow, Center for Advanced Study Behavioral Sciences, 1956–57; Northwestern University, 1957–.
Co-Author and Editor: Groups, Leadership, and Men, A Social Psychology of Group Processes for Decision-Making, Simulation in International Relations, and others.

Senator HARRIS. Dr. Guetzkow, I want to say to you, and the next witness, Dr. Johnson, we certainly are grateful for your agreement to come at this rather inconvenient hour which was made necessary by my appointment by the President to go to South Korea with the Vice President tomorrow, and we are very anxious to hear from you and Dr. Millikan, who is also going to testify this evening.

We are glad you are here and we will be pleased to hear from you at this time.

TESTIMONY OF DR. HAROLD GUETZKOW, INTERNATIONAL RELATIONS PROGRAM, NORTHWESTERN UNIVERSITY, EVANSTON, ILL.

Dr. GUETZKOW. Senator Harris, I thought I might sketch in two background considerations and then, if I may, try to answer some of the questions you posed in your letter and then I will conclude with a few comments on your bill, S. 836, if that is agreeable?

Senator HARRIS. Yes.

Dr. GUETZKOW. You can perhaps understand my remarks a little more adequately, including the limitations of them, if you will realize that I am a practicing social scientist who tries to work simultaneously in three disciplines.

I had my basic training in political science as an undergraduate at the University of Chicago, in the days when Charles Merriam was chairman of that department. That was a very brilliant period in its history—and with men like Harold Lasswell as a teacher to inspire me, I moved into psychology. Inasmuch as one really cannot understand individual behavior without seeing it in its social context, gradually with the help of people like Herbert Simon I became an organizational sociologist, too. You see, I do not belong at any one particular place within the social science disciplines now.

I also had the opportunity of working on research projects in addition to my teaching over the years on both private foundation funds and on public funds, and this background might be useful, as you conduct your questioning, in terms of some of the comparisons that perhaps I can make.

Ever since high school days I have been interested in the problems of war and peace. At the present I am trying to bring the social sciences to application in these problems of international affairs.

My experience at Carnegie Tech has given me a special interest in the problems of international business. In the 21st century the modern corporation can become a major rival to the Nation. I think it is already in many ways. In the next century we will see a very interesting phenomenon, perhaps a whole transformation in the Nation-State system, which has been in existence for almost 300 or 400 years, depending upon where you want to place its beginning.

OPENING REMARKS FOR BACKGROUND

It is puzzling as to why intellectuals in our secular culture and scholars in our academic culture responded so sensitively to the events of Camelot in all parts of the world. Does the overreaction come from worldwide fears about the social sciences, per se—and from fears about the emerging partnership of government and academia? At times I wonder if these fears might not be just another expression of the self-doubt so widespread throughout these cultures.

The intellectuals of the policy world—the journalists, the legislators, and the lawyers, and the administrators—seem fearful of the social sciences, perhaps because of their attempt to be objective. It is as if the "believers" were doubting their beliefs, as the social sciences enlighten us about our economic dogmas and our political myths. If you hold an ideology close—be it a variant of a democratic faith, a version of Marxism, or any other set of beliefs—the attempts of the social sciences to be objective may seem threatening, indeed.

Distrust of the social sciences in the Socialist societies is notorious. But even throughout the democratic world there is a fear that the social sciences might contain a potential for use as a tool of manipulation—violating one of the basic credos of an open society, which places emphasis upon autonomous and self-reliant citizens. Some Members of Congress are fearful of what might happen when we invest considerable resources in the generation of knowledge about our own economic, social, and political processes. It is as if the influentials of the world fear that the very bases of their own power will be manipulated by others—by those who have knowledge of the power processes. Are the intellectuals of influence—be they in Socialist or democratic societies—reflecting their own insecurities?

Might an array of national foundations for the social sciences throughout the world help relieve these fears by increasing our knowledge about power processes and about ourselves? In my judgment, yes. More knowledge about the very nature of power and its use will enable the constructive leadership of the world to develop societies in which we need not fear objectivity and in which we would have knowledge for controlling those who wish to manipulate.

Members of the scholarly community share these insecurities with the other intellectuals. In addition, they have other fears to contain. Within the discipline comprising the social sciences there are deep self-doubts which heighten reactions to the emerging cooperation between government and our intellectual establishments, such as the universities and "think tanks."

Over the centuries in all lands, governors have betrayed their scholars; scholars, in turn, have allowed themselves time and again to be subverted by their governors. Suppose one finds there is a disbalance in government support of the social sciences, in which the physical scientists in large measure control the allocation of funds to the social scientists. Suppose, further, there is a disbalance within a government, in that the military arm supports a considerable volume of such research because such a mission-oriented group understands that it can be aided well by the kind of knowledge which social scientists generate. Then the specters of its own past failings in handling with integrity its

responsibility toward government become aroused in the academic community.

In working with government there is a further exacerbation of self-doubts within the disciplines as to whether there really can be a social science. Some scholars who study social affairs are fundamentally artists, embedding themselves deeply in the particular—developing their "science" as an esthetic experience of consequence largely to themselves. Others—and many would include me in this group—believe we eventually can realize a social science through which judgments about policy may be checked empirically. In fact, a minority of us in this latter group believe that even the meager findings we now possess already can be utilized by the policymakers—even if the validity of their decisions are increased by but small, incremental amounts. Do some of my colleagues oppose a vigorous support of the social sciences by government—be it civilian or military in character—because of their fears that knowledge will "dehumanize" social affairs, with "science" invading matters that should forever remain the province of intuition? Do those who profess an interest in basic social science fear its application to be a vulgarization of their privilege to operate as basic social scientists? And are the appliers of social science afraid that, were there funds adequate to test the theories which they advocate as "experts," their postures and recommendations would prove hollow?

As we move forward in government and industry throughout the world in the development of big social science, these fears will become more intense. There will be more battle against the social sciences by those who fear objectivity. And within the disciplines there will be negative reactions from those who wish the power problems of the world—the problem of war and peace and the problem of equality and poverty, and all their entailments—would not intrude upon the neat packaging of their speculations.

Yet, in my judgment, with establishment of a National Foundation for the Social Sciences, as you propose, Senator Harris, another step will be taken to relieve the grounds for these fears. In fact, the Foundation itself may quite constructively proceed to underwrite research about the very processes involved in power and its manipulation. In its support of research on the sociology of the scientific enterprise itself, the Foundation's work should certainly include appraisal of the ways in which the partnership between government and social science may emerge, so that neither the government administrator or the social scientist himself will be corrupted by the generation and use of the new knowledge—knowledge far more potent in its implications for a brotherhood of peoples than even the fantastic impact we have experienced through the discovery and release of nuclear energies by the physical scientist.

By giving adequate support to the social sciences, can we thereby learn how to create an objectivity which doesn't destroy human value? In providing ample funds for the social sciences, can we thereby learn how to construct an uncorruptible partnership between power and knowledge, making manipulation controllable because of our very

understanding of manipulation? The very inadequacy of present-day support of the social sciences gives legitimacy to the arguments of those who fear its support—an ironic paradox of rank importance, indeed.

RESPONSE TO QUERIES WRITTEN BY SENATOR HARRIS

Now, Senator Harris, may I proceed to your questions? Perhaps the foregoing comments about the culture of fear within which social scientists operate will help illuminate my responses.

(1) The first issue you posed reads as follows: "An identification of the problems that have arisen concerning Federal support of social and behavioral science research and the effect these problems have had if any, on the social sciences in general."

In my judgment, the impact of Federal support has been appreciable. May I comment on two special ways in which the impact has been felt on the research itself—namely, in terms of the methodology used in the research and in terms of the time-perspective induced.

A disquieting imbalance is noted by my colleagues in regard to U.S. Federal support of the social sciences which comes disproportionately from the Department of Defense and from a National Science Foundation devoted largely to the physical and biological sciences. This state of affairs has tended to induce an emphasis on rigor within the social sciences, across the board. The administrators within these groups are working largely with physical scientists; often the social science scholars then feel they must meet the standards of hardness of the established sciences. At times, in my judgment, this has led to a premature emphasis upon precision, rather than encouraging choice as to whether "hard" or "soft" methods are to be used, as the problem itself may suggest.

The time cycles involved in Federal support has tended to shorten the research perspective of the scholar, inasmuch as he must tune his work to yearly budgets, with reports due at regular times so that requests for renewal and new grants and contracts may be developed. In my judgment, the longer range risks involved in research are thereby discouraged—one needs more immediate results to meet reporting deadlines and documentation for the next proposal. The short-range financing involved in our Federal budget for research makes it especially difficult to mount larger scale projects of quality, inasmuch as commitments to personnel must be tentative, thereby resulting in employment of the more marginal scientists.

(2) Next, Senator Harris, you asked for "an evaluation of the adequacy of existing procedures for Government grants and contracts for research in the social and behavioral sciences."

There are at least two ways by which present-day procedures tend to reduce the quality of the research being done in the social sciences, despite the overall excellence being obtained in the Government's research programs. Let me consider them one at a time.

First, although the procedures involved in awarding contracts and grants are topnotch, the monitoring and termination procedures seem to give too much emphasis to the relationship of the scholar to the Government agency rather than to the discipline itself. The scholar's peers are involved usually in the screening and selection of projects

for support; to date, the research administrators have not devised adequate procedures to maintain quality of work while it is being done—nor have they created systematic procedures for assessment of the work by the scholar's peers upon its completion.

Second, in keeping with a shorttime perspective, as mentioned earlier, contemporary procedures have tended to emphasize new approaches in the social sciences—those problems and methods which are novel in the hope of obtaining quick, fresh payoffs. Yet, the less glamorous work of a consolidatory nature must be supported, too. It may very well be that the longrun, effective utilization of social science research for decisionmaking in policy work may depend upon instituting systematic research now which provides for the unspectacular tasks involved in integrating knowledge already in existence.

(3) Your third inquiry, Senator Harris, asked for an assessment of "adequacy of the present level of Federal support available for research in the social and behavioral sciences."

Having centered my interests within political science during the last decade—the least supported of all of the social sciences—it is easy for me to appreciate the inadequacy of contemporary funding. To date efforts in the study of politics have been largely speculative, and speculation is cheap. As political science becomes more systematic, attempting to ground its conclusions in "data banks," such efforts—as is true for the social sciences, taken as a whole—will become more expensive, as other scholars have testified.

If we survive the 20th century, and if in the next 30 years we support our social sciences with adequacy, we will have a basis in the 21st century for that leadership in the "realm of knowledge and ideas about man and his societies" which you mention in the bill itself. But to do so will require vast sums, I'm afraid. Such leadership will need to be in partnership with intellectuals of other societies; hence, the provisions of the bill (sec. g(a)) with respect to collaboration with overseas scholars must be funded generously, too. As I mentioned in my opening remarks, can we overcome our fears of the social sciences so as to support them with enough resources that their outputs can make our fears groundless?

(4) Finally, Senator Harris, you wondered, "What Congress can do to bring about proper relationship between social scientists and the Government and how such a relationship should be structured."

As I see things, the Members of Congress can be supportive of the social scientists in two important ways: They can reduce the pressure on the administrators within the agencies who handle the research programs; they can provide that the social scientist gain access to stores of information already possessed by the Federal Government, and to insure that the social scientists participate in decisions as to what new data shall be generated. Over the past two decades, Members of Congress have shown ambivalent attitudes toward the inclusion of funds for social science in their bills, including their provision for the social sciences in the National Science Foundation. It seems to me that the key to a "proper relationship" is a willingness of the Congress to examine thoroughly what is being done in the social sciences, and then forthrightly to support their development and use in an ongoing partnership between Government and the social scientists.

If Government is to support the free development and unrestricted use of social science in its branches, given existing orientations by citizens and of the scholars themselves, it must be prepared for criticism, as the findings from research at times will contradict solutions favored by the intellectuals and exaggerate conflicts among scholars themselves. If the Congress is supportive of the agency administrators, wanting above all a social science which "calls the shots as it sees them," agency administrators will seldom be tempted to restrict the freedom of its scholars, be they on grant or in-house, so as to avoid the repercussions of having attracted attention in the Halls of our Congress through "flaps" involving their programs and budgets.

In addition to reducing the fears of controversy the Congress can structure its relationship to the social scientists as a partnership, in which it insits that the agencies base and evaluate their work upon the best in contemporary social science—rather than relying upon the crude, antiquated modes of decision current in the 19th century. Thus, its legislation about both domestic and foreign matters should include mandatory provisions for assessing program outcomes according to standards of adequacy now possible in the social sciences, rather than permitting "conventional wisdom" to continue ruling the day.

For a successful partnership in the generation of knowledge, the Congress must aid the social scientist by giving him access—under adequate safeguards, of course—to data held by the operating agencies. Further, as data operations are planned, more and more opportunity must be given the social scientist to gain new data of relevance for testing emerging knowledge. As has been done in an exemplary way in the Bureau of the Census, the agency must ask the scholar what data he needs, so that speculative knowledge may be replaced by empirically verified "laws."

Senator Harris, my conclusion is this: To legislate a National Foundation for the Social Sciences takes much courage and insight. It means creating a bill which will relieve the fears of citizens and scholars alike, as social science seemingly threatens ideologies and freedom. It means creating a bill which will interface adequately with those activities in social science already underway in the National Science Foundation, as well as with related activities funded in the Foundation on the Arts and the Humanities. Some will argue for a single community of science to keep social science unified with the other sciences; some will argue for tidy government, disaparaging the support of social science activities by three foundations, as well as by many of the operating agencies where its use is imperative. In my judgment, the establishment of a National Foundation for the Social Sciences will provide a way of introducing more pluralism within our social science endeavor, thereby reducing the potential for use of its products in a manipulative way and increasing the atmosphere of freedom with respect to its methods and contents.

SPECIFIC COMMENTS ON S. 836

Now please permit me to close the more formal part of the testimony with comments on particular aspects of your bill S. 836, per your invitation of May 5, 1967. When I studied the bill which you and your

19 fellow members of Congress submitted on February 6, 1967, I was again tremendously proud of my Government. It is heartening to know that so many members of the Senate want to promote the kind of altruism exhibited in the document. Once again I am completely grateful that I happened to have been born in the United States—where my own Government is so deeply concerned with the development of a base in the social sciences for construction of a better world, free from the very fears which prevent the attainment of knowledge about man and his societies, be these national or international in scope.

Will the provisions of sections 4(b) concerning the Board of Trustees of the Foundation, containing the phrase, "who are widely recognized for their knowledge of, or experience in, the social sciences or related public affairs," hamper the selection of younger, creative scholars for membership? I certainly would like to see some of the brilliant young social scientists invited to membership—men some universities recently have had the courage to promote to full professorships even before they reach the age of 30—and have not yet been widely recognized. It seems to me as important to have innovation by Board members, as by the scholars who are given funds for research. Will the provision of section 9(a) of your bill prevent the Foundation from securing the services of talented young people who are reluctant to disqualify themselves as recipients of funds for a full 2 years after they return to their home institutions?

In both of these provisions—sections 4(b) and 9(a)—there is a tendency to build into the agency a bias toward the establishment—toward the older men, who already have arrived and whose home institutions stand ready to support their researches without outside help, should they be disqualified for funds after having rendered significant service to their Government.

In section 6(2) on activities "to strengthen the research potential" in the social sciences, you say, "initiate and support research" and then you add "and programs," so, am I correct in believing that such programs might include training and study programs to increase the numbers and quality of personnel eventually available for research and application? The Lehman curves indicate that social scientists are almost a decade older at the time of their productivity than are the physical scientists. Is this because we do not attract young people into the social sciences through courses of comparable quality in our elementary and high schools? Even in the early years at college, it is rare to find a person like Dean James March offering exciting lectures and courses in mathematical models to freshmen in the social sciences, so that we may hope to compete with the biologists and physical scientists for high-quality talent. It is my hope that the Board, itself, and the Foundation's administrators will be directed by the Congress to provide programs which will help all citizens understand the challenge and potential existing within the social sciences, so that the fruits of these sciences may be used with understanding by all. Might this provision in the bill be made a bit less puzzling?

It seems to me most constructive that section 6(3)(c) provides for "encouraging social research by individuals, university faculties, interdisciplinary teams of researchers, nonprofit and foundation research-

ers." Such funding through multiple channels will preserve the freedom of the scholar—from his own well-meaning administrators, who sometimes mistakenly fear that the faculty member's devotion is of more immediate benefit to his sponsors in government than to his home institution, as well as from a demand that all research be done either by individuals or by teams, thereby inadvertently cramping the style of many.

In section 7(a) you permit cooperation with other agencies. Would it not be better to make such mandatory, especially vis-a-vis the NSF and the NFAH? We need to strengthen the hands of those who wish to relate the social sciences to other sciences as well as to the humanities, so as to close the gap between the two worlds described by Snow with such despair.

Will the phrasing of section 11(b)(2) be found limiting? It would seem to me that to prohibit contracting "for any research to be accomplished for its own purposes" might restrict the Foundation's ability to sponsor research on the efficacy of its own social science endeavors. Recently the armed services have been getting others to scrutinize systematically their own research programs, studying for example what programs of the 1950 decade paid off, now that we have hindsight. It seems to me that we would not want to exempt the NFSS's own operations from the same scientific scrutiny we believe should be developed as grounding for policymaking by others.

Your provision in section 8(a) for relations among scholars of different nations seems to me wise. We cannot build a cross-culture social science without having colleagues of quality overseas. Some specialists in international relations believe the reason the 19th century was a bit happier than the 20th century, as judged by the magnitude of our world conflicts, is to be found in the common culture—in this case a European, Christian culture—which existed among the elites, permitting the heads of state and their diplomats to come to more or less enduring consensuses. If the 21st century is to handle the problem of war and peace, it seems to me that one important route to a new consensus will be through common understanding based on a worldwide social science. After World War II, through our Pugwashes, we developed a worldwide "deterrence culture," in terms of which we now signal potential adversaries. In the decades ahead we may be able to broaden the bases for agreement in building a culture in which our social sciences provide a worldwide language and social technology through which we can achieve the economic, social, and political goals of mankind as a whole. Thus, it is imperative that all peoples have access to the knowledge we generate in the years ahead through the social sciences—including knowledge about the control of power—so they may be used to the advantage of all. It seems to me that section 8(a) will accelerate our progress toward achievement of this state of affairs.

I am at your service for inquiry.

Senator HARRIS. Thank you very much, Dr Guetzkow, for a splendid statement and the helpful suggestions that you have made.

I take it you support the idea of the establishment of a separate Social Science Foundation.

Dr. GUETZKOW. Decidedly, but not to the exclusion of the others, of course.

Senator HARRIS. Right. That is exactly, of course, our position. Certainly it is mine. I think pluralism is a real strength in our society and we would want to make it very clear, in the report on this bill, that it was intended as an additional, not an exclusive, source of support. Of course, that is not anything very startling. Pluralism runs all through our Government. And I do not think people need fear that the Congress is so precise and mathematical in its approach to social science that it would immediately decrease on the one hand what it increases on the other. I would say history and experience is to the contrary. Certainly that is true from the examples in our Humanities Foundation which, to some degree, overlaps on the jurisdiction of the National Science Foundation.

I think you made a good point and one with which I certainly agree when you say we ought to try to spell out more clearly either in the report or in the bill—I am inclined to think in both places—that there will be close cooperation between the National Social Science Foundation and the National Science Foundation. And I think you could add the Arts and the Humanities Foundation and the other agencies of the Government which will be funding social science.

I think you make two very good points about some difficulties with the present system, insofar as the present system supports social science research. There is a possible tendency to rigidify the theoretical orthodoxy of the social sciences, particularly that part of the social sciences which is more nearly engaged in quantifiable matters. I think that is true to a great degree in the present sources of support for social science research. I think it is true in the National Science Foundation, which the figures indicate, as we have already shown in our record here.

The other thing is, I think the tendency of the present system is also to fund on a rather short-term basis, as you have indicated. I think we need some long-range studies, and I think our hearings are rather replete, particularly these last hearings that we have been holding, with examples of the kinds of research that might be done over a long-range period that could be for as much as 10 years.

Dr. GUETZKOW. Yes.

Senator HARRIS. At present, support is pretty much restricted to 1 or 2 or 3 years. I might say, it would be our hope that the National Social Science Foundation, in addition to expanding the length of time, might also expand the size, so you could take a systems approach to some of the more complex problems that we need research on.

You make a very good point, I think, about the section of the bill which restricts for a 2-year period, former employees of the Government, obtaining funds from the National Social Science Foundation. We agree with you.

I could go into some detail about how we came to have that provision in there, and what it is similar to, but I think really, it is too restrictive for the purposes we intended. So that will have to be changed, I think.

You make another good point which has been made before here. I intended from the very first, and I think the other sponsors of the bill did, that in addition to fostering research, this Foundation would foster scholarship and training. We did not spell it out as well as we should have in this bill, and it will be spelled out more clearly.

I think you make another good suggestion for a possible change in the bill, that we have not heard before, and that is for some change in

the wording of the bill. It now says, "* * * will appoint widely recognized scholars in the social science disciplines to the Board." We have intended from the very first, and we will spell out in the report, at least, when this bill is reported, that the Social Science Foundation is intended to foster innovative and original and, therefore, controversial thinking and research. If we are to do that and if we are to avoid rigid theoretical orthodoxy in this new Foundation, we are going to have to, I think, bring in some people on the Board who would not be so "widely recognized," particularly by the orthodox.

Dr. GUETZKOW. You do not want just the "establishment."

Senator HARRIS. Yes; precisely.

Dr. GUETZKOW. Let us have a little controversy on the Board.

Senator HARRIS. A very good suggestion. You have made some really good points, I think. You know, the Government changed procedures after Project Camelot in Chile to require local notice to our country team and local notice to the country involved, and so on, for foreign-area research. When I looked into the Simpatico project after it appeared in the press, that was also funded by the Department of the Army and was a general social science research project in Colombia, I found that those procedures had, indeed, been followed, and that was an improvement.

I wonder what you think—but I personally think that if there is merit in our Government funding social science research in foreign countries—I happen to believe there is great merit in it—it ought to be funded by a civilian, rather than a military, agency. I feel that rather strongly, and I wonder if you have any comments on that.

Dr. GUETZKOW. Yes. I am supportive of the funding of social science research abroad by civilian agencies, especially a research-oriented civilian foundation. Our Department of Defense per se does not have a research mission; it uses research only as a means to its end in developing its military capabilities.

Yet, I am supportive of the idea of our Department of Defense doing social research in foreign countries, just as I am supportive of the idea of other branches of our Government doing research overseas, as may be required in achievement of their missions. As long as our Department of State is unable to provide an output of social science research about other countries adequate to the needs of our overseas and civilian agencies, in my judgment it is imperative that these agencies support the research themselves.

As is usually the case, the matter is not black and white. As we study the role of the military in developing societies, we realize that at times it is more constructive than its civilian counterparts in helping a society to manage its problems in growth. When Prof. George Blanksten, who will be here within a few days to give testimony, too, and I did a study for the Senate Foreign Relations Committee a few years ago on the Organization of American States, we were impressed with the way the Inter-American Defense Board serves a democratic function, in aiding Latin American military officers to accept norms regarding the subordination of the military to civilians. It is not impossible that, as our military missions demonstrate how social science research enables governments to solve impressive and urgent problems which relate to programs of military aid and civic

action, the military will become an important channel by which empirically oriented problem-solving techniques are introduced into more traditional societies.

It seems to me that Government officials and my academic colleagues have overreacted to the "lesson" of Camelot. Given the pervasive fears of ideologues about social science, as I pointed out in my opening testimony, some politicians will react negatively to social science, no matter what its sponsorship. Given the anti-Americanism of some critics as was the case in Camelot, the facts of sponsorship become irrelevant, when the incident provides leverage for local political advantage. Civilian sponsorship as well as military sponsorship is regarded by them as mere cover for "intellectual imperialism."

So, may I agree with your earlier comments about pluralism in our partnerships with other peoples and their governments: it seems we should be using social science to inform our programs and their programs, whether such activities be sponsored through the military or the civilian segments of the societies involved.

Senator HARRIS. We are interested in this subcommittee in identifying some areas where additional social science research support might focus. And I was intrigued by what you had to say about the modern private corporation modifying the nation-state concept. I wonder if you might say something about that.

Dr. GUETZKOW. May I begin with a statistic or two: As of now, the governments of only some five nations—the United States, the U.S.S.R., the United Kingdom, France, and the German Federal Republic—have revenues and disbursements exceeding those of our largest industrial corporation. And already there are some corporations which have more employees than some of the countries which are members of the United Nations. As we move into the 21st century, our multinational enterprises may have millions of employees distributed throughout the world operating with funds larger than those possessed by many of the nations.

It seems social science research might well focus upon the multinational enterprise, especially in terms of its potential for impact upon the evolution of the nation-state system. As many of my colleagues in international relations are noting, the nation-state no longer seems to be serving its purpose in providing for the welfare of its citizens—its boundaries are no longer inviolable, as missile delivery systems make all vulnerable to attack; its limited size in case after case makes it unable to operate so as to take advantage of economies of scale; its nationalism, often grounded in ethnicity, promotes meagerness in its social and cultural life. Will the international corporation, as Prof. Ray Vernon, of the Harvard Business School, asks, be a rival in the next hundred years to the nation, inducing an important system change? After all, nation-states have been a relatively recent innovation, dating in origin only from the 17th century. Can we develop a social science base which will help us in guiding the evolution of the international system? It may be that in the multinational enterprise we have a new vehicle to aid in the develpoment of a pluralism within our world culture which will allow for a great variety of styles and orientations, with more autonomy for all—yet, operating within a framework of tolerance for differences.

Through research in the physical sciences we are developing the ability to tap almost endless supplies of energy—and we no longer accept the limitations which supposedly were being imposed by the depletion of resources. As our researches move forward in the biological sciences, we refuse to accept disease as a "natural condition" of mankind, or as retribution for sin by the gods. Even within economics, we no longer take depressions as inherent features of the system. As we broaden our knowledge base—as we pour the treasure into the social sciences that we pour into our wars—we may gain the capability of helping to make a world which is worthy of the ideals of our forefathers. Of course, as the ancients already pointed out to us in the fable of Pandora's box, knowledge is a thing which may be used for purposes of evil or good. In our research, we must concomitantly focus upon the problems of values and goals and upon techniques for the control of power so that evildoers may be stayed in their efforts to utilize our knowledge bases for purposes of manipulation toward base ends.

In my judgment, there is one important new methodological development taking place within the social sciences upon which research support can well be focused. Through the use of simulations—be they of the all-computer or man-machine variety—of our national and international systems, we no longer will need to limit our research efforts to processes as they exist today. Instead we may construct "alternative futures." For example, through simulations of international processes, as my colleague, Prof. Paul Smoker, has been executing this spring at Northwestern, we can explore the role of the international corporation as an ingredient in a future world system. In this way, we can bring all our creative ability as innovators to bear. By validating such simulations through the data banks which an adequate social science endeavor will support, by researching the alternative transitional steps which may lead us realistically to alternative and more constructive ways of relating the different peoples of the world to each other, perhaps we will then realize, rather than just dream about, the kind of world all of us want.

Then perhaps those who come after us can look back and say, "This decision to support the social sciences with vigor and effectiveness was a very important turning point in the life of mankind."

Senator HARRIS. Most intriguing. Very, very eloquent. You are very kind to come here this time of day and present your testimony. Thank you very much.

Our next witness, who is also very kind to come here at this time of day, is Dr. Frederick Johnson.

Dr. Frederick Johnson is the curator of the Robert S. Peabody Foundation for Archaeology at Phillips Academy in Andover, Mass. Without objection, we will place in the record a biographical sketch concerning him.

Biographical Sketch: Dr. Frederick Johnson

Robert S. Peabody Foundation for Archaeology, Phillips Academy, Andover, Mass.

B.S. Tufts, 1929; Harvard, 1929–35; Sc.D. Tufts, 1966; Assistant Anthropology, Harvard, 1934–36; Curator Archaeology, R. S. Peabody Foundation, Phillips Academy, Massachusetts, 1936—American Anthropological Association (Executive Secretary 1949–54), Archaeology (Treasurer, 1941–46, President, 1947).

Senator HARRIS. We are very pleased you are here. We will be honored to hear from you at this time, Dr. Johnson.

TESTIMONY OF DR. FREDERICK JOHNSON, CURATOR, ROBERT S. PEABODY FOUNDATION FOR ARCHAEOLOGY, PHILLIPS ACADEMY, ANDOVER, MASS.

Dr. JOHNSON. I wish to thank you for the invitation to appear before you and the committee. I am here alone, as a private citizen, and can only express my personal opinions concerning your proposals.

I am offering opinions as an anthropologist who, during the past 30-odd years, has done some ethnological and linguistic research, but, for the most part, I have been doing research in American archaeology. Many of the statements I am about to make are judgments for which I cannot supply tangible proof, at least with the facilities I have available.

Allow me to preface my remarks by saying that the leadership shown by you and your committee in stimulating public discussion of the situation in regard to the social and behavioral sciences will result inevitably in great progress in the sciences themselves, in the Government, and in the world at large.

The results of the discussions do now, and will continue to, contribute significantly to the understanding of the needs and function of the sciences in the scientific world and, most important, especially in the Federal Government.

An observation of fundamental importance in all these discussions is the fact that the social and behavioral sciences are relatively new.

From a rather heterogeneous beginning, the social and behavioral sciences have made tremendous progress in the development of theory and basic hypothesis and in methodology, especially during the past 25 years or more. This growth is actively continuing. Of great importance is the collaborative aspect. This trend toward collaboration among scientific fields, especially in areas where they overlap, produces interpretations and conclusions of considerable depth and authority. I feel that in planning for the future it would be most unwise to do anything that would curtail this trend of development.

The needs of the social sciences are, it seems to me, to some degree a function of their state of development and the relatively recent discovery of their usefulness. Perhaps the greatest need is to continue the building of a substantial body of basic research.

A second need is to find a way to support and conduct applied and operational research which is required by Government agencies. This is separate, in a way, from basic research because the projects have definite limits and are usually carried out under pressure to secure practical answers. It is difficult to see how applied research for Government agencies can be combined with programs of basic research without imposing pressures and limits which would be detrimental to the need of a researcher to investigate the ideas and alternative hypotheses which appear as he analyzes and interprets the data at hand.

A third problem can be identified also as a separate endeavor. This involves the training of social scientists and leads into the development and support of university and other centers which combine training

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with basic and even applied research. This involves the provision of facilities and staffs for the training of social scientists, and eventually, as they develop research competence, they can apply for the grants which may be available.

In your invitation you listed five questions for consideration.

No. 1 was: "An identification of the problems that have arisen concerning Federal support of social and behavioral science research and the effect these problems have had, if any, on the social sciences in general."

The most obvious set of problems are those which have sprung from the much discussed Camelot and analogous affairs. There is hardly need for further discussion of these problems.

There is understandably greater emphasis on applied and operational research, or the practical side of social science, in the Government than there is on basic research. In practice it appears to be wise to separate basic research from applied without making them mutually exclusive.

What is needed is additional basic research. However, providing this is not a simple matter. The social sciences themselves are expanding and meeting their research needs as fast as the manpower and other resources become available. The Federal relationship to this is satisfactory, at least as far as the organizational aspect is concerned, and will remain so as long as the Government accepts the fact that the rapid expansion requires increased funding and that the need for increased basic research may mean production of hypotheses and theory, the application of which may be delayed.

The second item upon which you requested comment was: "An evaluation of the adequacy of existing procedures for Government grants and contracts for research in the social and behavioral sciences."

I feel that the use of panels of civilian scientists to evaluate proposals provides a check on the need and desirability of the proposed research as well as the quality of the organization and personnel involved. The research accomplished has been, as far as I know, generally of high caliber and the amount is commensurate with the available manpower and opportunity. I am not familiar with the situation relative to contracts and can only say that I have heard no complaints from my colleagues.

The third question was, "Adequacy of the present level of Federal support available for research in the social and behavioral sciences."

A very large proportion of Federal support for anthropology comes from the National Science Foundation and the National Institutes of Health with a minor contribution from the National Foundation on the Arts and the Humanities. Whether or not the support is adequate cannot be answered simply.

Following World War II the social sciences struggled with a serious lack of funds. The scientific fields that I know of got accustomed to working with a smaller amount of financial support and there was what you could call a sort of repression of social sciences, so that they got used to working with relatively small projects. This has gradually increased, now, and I think it is rapidly improving or expanding.

A proper present judgment of the situation is that no worthy project in anthropology, and I suspect in a great many of the social sciences, is

held up for a lack of funds. In anthropology, perusal of the lists of titles distributed by the Foundations leads to an opinion that the projects supported cover the whole field. They are not necessarily conservative, for in addition to traditional types of research one sees titles which indicate pursuit of exploratory or experimental research. This is not the full answer to the question.

Federal support, to be effective, must keep pace with the growth and expansion both in manpower and in the work accomplished of the social sciences. The increasing budgets for both basic and applied research reflects a real need for continuing expansion of funds. In short, the answer to the question is that present support is adequate but only temporarily so. The level of support will have to be raised annually for some years to come.

The fourth question is, "What can Congress do to bring about proper relationship between social scientists and the Government, and how such a relationship should be structured?"

The most encouraging fact relative to the Federal relationship to social scientists is that the situation has been brought to the attention of the Congress where it is being considered. This discussion, I feel, is extremely important, and I think I am correct in saying it is the first time there has ever been an extensive discussion of the problems of social scientists, particularly in the Congress. Much of this is due to the deliberations of this committee, and I am sure social scientists are indebted to you and your committee for this. The present structure of the relationship between the Government and the sciences is satisfactory in general, at least in my experience. It will need to be expanded as the sciences grow and as their contribution increases in importance.

In question No. 5, you ask, "Specific comments and recommendation concerning S 836."

If a National Social Science Foundation is the best way in which to increase the usefulness of the social and behavioral sciences, there certainly can be no objection to its establishment. I do feel, however, that the present foundations and the arrangements of the various Government agencies are working rather effectively. Probably the present system can be adjusted to meet changing requirements caused by the expansion of the sciences and the increased demand for their services. The establishment of another foundation may increase the administrative expense and manning the Foundation can add another stress to the manpower situation.

I have a feeling that the proposed Foundation would tend to isolate the social sciences from scientific research as a whole. It also seems to me that social sciences could and should justify their needs for funds on the basis comparable to the natural sciences. Isolation of the social sciences in a separate Foundation could interfere with the beneficial competition in the sciences as a whole.

I cannot see that the social sciences are really overshadowed by other sciences at the present time. They commenced in a small way involving a small group of people, and the record of their support reflects this.

I think, again, as the sciences expand, they will probably be supported. They will have to be.

The support by the National Institutes of Health, the National Science Foundation, and the National Foundation on the Arts and the

Humanities is primarily for basic research and this is necessary to the life and effectiveness of the social sciences. A new National Social Science Foundation, as it is outlined in S. 836, will be something of a hybrid—if you will pardon the term—for, in addition to supporting basic research, it is charged with carrying on applied research for Government agencies at least to the extent of 25 percent of its appropriation. This can set up problems in foreign area research because, rightly or wrongly, the arrangement can be misunderstood. Other problems will involve pressures to give priority to the urgent, applied, and operational projects of Government agencies, especially when funds become limited. This would be unfortunate at a time when we need a solidly founded corpus of research which has been initiated by a researcher upon consideration of purely theoretical interests.

A new Foundation could fragment support for the social sciences and perhaps even create confusion among supporters as to the objectives of Foundations funding similar work. There are possibilities of difficulties in distributing funds and some misunderstandings could even lead to duplication of funding.

The question of the much needed training of social scientists is not mentioned in S. 836 specifically, and it may be that this function is not appropriate in the proposed Foundation. However, the education programs in the Division of Social Sciences, NSF, have been very successful and productive from precollege levels on up. I think that this aspect of the problems should be, perhaps, given some consideration.

Thank you very much for your attention to these comments which very definitely are not recommendations because to do that is far beyond my competence. Thank you very much.

Senator HARRIS. I thank you for your presence here and for your testimony. You and I share tremendous interests in American archeology. I sometimes say that is my second love, but it really is kind of a first love, one which intrigues me at least as much as politics.

There is a good deal in your testimony with which I take great exception, as you might imagine. First—and I might say this is a rather incredible statement to me, in light of the testimony we have so far heard—you say:

> A proper present judgment of the situation is that no worthy project in anthropology, and I suspect in other social sciences, is held up for lack of funds.

At another place you say that you have heard no complaints from those who have not been able to get funding for their research projects. I might say we have—and I wonder if you would agree with me—that a person's attitude about the creation of a separate Social Science Foundation is formed, in some measure, by the discipline with which he is associated. That has been our experience in these hearings. Now, if you look at the National Science Foundation budget, you find 19 percent of its money is spent in the natural and physical sciences, 10 percent in the social sciences. A good many categories, such as chemistry and physics and others within the National Science Foundation receive, alone, more money than all of the social sciences combined. Furthermore, just this morning, Robert R. Sears, dean of the School of Humanities and Sciences at Stanford University pointed out, that:

> The National Science Foundation has clearly made an effort to support social science in certain branches, but it is noteworthy that the kind of social science that is most heavily supported is that which most resembles the natural sciences.

For example, in 1965–66, NSF made 140 grants for research in the field of anthropology; of these, 63 were in archeology, an enormous proportion if one considers the relative size of this field in comparison with social anthropology in universities.

Then he goes on to point out:

Under the label of the History and Philosophy of Science, only three out of 49 grants—

He is referring to the NSF—

were made for studies relating to the history and philosophy of the social sciences. In political science, there were only 17 grants all together, and of these, only two related to studies of international problems, an area within which there is beginning some of the most interesting and potentially profitable work of a social science character.

Then he pointed out in psychology and economics, much like archeology, techniques are more nearly comparable to natural science techniques and he went on to say, that, for example, in the field of law, in the field of history, there are virtually no grants by NSF. Law, particularly comparative law, which is a social science, gets almost nothing.

Now, would you think that those are reasonable observations which might color a person's viewpoint toward legislation of this sort?

Dr. JOHNSON. These are reasonable observations, based upon the grants which had been awarded, I think. What I don't know and what I would like very much to know—and I don't know whether it could ever be found out, would be how many applications for grants in social anthropology, for instance, were made, and of those number of applications, how many were granted. In my very small amount of experience on the Panel, I know the social anthropological grants have just as much chance of getting through as the archeological ones. So, there is a lag in application, in the applications submitted. Just how much more, or the degree of this, I can't tell. I don't have that information.

Senator HARRIS. Wouldn't you think the evidence indicates that NSF, in the social sciences, has primarily supported those efforts which are most nearly comparable to the natural sciences.

Dr. JOHNSON. This is the way it has started out.

Senator HARRIS. Dean Sears also pointed out in his testimony this morning, that:

Research support from both the National Science Foundation and the National Institutes of Health provides large sums for laboratory facilities and for the use of computers. Neither, to my knowledge, has a vigorous and active program for the support of library facilities. Yet, in law, history, political science, and indeed in many of the areas of social sciences, libraries play essentially the same role for the scholar as do laboratories for the medical and natural sciences.

I just wonder if it is not evident that there might be a need for additional reseach in the social sciences, where the computers would not be so readily usable.

Dr. JOHNSON. Well, there is need for further research in the social sciences. There is absolutely no question about this. There is need, and the need is greater than probably the manpower and research facilities we have to accomplish the required and expanding amount of work to be done. These needs just exist, there is no question about that.

Senator HARRIS. You said in your statement:

I am not sufficiently familiar with the details to do more than suspect that there are areas in which the social sciences can eventually make greater contribution.

Dr. JOHNSON. Yes.

Senator HARRIS. I think we have rather impressively documented, within the last few weeks in these hearings, that there are tremendous, enormous areas in the social sciences that investigators are very anxious to work in, if they could only find the support to do so.

But as you say, perhaps your own knowledge doesn't give you an opportunity to comment on that.

Now, one of your objections to this bill is based on your objection to section 7(b) of it, which allows it to receive transfer of funds from other agencies. My own opinion is, and I have stated several times in these hearings that as well founded were our reasons for that section, since the Defense Department has an easier time getting money for research, we nevertheless feel, that either that section is going to have to be taken out or very severely restricted, and wait for the day when the new Social Science Foundation would be able to get sufficient funds for research support on its own.

I wonder if, with the elimination of section 7(b), as we contemplate your objection to S. 836, it might not be lessened.

Dr. JOHNSON. I think that it would very much be lessened.

Senator HARRIS. And the same is true of your objection voiced in your prepared statement—I believe I just said in response to Dr. Guetzkoy's testimony that it was our intent all along to provide, in addition to support for research, support for training and scholarship in the social sciences through the National Social Science Foundation. It is our intention to spell that out more clearly.

I wonder of that would change your feeling about S. 836, were we to do so.

Dr. JOHNSON. Yes. I heard what you had to say previously, and I was very happy to hear your comment to this effect.

Senator HARRIS. Do you really feel that it is much of an objection to state as you do, that a new Foundation will "create difficulties in distributing funds and misunderstanding could even lead to duplication of funding"? Do you really believe we are doing so much in the field of social science that there would be a likelihood the Government would waste its money by doing precisely the same kind of research twice?

Dr. JOHNSON. I would say the relationships between Foundations would sometimes create difficulties in communication and there could be more or less duplicate projects proposed and support might be initiated.

Senator HARRIS. Can you believe a situation like that would be bad for the American taxpayers?

Dr. JOHNSON. I hesitate to visualize it. I think it is a possibility, but I don't like to think it could happen actually.

Senator HARRIS. I can't imagine one. For example, if there were going to be two projects, one sponsored by the National Science Foundation and one sponsored by the National Social Science Foundation to do archeological excavation in a certain area, of course, but to me that just seems incredible. But suppose it was a more general kind

of thing, say NSF were to give two separate groups of scholars or even two separate scholars, funds to study Navajo social organization; would that really be anything new?

Dr. JOHNSON. That wouldn't be anything new but I don't think it should be repeated.

Senator HARRIS. Somebody who testified earlier before this committee said, I believe last year, that a typical Navajo family these days is one composed of a husband, a wife, children, and a resident anthropologist.

Dr. JOHNSON. That's a good statement. Every family knows what to say and when.

Senator HARRIS. Do you think that there is any likelihood we would do any more of that than we now do?

Dr. JOHNSON. I think there should be certainly very carefully developed safeguards so that doesn't happen any more.

Senator HARRIS. Take one that is more difficult than that. Suppose you were studying the people in the Andes of Peru, and their response to the impact of the outside world on them. Do you really visualize that if two groups of scholars study the same thing that that would automatically be a loss to the taxpayers?

Dr. JOHNSON. I wouldn't think of it in some exotic place like the Andes, in Peru, but I think there is the possibility somebody might—some two organizations might set up a similar project, one studying a group in one city and another studying the same kind of group in a second city.

Senator HARRIS. Wouldn't that be a kind of welcome check of one on the work of another?

Dr. JOHNSON. It could and it couldn't. Under certain circumstances it would be a check but under other circumstances it would be plain duplication of work. If the two projects were known—if each group knew there was another project, a similar project going on, then the checks and balances would come about. But this duplication could just arise without the knowledge of other people, and then I think we would be getting duplication of effort.

Senator HARRIS. Do you know how many Government and industrial supported research projects and grants there are now in regard to the laser?

Dr. JOHNSON. I haven't any idea.

Senator HARRIS. I can tell you there are over 400 of them.

Dr. JOHNSON. I can imagine, yes.

Senator HARRIS. Do you know how many Government supported research projects there are now going on in regard to DNA, which is very fashionable this day?

Dr. JOHNSON. I don't know.

Senator HARRIS. There are literally hundreds of them. I would think that the prospect for wasteful overlapping in the social sciences is infinitely less than what is already going on in the natural and physical sciences. I don't say all those people studying the laser, or studying DNA are wasting the taxpayers money, but I say there is more likelihood there are than you would find in the social sciences, because there is so much more money involved in the one than there would be in the other. It seems to me there are so many frontiers of social

science knowledge, we know so very little, that anybody we can get to look into it and give us his insight would be a welcome addition. Let me give you an example. Take the problems of AID—Agency for International Development—the Peace Corps, the Office of Economic Opportunity, the Bureau of Indian Affairs, the Department of Health, Education, and Welfare, and I think you can name some others—the Department of Labor certainly—all, would like very much to know what causes some individuals to have the motivation, the self-confidence, and the kind of self-image which impels them to continue trying, even though buffeted by life, and to move if necessary, for employment, to go into a situation requiring additional training and education, or to possess the entrepreneurial spirit. Now if we knew those things; if we knew more about them, and as Jack Vaughn testified before this committee—the fact is, we don't know very much about human resource development, and that is best exemplified by our experience with the American Indian. If we knew just a little more about these things, the jobs of all the myriad Federal agencies would immediately become a little easier to perform. And it seems to me the more people we get involved in that kind of research, the better off we would be, even though they would be studying very much the same kind of problems. Would you disagree with that?

Dr. JOHNSON. No, I wouldn't disagree with that at all, especially if the studies were coordinated. If they were coordinated I would not object to it.

Senator HARRIS. You said that manpower in the social science field is just about as much as we expect to take care of—well, perhaps I am putting that wrong—that social science manpower is just too scarce to go around, and you cannot put more demands upon them. Now I will ask you to consider a couple of things and reconsider that. One, can anybody really doubt that the available manpower in the natural and physical sciences has not only expanded, but exploded, as a result of the massive Federal support since the beginning of World War II for research and scholarship in the natural and physical sciences? Number two, the other factor I would like you to consider about manpower is, and would ask if you are familiar with the studies that have been done and testified about before this subcommittee, which indicate that by and large the more talented college young people go into the natural sciences rather than the social sciences? Does that not have something to do with the quantity of research going on in the country? And the fact is that more exciting and interesting work and prestige are associated with the natural and physical sciences. What I am saying to you is that the Government has already upset the balance of manpower in the natural and physical sciences, and that it could perhaps do the same by encouraging, through its support, research and training in the social sciences.

Dr. JOHNSON. I would say that it probably could. That is, I don't know whether it would explode or not, the way it has exploded in the natural sciences. I am not sure that it would do this because there may not be the kind of opportunity to develop. Nevertheless, it seems to me, if the opportunity is provided more people will go into the social sciences. I don't think that it's necessary that it involves prestige or anything of that sort. I think that if more money was available, if the

opportunities are improved and more money becomes available, the people will go into the social sciences. Then you are involved with the problems of training them. You have to have the facilities to train them.

Senator HARRIS. Yes. My point is, and surely you would agree, that we don't have to depend upon natural laws of supply and demand, operating exclusive of the artificial pressures that Government can create, for the kinds of social science manpower the country needs. The answer to that is surely yes.

Dr. JOHNSON. Yes, sure.

Senator HARRIS. I would think, then, that you get into a kind of circumlocution when you talk about not having enough manpower for increased efforts in the social sciences, and then at the same time, say, the Government could, by its actions, like it did in the natural and physical sciences, induce increases in that manpower.

Dr. JOHNSON. Yes, by priming the pump all the time. It is a circular problem. You provide more opportunities and then you have to find a way to train the people. It could spiral, I presume, on upward.

Senator HARRIS. That is exactly what I would like to do. I think the problems in our world are so massive and so complex, that there is a good deal more urgency than many of us realize, to come to some better understandings about man and what makes him act as he does, and interact as he does with other human beings.

I think we can't just allow the situation to continue where we do not get some of the best minds of the country into these fields because actually we are not encouraging them. We have already tipped the balance in the other direction by massive inputs of Federal money into the natural and physical sciences. I want to even it up a bit. I don't think we can just leave it to chance for some kind of law of supply and demand to provide us with the amounts of social science manpower, because, as I say, I think we have already monkeyed with one such so-called inexorable law of supply and demand by making inputs on the side of the natural and physical sciences. So, while I don't necessarily look for any breakthrough in the social sciences, I do wish there was some kind of breakthroughs in the theoretical understanding of man, as there have been in the physical sciences, as, for example, in the molecular theories of biology. I wish we were going to find something like that, but I rather doubt we are, as I rather doubt anything dramatic will come out whereby, all of a sudden, we will find clear-cut answers to problems of long standing. It seems to me, we are so woefully short on answers that almost any increase in our knowledge would not only be helpful, but really vital to our understanding. At any rate, that is my own bias stemming from my political science and political backgrounds. I am also, of course, interested in your ideas. I wonder, why would you say that for so many years North American anthropology and archaeology was so greatly influenced by Hrdlička and others who said man has not been on this continent very long?

Dr. JOHNSON. Was found by whom?

Senator HARRIS. Such a short time ago, when I was studying anthropology in college, it was almost heresy to suggest that man might have inhabited this continent as long as we are now fairly sure he

has. There were people in anthropology and archaeology in this country whose theories were so sacrosanct that we overlooked rather clear geoglogical data which indicated their theories were wrong, and that the time span they set on man's presence here in this continent was much too short.

Dr. JOHNSON. Hrdlička and some of those who preceded him were strictly domineering people, and they were accustomed to make pronouncements. This was in the days when the field was very small. It took a tremendous amount of courage, especially on the part of a youngster—I was a youngster in those days—it took a whale of a lot of courage to say anything about this. If you did, it was a form of suicide. I can remember taking a course in geology with Kirk Bryan, who was a geologist of some ability. He said in one of his courses that if these geologists, these students, ever found any evidence of early man, they should cover it up and go away, and not say anything about it but not forget it, because sooner or later it's going to be found. I don't know, Hrdlička seemed to have a hold on some of the men, and he was very popular in Congress, as you know.

Senator HARRIS. That is the kind of thing I had in my mind, when I considered the need for a separate Social Science Foundation. It seems to me, as I said over and over during these hearings, we would want to write very plainly into the report on this bill that it was intended by the Congress that the kind of research they would support, and the kind of scholarship they would support, would not be limited to the orthdox in any field, but would encourage the innovative and the original and, therefore, the controversial—not just controversial in the political sense, but also in the scholarly sense. I would think that a diversity of sources for funding research and scholarship, in the social sciences, would more tend against rigidifying and orthodoxy in disciplines rather than the other way around. Wouldn't you think that would be generally true?

Dr. JOHNSON. That is a matter of opinion. I am not altogether certain that you can't have a varied approach and novel approaches and different approaches, if it is properly handled in a single source.

Senator Harris. I wouldn't say that you couldn't. What I would ask is: Which is more likely to allow for deviations from the accepted orthodoxy? I think you would have to say that, if there were to be any difference at all, the probability would increase with two foundations rather than one.

Dr. JOHNSON. This is a matter of opinion. In a foundation, such as the National Science Foundation, you have a tremendous range of science being considered. Isn't there a possibility that there is in existence this great variation in the scientific approach or scientific fields? I say something like this off the top of my head.

Senator HARRIS. We have, of course, diverse sources of funding through the mission-oriented agencies, NIH, DOD, and so forth, and this would add another, so there isn't any neat single source of funding now. But it would seem to me, if you had a foundation which had its own board made up of social scientists from different disciplines, you would be more likely to get different and novel things supported, than you would with just one foundation with one board. But I wonder, also, what would be your notion that the National Science

Foundation should have a board which was made up of a majority of social sicentists, and a director who was a social scientist.

Dr. JOHNSON. Well, that is really——

Senator HARRIS. You know, NSF now has an overwhelming majority of its Board members who come from the natural and physical sciences, and the same has been true of its Directors over the years.

Dr. JOHNSON. I wouldn't say this is a great heresy, that as long as all the sciences were adequately represented, I don't know that it makes too much difference, as to just what the distribution of the representation may be.

Senator HARRIS. But that is, wouldn't you say, a really farfetched notion, is it not, when for now and the foreseeable future the overwhelming bulk of the National Science Foundation's work is and will be in the natural and the physical sciences?

Dr. JOHNSON. Yes; it would be. It would seem unlikely that that would take place for a while at least.

Senator HARRIS. I don't believe I have anything else. I really do appreciate your frank discussion with me here, and I again express my gratitude for accommodating yourself with the change in the schedule of the subcommittee.

Dr. JOHNSON. Thank you very much.

Senator HARRIS. Thank you.

The last witness for the evening is Dr. F. Max Millikan. Dr. Millikan is director of the Center for International Studies, Massachusetts Institute of Technology, Cambridge, Mass. Without objection we will place into the record a biographical sketch concerning him.

Biographical Sketch: Dr. F. Max Millikan

Director of Center for International Studies, Massachusetts Institute of Technology, Cambridge, Mass.

B.S. Yale, 1935; Ph.D., 1941; Cambridge, 1935–36. Instructor, Yale, 1938–41, Assistant Professor, 1941–42; Research Associate, 1942–49; Associate Professor of Economics, Massachusetts Institute of Technology, 1949–52; Professor and Director of Center for International Studies, 1952—. Principal Economist and Assistant Director, Division of Ship Requirements, War Shipping Administration, 1944–46; Chief Economist of Intelligence Bureau, Division of Research, Europe, U.S. Department of State, 1946; President World Peace Foundation, Boston, Massachusetts, 1956—. Consultant, Select Committee Foreign Aid, U.S. House of Representatives, 1947; Science Advisory Board, U.S. Air Force, 1955; Operations Evaluation Group, 1960—; Presidential Task Force on Foreign Assistance, International Cooperation Administration, 1961.

Assistant Executive Secretary, President's Committee Foreign Aid. 47; Member, Social Science Panel, Science Advisory Board, U.S. Air Force, 1956–62; Committee on Foreign Aid, President's Science Advisory Committee, 1960—; Board of Directors, Committee on International Economic Growth, 1961. American Economic Association; American Statistical Association; Institute of Mathematical Statistics; Royal Economic Society. Author: Economic Development and Theory; National Income.

Co-author: "Income Stabilization for a Developing Democracy" and "A Proposal: Key to an Effective Foreign Policy"; co-editor "Emerging Nations; Their Growth and United States Policy".

Senator HARRIS. I repeat, Dr. Millikan, what I said to the other witnesses who appeared at this very inconvenient time this evening. I do appreciate your being here, and I am pleased to hear from you at this time.

TESTIMONY OF DR. F. MAX MILLIKAN, DIRECTOR, CENTER FOR INTERNATIONAL STUDIES, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASS.

Dr. MILLIKAN. Well, Mr. Chairman, I am very grateful for the opportunity to present my views here. It has been a long day and it is late, and I will be as brief as I can. I think I will save your time probably better if I stick fairly closely to my text, skipping here and there. If I try to improvise, it usually takes longer.

I began my careeer as an economist at the height of the great depression of the 1930's working on problems of the business cycle and control of the national level of economic activity. Observing over the last 30 years how the results of what started as university economic analysis and research have gradually become embedded in the operating practices of American Government agencies responsible for fiscal policy, and how in consequence we now have some assurance that we will never again have to go through a great depression like that of the 1930's, I am encouraged to believe that with patience, imagination, and adequate effort social science may come to play a similarly helpful role in solving some of the other great problems of our time.

For the last 16 years I have been director of the Center for International Studies at MIT, a research center dedicated to trying to bring to bear all the relevant social sciences on a better understanding of the international world in which we live. While the Center receives a major portion of its financial support from foundation and other private sources, we have done a great deal of contract work for various Government agencies and we have always taken it as one of our prime objectives to attempt to make academic research relevant to the illumination of the major foreign policy issues facing the United States. Because of this recent experience of mine, I would like to concentrate my attention primarily on social science in international and foreign affairs, though I recognize that the scope of the committee's concern is much broader.

Now, with your permission I would like to raise three basic issues about the character and extent of Government support of social science research. These issues suggest somewhat conflicting considerations as to how that support should be organized, and I would like to discuss these conflicts of objective and how tentatively they might be resolved. Let me first state the three issues.

The first is the question of whether and why more financial support from the Government is required for social science research in the international field, what sorts of additional financial are most needed, and how they can best be supplied.

The second issue, which I shall call the image problem, is how the reputation for objectivity and disinterestedness of American researchers abroad can be maintained in the presence of Government support for their work so that they can preserve access to foreign data and information and secure the cooperation of foreign scholars in the face of the very widespread foreign suspicion of any research activity with Government connections. You have heard a great deal about this problem, sparked by the Camelot affair and the various CIA disclosures, in earlier hearings of this subcommittee, and I am convinced

that it is a very real and very serious problem to which great attention should be paid in organizing Government support for social science. The third issue, which I shall describe as the bridgebuilding problem, is how better communication can be established between the producers of academic research in universities and research organizations and the potential operational users of their grindings in the foreign policy agencies of the U.S. Government. A great deal of meaningful scholarly research is never utilized by operators because they understand neither its relevance nor its limitations, and many of the most crucial operating problems are not adequately researched because the scholar is not brought into sufficiently immediate contact with them.

These three criteria for the design of Government support for social science—what will yield the most funds, what will create the best foreign image, and what will build the most effective bridges between research and operations, as I shall explain in a moment, are frequently in conflict and the resolution of these conflicts calls for wise compromises. I would like to elaborate a bit on each of the issues and then discuss the resolution of the dilemmas.

First, is more Government money needed and, if so, why? The revolution in economic thinking of the 1930's which produced modern fiscal policy was supported by Government to only a very limited extent. Until fairly recently a typical social science research project involved similarly a scholar working in a well-equipped library, though overseas research has always involved travel to the foreign country which in this case is the scholar's laboratory. However, there have been some recent developments which have enormously increased the cost of effective social science research, particularly in the international field.

In the first place, social science is doing less armchair theorizing these days and a great deal more collection of facts and empirical observation of what is happening in the real world. This fact collection would be relatively unmanageable, it were not for the development during the past decade of infinitely more efficient means of storing, coding, handling, and analyzing data of all sorts with the help of the modern computer. One of the great problems of social science has always been that simplifying reality through controlled experiment is difficult or impossible, in social situations but at the same time the number of variables at work in any real life situation is so great that without some mechanical aid, we couldn't handle these variables. The computer has changed all that. We can now, for example, collect information about the attitudes of thousands of people either here or abroad about a great many different things and very quickly find out what some of this information means. However, both the collection abroad and the statistical processing of both qualitative and quantitative data about human societies are very expensive business beyond the unaided means of most universities. I would like to emphasize here this applies to the qualitative as well as the quantitative data we heard about from Dr. Guetzkow.

A second reason for the rising costs of social science research, and this applies particularly to the international area, is that the involvement and responsibilities of the United States abroad have increased dramatically since World War II, and at the same time the greatly increased pace of social, economic, and political change throughout the

world has made the understanding and interpretation of developments in foreign countries much more difficult, complex, and time consuming. We need a quantum jump in the scale and intensity of research on the baffling international environment in which we find ourselves and we need expert analysis of the evolutionary processes at work in each of the more than 100 national societies which comprise that environment. The financial resources of the private and State universities already strained to the limit in coping with the postwar explosion in college enrollment are not able to cope with the problem. The private foundations have in the past decade made major contributions to social science research especially in the international area, but they have many other responsibilities and interests and cannot support the kind of expansion of social science research activities which the longrun national interest requires. Government has become a major and expanding source of support as operational agencies like AID, the Arms Control and Disarmament Agency, the Department of Health, Education, and Welfare, and most notably the Department of Defense, have come, increasingly, to recognize the importance of social science research to them in the discharge of their operational missions.

But there is a problem here. Operational agencies quite properly feel that given the limited funds available to them for research, priority must be given to activities at the applied end of the research spectrum where fairly quick payoffs to the achievement of immediate agency missions may be expected. The consequence of this is that the scholar or research center seeking Government funds to finance research is under considerable pressure to focus his attention on applied or operational problems. Now, a bias in favor of demonstrably useful applied research at the expense of more basic and fundamental investigation, if carried too far, is self-defeating. As we have learned in the natural sciences, applied and operational research is most productive when it is based upon and grows out of the kind of understanding of the fundamental forces at work which is yielded by basic research investigations. Thus, in the long run, the most important step in learning how to make foreign economic aid more effective or foreign information programs more telling, may be to improve our understanding of the nature of the economic development process in foreign countries or of the fundamental psychology of attitude modification.

Senator HARRIS. Let me just interrupt to say I could not agree more. Not long ago in Germany I attended a meeting of parliamentarians to talk about aid to developing countries, and the chairman of that meeting was a member of German Bundestag, a very impressive young man by the name of Walther Kiep, who delivered a paper on the subject about how little we know about the people we are trying to assist, and the economic development process in general. This is a subject of great interest to me, as I indicated a little while ago in a comment on a previous witness' testimony.

Dr. MILLIKAN. There is a clear understanding of this point in some of the operating agencies, and some, notably, the Department of Defense, have supported a substantial amount of basic social science research for this reason. Nonetheless, the bias toward an applied

emphasis is still quite understandably there, and in my view until the Congress gives explicit recognition in one way or another to the view that support of basic social science research is in the longrun national interest, we will not make the progress of which we are capable.

In the natural sciences the Congress has understood and accepted this philosophy in the establishment of the National Science Foundation. There too, before the establishment of the Foundation, a great deal of basic research in the natural sciences was supported by the operational agencies, but a proper balance was not secured until the mission of promoting fundamental and basic natural science research was accepted as a proper and important national concern.

It is my conviction that in the social sciences the case for a heavy emphasis on the basic end of the research spectrum is even stronger than it is in the natural sciences. In the development of any science, it is concerned in its early stages mainly with improving its understanding of the phenomena with which it deals and cannot be expected to have immediate and large practical payoffs. As the science matures, and the structure of its concepts and analytic tools is somewhat stabilized, and as its capacity to deal with complex as opposed to simple situations grows, its utility for operational purposes greatly increases. This suggests that the balance between basic and applied activities should be much more heavily at the basic end the less advanced the science is. Economics, which is perhaps the most highly developed of the social sciences, is already at a stage where support of a good deal of its research can be justified on grounds of immediate applicability to urgent operational problems. The other social sciences all have considerable utility over limited ranges of practical activity, but their rapid advance will depend on the allocation of a much higher proportion of money, attention, and manpower to the basic end of the spectrum than is probably true of the more mature disciplines.

If this diagnosis is accepted, let me turn for a minute to its implications for the bill now before the subcommittee. Will the establishment of a National Social Science Foundation result both in more Government support being available over a period of years for social science research in the international area and a higher fraction of that support being provided for basic as opposed to applied research? I think the answer to this question depends on the attitude with which the Congress approaches this bill and the expectations it has for it. There are many who feel that the case for public funds for support of social science research must be made in terms of its demonstrated relevance to immediate short-term issues facing the country. If the bill is passed with this expectation, its sponsors, I am convinced, will be disappointed, and the experiment, I think, is likely to be a failure.

If this is the concept, then funds for the Foundation will be competitive with those for the research programs of the operational agencies, and a net addition to research funding in this area would in my view be rather unlikely. This is because without more basic research, I do not think a rapid expansion of applied social science research is likely to be highly productive. If this bill is supported in expectation of dramatic applied results and these are not forthcoming, the support will not be sustained. In this event it would, in my judgment, be much

better not to establish the Foundation, but rather to concentrate attention on getting adequate research budgets for the operational departments to conduct whatever research is clearly relevant to their needs.

On the other hand, if the Congress genuinely accepts the case for Government support of basic research in the social sciences, which I have tried to make earlier, and is prepared to let the foundation operate on criteria of scientific interest, relevance, and productivity without congressional pressures for a demonstration of immediate practical payoff, I think the creation of such a foundation would be an act of historic statesmanship.

There is an intermediate position. The Congress has already expressed faith in and continuously supported basic research in the natural sciences. If the Congress—and I know I am not speaking about you, Senator, because I know your views—if the Congress is not solidly convinced that the social sciences merit similar treatment, as I believe they do, then perhaps it would be wiser to continue the present course of leaving basic social science support under a protective natural science umbrella in the National Science Foundation, and not risk exposing this tender plant to the full blast of direct and possibly hostile congressional scrutiny by giving it separate legislation of its own. On the crucial question facing the committee and the Congress of whether to establish a separate foundation or strengthen the social science activies of the NSF, I believe the above to be the central consideration. Social sciences are much more controversial than natural sciences, and it will, I suspect, be a good deal harder for the Congress to resist the temptation to try by legislative history or otherwise to influence the substance or the focus of the research which the Foundation supports. You, Senator, are in a much better position than I to judge whether, to avoid this danger, basic research in the social sciences needs the prestige and protection of an established agency with a natural science flavor. I personally for one would hope it did not because I do not think that Government support for basic social science can be effective or sustained unless the Congress understands it and has faith in its promise.

Now, let me turn now to my second issue, what I have called the image problem. There is no need to elaborate for the subcommittee on the mounting suspicion and resistance which greet American researchers abroad who either are, in fact, or are believed to be serving the purposes of operational U.S. Government agencies. I would only confirm the testimony of other witnesses that these suspicions exist, that in some cases they have been raised to really quite irrational levels, and that they create difficulties for overseas research which may in some cases be even crippling to that research.

It is important to start with the recognition that the Camelot and CIA disclosures are only one, and probably not the most important, reason for this state of affairs, and that no institutional device at the disposal of the U.S. Government will provide a complete or even a primary solution to the problem. It arises partly from psychological and attitudinal developments abroad such as the sense of inferiority and of being exploited of foreign social scientists, the lack of any tradition in social research in many foreign countries which makes it hard for people there to understand what possible reasons other than subver-

sive ones scholars can have for asking questions and distributing questionnaires. It comes partly from the fact that officials of some foreign governments would regard it as madness to provide funds from their own budgets for social science research and cannot believe that when this is done by the American Government it doesn't have ulterior motives. Finally, it arises because it is a very handy hook, as Dr. Guetzkow was saying, on which opposition groups can hang their efforts to generate anti-American feeling and embarrass colleagues of theirs who cooperate with Americans.

This atmosphere, since it is based largely on suspicion rather than on evidence, would continue, I think, even if all Government support for foreign social science research of whatever sort were completely cut off tomorrow. The most important techniques for dealing with it lie in the hands of the researchers themselves who are going abroad. Their actual behavior, their candor, their respect and consideration for their foreign colleagues, and their scholarly integrity and intellectual quality are in the long run much more important in determining how they are received than their sources of financial support. Nonetheless, there is no question but that a scholar's connection with or support by operational agencies, particularly those with intelligence or military functions, gives foreign enemies of scholarly collaboration very effective ammunition with which to attack it and creates additional problems for the American researcher. While the problem would not be solved, it would be a good deal easier to deal with if for genuinely basic social science studies there were a source of Government funding, such as the proposed Social Science Foundation with an explicitly scientific mission and no connection with operational agencies.

Our Center has done a good deal of overseas research, virtually all of it privately supported. We have now in the design stage plans for a basic project on the development of public attitudes in underdeveloped countries as they undergo the modernization process. This project has no immediate relevance to current operational problems of the Department of Defense but is being supported by the Advanced Research Projects Agency of that Department as part of its basic social science program in the conviction that an improved understanding of modernization will, in the long run, be useful to Government policy. While our preliminary discussions with our potential collaborators abroad on this project make it plain that, on the whole, they trust us and our motives and that some Defense Department support will not be a fatal bar to the successful conduct of the project, they and we would both be much happier if its basic research charater were underlined by financial support from an agency without operational responsibilities.

For these reasons, I believe that a very long step toward a solution of the image problem would be taken if either the resources of the National Science Foundation for basic social science research were significantly expanded or if the new proposed National Social Science Foundation were established. In the latter case; that is, if you set up the National Social Science Foundation, I feel it would be urgently important for the new Foundation in its first years to establish an unchallegeable reputation for being interested solely in the advance of social science and not in serving the interests of operational agencies in the foreign policy field. If the legislative history indicates that a

prime basis for congressional support for the establishment of the Foundation is the hope that the researches it finances will be of immediate help to American foreign policy operations, the contributions which the Foundation could make to the solution of the image problem will be largely negated.

I would be opposed to having the Foundation make use, at least in its early years when it is establishing its image, of the provision in the bill that it can accept funds from operational agencies for basic research support. I was very glad to hear you say that there is a possibility of eliminating that from the bill. If the Congress, in fact, has enough confidence in the basic research functions of the agency, and this is the only condition under which it should be created, it should appropriate directly to the agency whatever funds it needs to discharge its responsibility.

In this connection, Mr. Chairman, let me put forward as vigorously as I can the view that grants or contracts by the proposed Social Science Foundation for work overseas or on foreign areas should not be subject in any way to the review or procedures presently in effect by the State Department for overseas research by the operational agencies. My convictions about this do not arise from any dissatisfaction with the way these review procedures are now being conducted by the Department. On the contrary, we have had some experience of review under these procedures and have found the State Department most helpful, understanding both of our research objectives and of the importance of freedom for the academic researcher, and concerned that these procedures not constitute one more unnecessary hurdle which the academic researcher must clear in order to get a foreign project started. My concern is different. It is rather that the mere existence of these procedures implies that the State Department and by implication the U.S. Government accepts some responsibility for the conduct of the research it finances and the behavior of the academic researchers engaged therein. This seems to me to be an incorrect and unwise philosophy, probably with respect to all Government grants and contracts for research by private scholars, but certainly with respect to all such contracts in the basic research area.

The Government should, in my view, take the position, and explain it vigorously in public, that it is supporting fundamental research because it believes it to be scientifically valuable but that its financial support gives it no control whatsoever over either the conclusions of the research or the manner in which it is conducted. The responsibility for conducting research whether at home or overseas in such a way as to maintain access and cooperation in foreign countries must rest squarely on the individual investigator and the organization by which he is employed.

Senator HARRIS. Could I, just in the interest of time, make a comment at this stage. You noted what I had to say about the probability of eliminating section 7(b) and I think with that section out we would also answer the second question you raised—I think it would not get into the clearance procedures if you were not involved with operational agency money for foreign area research. At the present time NSF at least doesn't have to go through those clearance procedures, although there is, I understand, some movement afoot to require them to do so.

I think that would be a mistake. I think if we eliminate 7(b) from this bill, we also could answer the very real question you have raised, concerning the clearance procedure. I think the State Department would be taking on additional problems for itself if they got into that. It seems to me they are in a better position on NSF research projects in foreign countries to say, "We don't clear it because it has nothing to do with our foreign policies." Whereas, if they were to clear projects, then they would become involved in what the Foundation would be doing.

Dr. MILLIKAN. I agree with you completely, Senator, with only this addition, that I would hope you would give consideration to making some mention of this point, and the reasons for it, at least in the report of your subcommittee, if not in the actual language of the bill, because I really think there is a vicious circle here between the executive branch and the Congress. The executive branch partly wants these review procedures because it is afraid of the trouble it will get into with Congress if it doesn't have them. I think it's very important to get established in a congressional statement the view on this point that the Congress neither expects nor wants any control over the conduct or conclusions of the research it supports, by the moneys it is granting this way.

The American Government should take the view that is has no more control over the activities of the researchers whose work it finances than it has over privately financed researchers, newspaper men, or any other American citizen. This is part of the central doctrine of our open society which should be reaffirmed as frequently, in as many ways, and as vigorously as possible. Only if Government policy is crystal clear on this point can foreign collaborators be reassured that Government sponsored basic research is not motivated by narrow and short-range U.S. national interest considerations.

Let me turn now to the third issue of how to build bridges between research and operations in the foreign policy field. Everything I have said up to this point has been focused on destroying these bridges. I have emphasized the importance, at the basic end of the research spectrum, of insulating Government sponsored basic social science research from applied and immediate policy considerations both in the criteria for the selection of projects and in the conduct of the work once undertaken. I listen to myself saying these things with some surprise since my principal efforts have been devoted for the past 16 years to making international research more and not less relevant to the operational issues confronted by our foreign policy agencies. I believe fundamentally that the ultimate purpose of public support of international social science research is that we need to know more in order to act more effectively on the world scene. The utility of basic social science research to the policymaker, which is the longrun justification for public support, depends, I am convinced, on very close and intimate contact between people whose function it is to push back the frontiers of knowledge and those who have responsibilities for taking action for improving the state of the world. I am convinced that we must strive in the foreign policy field for the same intimate and constructive relation between the scholar and the policymaker that we have largely already achieved in the area

of domestic fiscal policy and are beginning to achieve in areas like the economics of foreign aid.

How can this dilemma be resolved? What can we do to build more effective bridges and secure better operational use of social science results without at the same time weakening the integrity and perhaps even destroying the possibility of fundamental social science research on foreign and international matters? While there is no ideal answer, I am convinced that the general lines of an answer are to be found in paying attention and devoting resources to the whole spectrum of social science activities running from the kind of basic research at one end, which I conceive to be the central task of something like the proposed National Social Science Foundation, through a vigorous program of more mission-oriented social science research conducted by private, academic, and other organizations but sponsored and supported by the operational agencies of Government, continuing toward the more applied end of the spectrum with operational research conducted by qualified social scientists internally within the operating agencies themselves, especially where large amounts of classified information or very sensitive policy issues are involved, and terminating finally with the employment of substantially more academic social scientists in actual operational posts in Government agencies for some parts of their careers.

If the various pillars of this bridge are all firmly founded and adequately supported, and if substantial numbers of individual analysts move back and forth between these different kinds of activities as economists have moved back and forth between theoretical research and operational posts with stops at the way stations in between, then I am convinced that both knowledge and action will gain enormously. I conceive of the bill you now have before you to create a National Foundation for the Social Sciences as concerned primarily with one end of this spectrum, the end relatively neglected by public funds concerned with basic research and the advancement of knowledge. I have emphasized keeping that end pure because, I think, the pressures in the Congress and among the public to push toward the utilitarian end will be very powerful and it will take an act of congressional statesmanship to recognize the country's longrun interests in a flourishing basic social science research establishment. But, if I am right in my conviction of the importance of the bridgebuilding issue, there are some points to be kept in mind in considering this bill.

First, funds appropriated to the National Social Science Foundation must not be considered as substitutes for funds appropriated for research purposes to operational agencies. Two quite different functions are involved and both of them are essential to the effective utilization of social science research. Second, the operational agencies of Government must be encouraged to expand their use of social scientists in three kinds of roles: First, as monitors of external mission-oriented research, second, as conductors of operational research within these agencies themselves, and third, as decisionmakers who have some feel for and experience with the uses to which social science research can be put. Private research centers, such as mine, and individual scholars for their part should conduct a range of activities running from pure research at one end and operational analysis at the other, with periods

of Government service interspersed for those who are so inclined. The National Social Science Foundation might well take it as one of its functions to attempt in a variety of ways to expand the very limited supply of people capable of moving back and forth across this spectrum from the pursuit of knowledge to the conduct of action.

In summary, what I have been trying to say is that I believe the National Social Science Foundation can perform a very valuable function if the spirit in which it is conceived by the Congress permits it to do three things:

First, it must be thought of not as a convenient alternative institutional device for spending money already available but rather as a way of creating a net addition to Government financial support of social science research especially at the basic end of the spectrum.

Second, in order to create the right image abroad and to strengthen the long-term productivity of social science in the national and international interest it must be envisaged not as a way of stimulating more operationally useful applications of social science but as an institution devoted to fostering the fundamental advancement of knowledge.

Third, if it is to constitute not an isolated activity but a necessary pillar at one end of the bridge leading from knowledge to action, the Congress must be prepared to devote equal amounts of time, effort, and money to the other elements at the more operational end of the bridge.

Senator HARRIS. Well, I want to say, Dr. Millikan, I think that is a really well prepared and thoughtful analysis of the questions involved, and I find myself almost in complete agreement with the things you have had to say, as to the factors this subcommittee and the Congress ought to consider, as it determines whether or not this bill ought to pass. Many of the ideas you express are exactly what I had in mind when I introduced this bill, and certainly it will be our intention to spell that out in the report. I also agree with you that we have to have a "quantum jump" in the scale and intensity of research, not only in international affairs, but I think in all areas of social science.

I agree with the issues first, second, and third, that you say are involved in the consideration of this legislation. The matter really boils down to what you have said and what, in a different way, Secretary Willard Wirtz has said, to whether or not we really are serious about the contribution increased support for basic research in the social sciences can make. I think that the first part of that question is addressed to the social science community. Are you willing to stand up for the social sciences without the protection of the umbrella of the physical sciences? As I said in a speech at the annual meeting of the Association of Applied Anthropologists, that if we are not ready and willing to do that, if we are not sure it can be justified on its own, then it seems to me we ought to conduct our social science classes in our colleges in secret. As you say, the ultimate question is, Does the Congress really believe that there is anything to be gained by increased support for basic research in the social sciences? I pointed out to you that, before there were any hearings at all on this bill, 20 Members of the Senate, which is one-fifth of its total membership, joined together in the cosponsorship of this bill to create a separate National Social Science Foundation. Those cosponsors include the majority leader, Mr. Mansfield, Mr. Kuchel, and others embodying a wide spectrum of political

philosophy, such people as Senator Robert Kennedy of New York, Senator Mundt of South Dakota, Senator Byrd of West Virginia, who is the secretary of the Democratic Conference. So, I think there is a growing willingness on the part of the Congress to recognize that there are a good many unanswered questions which the social sciences must address themselves to, and that it is worth while, from the taxpayer's standpoint, to see if we can increase our knowledge and understanding in these areas in order to allow us to do a better job on the broad range of social problems that we are considering, and for which we have enacted a myriad of Federal programs. So, I would say, in answer to the question you raised in your statement about the demonstrated relevance of social science to short-range goals, that it is certainly my intent that we won't have to justify every single expenditure.

Of course, there are always going to be objections by individual Members of the Congress to particular studies. I don't suppose there is anything that sounds as funny to a layman or outsider in a particular field than to read titles of Ph.D. dissertations.

Dr. MILLIKAN. It even seems funny to some of us.

Senator HARRIS. A good many Members of the Congress find it very interesting to read off the titles of grants made, by NSF, or by the Arts and the Humanities Foundation. I thought when Dean Sears of Stanford testified this morning that the title of his dissertation, which is "Effect of Occipital Lobe Ablation on the Visuomotor Behavior of Goldfish," would cause two or three speeches around the Congress, had that been done with Federal funds. We are always going to have that. But, I think, though, we would have a less responsive public to that sort of thing, if we just struck out on a new course of national policy to recognize the value of social science research for itself, and for increasing our knowledge, then we will have come a long way. That's my thought and I do think there is a need for that kind of recognition.

Social sciences just permeate all parts of the Government, of course, and social science research, applied or basic, is supported by our Government a great deal, but it is not really visible to the general public, or to the Congress, in such a way as to make its importance obvious. So I agree with you that those are the questions we are going to have to ask. We are going to have to ask them of the social scientists, we are going to have to ask them of the Congress, and ultimately of the people themselves: Do you believe there is benefit to be gained for greater support for social science? And they, ultimately, will have to answer.

Dr. MILLIKAN. If I may, Senator, I would like to make one more comment on the point of a separate Social Science Foundation, which is not in my paper. As I have listened to and read some of the other testimony, I think there are some very real dangers in not establishing a separate Foundation, in continuing what I would call the bifurcation of social science between its humanistic wing and its quasi-scientific wing.

We have found actually in our center where we employ both historians and mathematicians that the interaction between these two groups is just enormously valuable. Any institutional device which tends to make people continue to justify themselves either as quan-

titative natural science types or as historian philosopher types really leads to a neglect of this middle area which really ought to be right at the center with both of these two things on its wings. So I think you have a very good answer to that point which I think can easily be supported.

Senator HARRIS. I said earlier in these hearings, in addition to fostering interdisciplinary efforts between natural and social scientists, it seems to me a separate Social Science Foundation could foster interdisciplinary effort within the social sciences to great advantage.

Dr. MILLIKAN. Exactly.

Senator HARRIS. Well, I don't have anything else. Your statement is a very complete one and I think it will be very helpful in making a record on this subject. Do you have anything further?

Dr. MILLIKAN. No, sir.

Senator HARRIS. I really appreciate your coming and I appreciate your testimony.

We will stand in recess until 8 a.m. tomorrow.

(Whereupon, at 9:15 p.m., the subcommittee recessed to reconvene at 8 a.m., June 28, 1967.)

NATIONAL FOUNDATION FOR SOCIAL SCIENCES

WEDNESDAY, JUNE 28, 1967

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

The subcommittee met, pursuant to recess, at 8:05 a.m., in room 1318, New Senate Office Building, Senator Fred R. Harris (chairman of the subcommittee) presiding.

Present: Senator Harris.

Also present: Dr. Steven Ebbin, staff director.

Senator HARRIS. The subcommittee will be in order.

We are continuing hearings this morning on S. 836, "A bill to create a National Foundation for the Social Sciences."

I am very grateful to the witnesses who are scheduled to appear today and who have agreed, very graciously, to come at this early hour for that purpose.

Our first witness this morning is Dr. Gerald Holton, who is professor of physics at Harvard University.

Without objection we will place in the record at this point a biographical sketch which has been prepared concerning him and, Dr. Holton, I believe you have a prepared statement. We will be glad to hear from you at this time.

Biographical Sketch: Dr. Gerald Holton

Professor of Physics, Harvard University, Cambridge, Massachusetts.

National Certificate Electrical Engineering, 1940, School of Technology, Oxford, England; B.A., 1941; M.A., 1942 Wesleyan University; M.A., 1946, Harvard University; Ph. D. (physics) 1948. Instructor, Brown University, 1942–43; Laboratory for Research on Sound Control and Staff, Officers' Radar Course, 1943–45, Harvard University; Various faculty ranks, 1945–59, Harvard University; Visiting Lecturer, 1949, 1957, University of California, Berkeley; National Science Foundation Faculty Fellow, at Paris, 1960–61. Exchange Professor Leningrad University, Spring 1962. Member—Institute for Advanced Study, Princeton, New Jersey, 1964. National Science Foundation, Advisory Panel for History and Philosophy of Science (1963-65).

Fellow, American Physical Society; Chairman, New England Section, 1962–63. Robert A. Millikan Medal, 1967. Fellow, American Academy of Arts and Sciences; Editor of Daedalus, 1957–61. History of Science Society; Council, 1958–61. 1963–66. Board of Directors, American Association for the Advancement of Science; Philosophy of Science Association and others.

TESTIMONY OF DR. GERALD HOLTON, PROFESSOR OF PHYSICS, HARVARD UNIVERSITY, CAMBRIDGE, MASS.

Dr. HOLTON. Thank you, Senator Harris.

I am happy to accept your kind invitation to testify on the bill to

provide for the establishment of the National Foundation for the Social Sciences.

My interest in the present bill stems from the fact that I have had some first hand experience with a variety of fields. As professor in our physics department, my research work is primarily in experimental molecular physics. But I also hold associate membership in our department of the history of science and I have published in that field which stretches from the social sciences to the humanities. As codirector of a large and interdisciplinary national curriculum improvement project, one which tries to include in a course in the natural sciences also the sociological and humanistic impact of science, I have had some occasion to think about the more practical aspects of education on a large scale. Because our time this morning may be a bit short, let me summarize some points of my prepared statement and ask you to study the statement in more detail at your leisure if you wish.

Senator HARRIS. All right. And, without objection, we will place the entire statement in the record.

Dr. HOLTON. Thank you.

Now, my first main point is that a mandate for organized and expanded research support for the social sciences has already emerged. Judging from the reading of the early testimony of this hearing, the hearing on Federal support of international social science and behavioral research, and of the four-volume staff study of the House Committee on Research and Technical Programs of the Committee on Government Operations, there is widespread agreement among the experts on the need for expanded support. But we must now look to the future to understand the urgency of what we are facing. I would like to do a little projective arithmetic which will show the problem of support, now thought to be already seriously out of balance, is going to become drastically worse between now and the year 2000.

Here are some rough estimates based on present facts.

The National Register of Scientific and Technical Manpower lists about 44,000 persons employed in 1965 as social scientists and psychologists in colleges and universities, and that is 18 percent of a total of about 240,000 scientists of all kinds in academic employment.

Now, in terms of sheer numbers, the social scientists, including psychologists, in the academic world alone are already of the same order of magnitude now as the physical and natural scientists were at a time when the NSF was proposed to Congress. But the projections for the future, based on NSF manpower projection data, show that there will be a staggering increase in the amount of research support requested by the social science community in years ahead. Thus, whereas today only some 18 percent of scientists list themselves as social scientists in the academic world where most of this basic work is now being done, we already have between 25 and 29 percent of all new science Ph D.'s coming from the social sciences. So we are now roughly doubling the research potential of the very near future.

Secondly, while these new Ph D.'s come from a generation which numbered 2,300,000 people of age 22 in 1962, this absolute number will rise to 5,610,000 roughly at age 22 in the year 2000, again more than a doubling of the manpower pool. That makes it four times as large.

Next, whereas the 1962 generation went on to get a B.A. in some field in 17.8 percent of the cases in any field, the generation of com-

parable age in the year 2000 is projected to get a B.A. in 34 percent of the cases, according to NSF projections. This is again a doubling of the pool from which social sciences will draw and who will want to do research. This predicts, therefore, so far, an eight-fold increase.

But that is not all. At the moment twice the percentage of physicists, chemists, and biologists say that they do primarily research compared to the percentage of psychologists, sociologists, and economists who say that research is their primary work. The figures are 40 percent versus 20 percent. It is a very wise guess that the fraction of social scientists who will do primarily research will rise.

And finally, to add to this, the expenditures to do meaningful social science, research in teamwork, in using computers, in longitudinal studies, in large-scale surveys and so on, will become more and more expensive for each investigator, not only because of the inevitable inflation of research costs but, rather, primarily because of the increasing sophistication and ambitions of researchers once they have established a style for meaningful large-scale research.

And now you have a rough estimate of the size of the job ahead for any funding agency or combination of agencies. As a conservative estimate, and barring a cutoff or limiting process in growth which does not now clearly suggest itself, I would judge that in the next 30 years there will be 10 to 20 times the number of people wanting to do basic research in the social sciences, and that they will make a very good case for meaningful expenditure on the order of 20 to 50 times the amount of 1967 dollars.

I might add that my expectation is the quality of research will be at least as high as what we now have. The simplest way to indicate this is our realization that some of the students with the highest IQ's, which we all thought we had safely wrapped up for the physical and biological sciences, more and more tend to be kidnaped also by the social sciences.

To keep this impending growth orderly, to keep it from remaining too small compared with the potential or too large in the stampede of pressures, there will have to be some long-range planning to find out what is good for the field itself. This doesn't mean we need one agency that does all the planning and hands out all the money. On the contrary, what it does mean is that here we have an additional reason for asking for a more coherent mechanism to think about the needs for the field as a whole, as identified and focused in an agency that will take the job to coordinate and administer a central portion of the plans and the resources.

Now, the second part of the mandate consists of clear evidence that the social sciences—more in some fields than in others, of course—have long reached a level of depths and scholarly maturity to qualify them for the Nation's support. I shall let the testimony of the social scientists themselves speak on this point.

The third part of the mandate comes from a direction which many of the social scientists themselves perhaps would rather wish that it didn't come from, namely, from the pressure of questions and answers in the field of applied social science. And indeed, for better or for worse, we sometimes find that basic research has to catch up with the applications which have been already initiated on a large scale. Thus, Dr. Cronbach writes in the Orlans study: "We professionals do not

know enough about learning and instruction to design the desired reform" in education. And yet the large educational system which now accounts for more than $10 billion per year of the Nation's total effort has received a major infusion of government moneys, to meet some very real short-run and long-run needs.

I know you want me to speak here as plainly as possible, and therefore I must say it is almost as if we were building nuclear powerplants and Polaris submarines on the basis of a clear social need, but had not yet discovered the physics of nuclear fission. And this is only one area where the enormous needs of our time are in danger of outstripping the amount of basic knowledge, sound though it may be, in many areas of the social sciences.

Indeed, the analogy may be carried a little further. In many respects the social sciences seem to me comparable to the state of physics before the atomic bomb and sputnik—namely, excellent, but vastly improbable, with the improvement of basic knowledge being purchased by means of gains achieved of good will in Congress and the electorate because of the participation of the scientists in applied work.

If it took the atomic bomb and sputnik to insure adequate scientific research money—and by no means all scientists were or are happy with this unforeseen turn of events—we cannot fail to notice that the same situation is already upon us in the social sciences. The social science equivalent of the atomic bomb and sputnik is with us right now, in terms of our domestic as well as our international problems. Some of these problems are obvious and stark and some are hidden and subtle. The list is long. It has been mentioned in these hearings again and again.

They include race relations and civil rights, poverty, urban growth and blight, preservation of natural resources, the fight against threats to the esthetic and other qualities of life, population pressure, unemployment, automation and other potential forces that can make for alienation and the loss of traditional freedoms, the nurturing of excellence and talent, mental health of individuals and social groups, the blind proliferation of the products of technology and their unexamined hazards both physical and social.

Many social scientists will fear their involvement in the applications of the social studies, but there is no longer any choice except whether the job under these and other headings shall be done badly or well. Indeed, I propose that the magnitude of the work ahead in the applied social sciences is so large that what is needed is a Presidential declaration of a national goal to make the basic and applied social sciences as strong in the foreseeable future as the physical and biological sciences have become in the last 20 years.

This will be analogous to the only other major declaration of a national goal which I recall a President to have made in recent memory; namely, the decision to try to put a man on the moon. I do not, however, have in mind a similar crash program. The analogy consists mostly in the need for a top-level commitment by the Congress, the executive branch, and the profession itself to provide the necessary structures for deliberate growth in the social sciences.

The urgency is no less in the international scene where the stability of the international order and indeed of life itself is threatened. So

it is most unfortunate that it is precisely in the area of foreign regional studies that support for research in the social sciences seems weakest and indeed today most threatened.

My second main point is the emerging need in the social sciences for new recognition and a new professional style. Possibly the single most significant advance in the social sciences that could be achieved even with a moderate initial investment of the kind envisaged in this bill would be a strengthening throughout the field of the direction, purpose, and integrity in the sense of indigenous self-estimates. A professional area must have its own rules, its conduct of research, its mores, its interests, its corpus of knowledge, its fights, its excitements, its own successes, pure and applied, its morale for good work, and indeed its self-confidence. Even as physics had to fight, long ago, to free itself from the ties with a more general Aristotelian natural philosophy, so from the end of the 19th century on the self-development of the various social studies out of the humanistic developments became evident—economics, anthropology, psychology, sociology, et cetera.

Thus, the history of many of the social sciences is remarkably brief; for example, psychology at Harvard University freed itself from philosophy only in the 1920's. Many of the scars and pains of that recent struggle are still here.

One result of this fight for identity has been that within the profession of social science itself there are to this day really two separate traditions, one which sees its historic destiny in an alliance with the so-called hard sciences which had been successful earlier in their break from the general humanistic tradition, and the other trend which still clings to some commonalities of method and hope that characterized these studies when they were more closely allied with the humanistic ones.

Now, this is a very important division which runs through the discussion among social scientists, and it has run through the hearings that have been held so far in this room.

That there are unities is unquestioned, but they should not blind us to the existence of diversities between the different parts of the social studies. There are differences in methodology, in models, in the time scale of development of the field, in the possibility of explicitly including subjective or synthetic statements. But above all, a significant number of social scientists recognizes that a major distinction between the hard sciences and the social studies is the possibility, nay, even the usefulness of the inclusion of a normative component in their work.

A proper model for a substantial part of the work in the social sciences is not physics or astronomy, as a minority of social scientists sometimes feel, and as used to be the case in the late 19th century—in my opinion owing to a profound oversimplification of the image of the hard sciences. The new model that might well emerge from one wing of the social science group is rather, say, jurisprudence, about which Justice Cardozo in describing the judicial process said that the most important ingredients that entered into a decision were logic, history, and social utilty.

Now, if you believe with one group that the social sciences are allied primarily to the hard sciences, then you would tend to let them be

folded in with the latter. If, on the other hand, you see that there is a tension between two quite different traditions within the social sciences, that a normative component quite legitimately exists and waits to be developed, then we should tend to look for an organization that in the context of other existing supporting agencies would allow social sciences more easily to find their particular indigenous existence, their style, their function, and their application.

Now, it seems to me, as to many observers, that the scientific aspects of the social studies, which indeed deserve treatment and support, must be balanced by an indigenous component which is certainly struggling for recognition. Perhaps the time, as Tom Hughes of the State Department said in these hearings, "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."

A number of others have made the same point here, and I think none of them has made it better than Senator Mundt himself in responding to Dr. Miller in a later part of Dr. Miller's testimony, when Senator Mundt said:

> 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 need, because I think we have recognized there is a difference.

Now, I must emphasize that in my view strong support for various aspects of the social sciences should be developed and increased, through the National Science Foundation, in the Humanities Endowment, and in all other agencies which now have competence and interest in the evaluation of social support programs. I must emphasize that this is a very common pluralistic view, but one which I believe is the only proper one to take in this case. I also have no doubt that there is need also for one agency within which the indigenous strength of the social sciences in all their aspects can develop, and where the soft and the hard traditions, the scientific and the humanistic traditions, the applied and the pure work, all would meet and mingle.

I agree with my colleague, the distinguished sociologist and now the new president of the American Academy of Arts and Sciences, Talcott Parsons, who holds that now neither a monolithic nor a dualistic view of culture is tenable as a frame of reference for the modern level of sophistication. The social sciences have emerged as an area in their own right as mediating and coupling connections between the sciences and the humanities, and this must be recognized by the developing style that will emerge in the social sciences themselves if they are encouraged.

This brings me to the third main point. In my opinion nothing could be more harmful to the social sciences, not even the absence of all Federal support, than a decision to put all Federal support for the social sciences into a single agency, be it NSF, or the NEH, or NSSF, or some one overall research foundation. One part of my point was made recently by T. H. White, who wrote of the early post-World War II period during which some forces in Congress wanted to create one enormous centralized government department to oversee all scientific effort. White wrote:

Conant and Bush scotched this effort, and, departing, left behind what to the administrative eye seemed like the most wasteful, confusing and overlapping system of government aid to learning ever devised. When asked one day many years later about its apparent confusion, Conant replied, "We planned it that way so that the NSF, the AEC, the NIH, the Army, the Air Force would all have independent funds for science—so that no one government agency could turn off all the spigots at once.

However, the main reason for my warning against monolithic support is not Machiavellian but Jeffersonian. One must be ever on guard against the aristocratic fallacy of single, overall models to be imposed upon the multitude. You will remember the dispiriting conclusion to which Alexis de Tocqueville came at the end of his great work, "Democracy in America." He said that democracy would lead inevitably to a deterioration of the great social examples imposed from above, the models of style and the elevated thought constructs that he thought to be characteristic of aristocratic sociey in all its endeavors, including the sciences.

Why was he so wrong? Why is it that our country, far from sinking into an overall mediocrity, managed to do the kinds of things which the artistocratic societies would not even have dreamed of doing? The answer I think is that his lugubrious prediction turned out to be wrong because instead of the aristocratic models of excellence imposed by small groups upon the large mass, the peculiar American talent has been that for pluralistic excellence. By warding off monopolistic and monolithic practice, we have usually kept the social units of action manageable enough to give the varied exemplars of excellence in each unit a chance to assert themselves against the background noise of indifferent or hostile mediocrity. When social action is involved, the prototype of action at its best is still that of town-meeting government rather than that of a one-way flow of directives from a central Paris or Madrid. Thus, for programs in social science as well, our formula must be excellence and pluralism—although it is certainly not an easy slogan to follow.

Now, some specific comments and recommendations concerning S. 836 if I have a few more minutes.

Senator HARRIS. Yes.

Dr. HOLTON. First, it should be explicitly clear that the National Foundation for the Social Sciences is not intended to relieve other Federal agencies of their function to support high quality work in appropriate areas of social science, and I would like this fact to be stated in the bill if it were possible. The temptation particularly at some future time of contraction of funds might very well be to subsume all research funds in each area under one umbrella. For reasons stated I think this would be very bad.

Next, I would like to assure that the various main agencies of support make some attempt at systematic and intelligent overlap. For example, the Board of Trustees quite specifically should include scientists who have interests in social science work and humanists who have interest in the overlap between social science and humanistic studies.

Indeed, I feel there should be perhaps common trustees with the other foundations, the NSF and the NEH.

In this connection may I venture to suggest that a better name for the planned foundation would be National Foundation for Social

Studies rather than National Foundation for the Social Sciences. This itself would indicate more of the overall function that reaches from the sicences into the more humanistic studies.

Third, I would like to see that the Directors' offices of the three main foundations involved have by law the responsibility to consult with one another from time to time on areas and problems where their interests overlap. Interagency business is always difficult in Washington as elsewhere when these matters are left to the agencies themselves.

Fourth, perhaps the most worrisome problem will be that of assuring the sponsorship of imaginative projects of high quality which for some reason may arouse the ire of special interest groups. I believe the bill itself should express that the sponsors recognize the problem, and urge support of imaginative and sometimes perhaps controversial projects.

Fifth, I hope that you can modify the request on page 4 of S. 836 that the President give "due consideration" to the recommendations for nominations submitted to him by professional organizations, and so forth. Thus, of course, what may happen is that once more we forget to put on such a board some people with a clear eye for new and bold problems, a knowledgeable "gadfly" or two.

Six, I believe you should reexamine whether you should pattern the structure of the NSFF so closely to that of the NSF, where the Director and Deputy Director are appointed by the President, where the Director serves as voting trustees and is the chief executive officer of the Foundation. There has been considerable discussion on this, as you know, sir, and I believe that the structure should be somewhat reexamined.

Seven, on page 6 I am alarmed by the words "the pursuit of a national policy for the promotion of programs of research." For basic research ideas as contrasted with say, problems of foreign policy or major projects of development, there shouldn't be a national policy but a number of allowable policies. The use of the plural is very much called for.

Eighth, on page 7, line 13, I realize why the words "to avoid the concentration of research grants in any one State" appear, but this can be truly a dangerous phrase. As now written the language is so loose that even a distribution that is proportionate with respect to research talent in some one State or region could easily be challenged. It may even hinder rather than help in creating some regional organizations. The great function of the Foundation would be to support work of high quality regardless of geographical origin. This phraseology would make it somewhat more difficult and could become a bone of contention.

Ninth, I see that you are excluding industry from the list of supportable grants recipients. The Office of Education has recently widened its frame of reference to include industry in its grants. It may or may not be pleased with the results. But precisely because so little basic social science has been done and is being done by the mightiest engine of social change in our time; namely, American industry, I would suggest that you invite participation to a certain degree even if it has to be limited some way during the early trial period.

Tenth, among the actions authorized for the Foundation I do not see education, evaluation, and a review or report or state-of-the-Union survey quite clearly enough. Perhaps it is not there at all. With respect to the first, not everyone will agree that the support of education is now handled best, but this is precisely an argument for having it tried in as many places in Washington as possible. Moreover, a divorce of the research function and the educational function in this field would be bad for both. Also it would be quite unique compared to the other two foundations.

In-house evaluations as well as evaluations commissioned from independent agencies seem to me the only way in which the new Foundation will really understand what it is accomplishing with its support. This type of work, namely, evaluation, is really not sufficiently done in some of the agencies that now support social science research.

Eleventh, I urge that you consider the inclusion of a periodic survey of the function of the Foundation and of the needs of the area as such in the bill itself. I know that you have interest in bill 843, and in the Daddario committee reports there are similar motions, but I believe that the functions of the NSSF are broad enough to encompass some kind of periodic survey of the needs of the area and of the Foundation.

Twelfth, going beyond that I would urge, that the Foundation be regarded not merely as a passive agency, as it were a cow to be milked by whoever attains enough prestige. Particularly in the field of social science there are bound to be areas where work that should be pursued on a vigorous scale for some reason is not so pursued. I have experience myself as editor of the Journal of the American Academy of Arts and Sciences, the Journal Daedalus, which I founded and ran for 6 years as a quarterly. Again and again we came to important areas of social concern in which there was just simply not enough expertise—on mass culture and mass media, on the future metropolis, on an issue intended in 1962 on the Negro American which we had to abandon because we found at that time there were not enough informed and competent professionals, and we had to wait a number of years before we could bring this issue out with enough basic, substantial and meaningful articles.

To be caught again by the serious backwardness in some one area would be analogous to be caught again by some sputnik, or by a Watts riot. In the long run, sir; I believe it will be necessary for the Foundation itself to look by in-house research or by bought research, for areas in which work needs to be done but is not. And I speak of work in the basic as well as in the applied field.

In the long run our society will not continue to support pure research, of course, unless somewhere there is a social benefit to such research. I know that nobody in Congress is more aware of this principle than the authors and sponsors of this fine bill. I am therefore most hopeful that you will be able to shape the ground rules by which this Foundation will operate and succeed.

Thank you for the opportunity to share my views with you.

Senator HARRIS. Well, thank you, Dr. Holton. You indeed bring a very interesting and varied background to bear upon this question of whether or not there should be created a National Foundation for the Social Sciences, and I think the kind of background you have has produced a very thoughtful and helpful paper.

I remember the letter you wrote some time ago which gave the promise for this kind of statement which has been realized today in this statement you have made.

I won't go into detail in responding to your suggestions. I will just say something about each one very briefly, but the record of these hearings, which we will send you when they are printed, would show that on most of those I have commented in great detail up to now.

Your first suggestion is one that I am in complete agreement with. The National Social Science Foundation, intended as an additional and not as an exclusive source for funding of social science research and support generally.

I am in agreement with the general thrust of your second and third points and I think we would want to spell out very carefully in the bill or in the report, perhaps in both, that we intend to have as close cooperation and coordination between these various foundations, the National Social Science Foundation and National Science Foundation, and the National Foundation for the Arts and Humanities as is possible.

I am strongly in support of youth fourth suggestion, and we would want to make it very clear in the history, the legislative history of this bill as we are attempting to do, that if we are to get at the tremendous modern social problems we are faced with, it is not going to be satisfactory to do anything short of innovative, original, and therefore controversial thinking and research in the broad spectrum of social science. And that also applied in some degree to your suggestion No. 5.

A witness just yesterday raised the same point for the first time that you raised there, that we should not bind ourselves to the exact words in the bill about the type of people who will be appointed to this board. I believe he used the words "widely recognized," for example, and I think you are quite correct, that it ought to be relaxed.

I don't know about your sixth point, about the organization of the administrative staff of the Social Science Foundation. Dr. Eric Walker is very well known to this subcommittee. He has testified for us, but on another subject, and that is the subject of medical research and the application, development, and use of biomedical knowledge. But I can assure you that we will study this suggestion together with his statement which you have cited, in our consideration of this bill.

Now, your seventh point is your concern about the statement in the bill that there would be a national policy for the program, for the promotion of programs of research. That was intended—perhaps we ought to make this clear—not as any kind of straightjacket of orthodoxy so far as research in the social sciences is concerned but simply to state, which perhaps we can do better in the bill itself, that it is the intent of the Congress and of the country to say that support for the research and scholarship in the social sciences is of prime national importance, and establish that as national policy. Perhaps we can do that in the bill itself.

Your eighth point is one which is a point which requires caution on the part of this committee but I might say that I think you could be resassured by our thinking on that. It is not our idea to try to take away from the existing centers of excellence in the country in the fields of social science. What we have done there is to state in the bill what

is already the established national policy by presidential directive to every agency and department in the Government that so far as possible we ought to be working to build additional centers of excellence.

I think we are woefully short on manpower in the social science fields and that shortage is going to become more acute and therefore we are going to need not only to continue to build existing centers of excellence but we are going to need to build additional centers of excellence and that is what we hope to say in this bill.

Furthermore, I think there are certain social science problems which are best met if in the area of such problems you have indigenous resource people, and I think one of the reasons why, among others, certain areas of our country have not kept up with the economic growth of the country is that some of your best thinkers and planners and activists and resource people have gone off somewhere else. I think if you had in the Ozarks region of eastern Oklahoma and western Arkansas or in the Appalachian region and other depressed regions of the country people who not only had the basic skills and knowledge required for human resource development and accelerated economic development but also people who were very much in tune with the local situation and the local problems, your chances of doing something about those particular problems would be increased.

So I think it is important nationally to help build indigenous leadership in the social science fields in problem areas.

In addition to that, and this is still on your suggestion No. 9, I am convinced that where high quality research is being done in a higher education institution, quality of the teaching is better. Other things might interfere with that flat expression to some degree but I think basically that is true. And so I think it is a matter of national policy that we ought to encourage high quality research around the country. Otherwise we are not doing as well as we could by the students in institutions all over the country.

Now, all that, just like the establishment of the Social Science Foundation, in my view is an addition to what we are now doing, not a substitute for it. But you are quite right in raising that caution about that provision of this bill.

On your ninth suggestion we have got some real doubts about that. At least one witness has appeared before this committee and rather strongly advocated that there not be direct grants to private industry, to profitmaking industry, that it be limited to nonprofit institutions and primarily to educational institutions because of the multiplier effect, that you get more out of it if it is also tied in with the teaching institutions.

I am not sufficiently convinced of either position yet to make you any statement about my view on this. The bill itself takes the position that it has to be public or educational or nonprofit institutions who will receive these grants but we will think about that.

I think you make a very good point in your 10th suggestion. I could go into detail and say to you—but it is in our record and it was our intent from the very first—that this bill would not only support research but also scholarship, education, and training. As I have stated before, we have determined that we certainly have to spell that out much more strongly in the bill itself, and so I am in agreement with

that. I also think you make a good point in the requirement for some systematic and periodic evaluation of the research being done, and of the state of the social sciences generally, and I therefore agree with your 12th suggestion that the Foundation should not be a passive agency but should search out areas which need additional research efforts and I think some of the things it may do in those fields might include a systems approach, that is, rather large kinds of research projects, multidisciplinary research projects, to get at some of the more massive and more complex problems of our society.

Well, those are my general comments relative to the suggestions you have made and I think they indicate to you how seriously we take them.

Dr. HOLTON. Can I respond to a couple of those?

Senator HARRIS. Yes, sir. I wish you would.

Dr. HOLTON. First, on the matter of centers of excellence, I think that I must completely agree with you that the encouragement of additional centers of excellence, and indeed the spreading of excellence across the board, is a very high priority item, a high priority aim that this bill should be designed to fulfill.

In the physical sciences we have had some experience in the last 20 years which gives some hard facts to back up this particular hope. When I started out in physics I think it was true to say that throughout this country there were of the order of a dozen really great departments of physics, and possibly this is being a bit overly generous.

In the last 20 years we have come to the point where an exceedingly good graduate student on getting his Ph.D. can, in fact, safely be sent to a number three times as large of good institutions, any one of them, all over the country. That is, we have increased by a factor of three the places where top-notch research and teaching is being done, and that might be, in fact, an ungenerous underestimate.

This has happened in a couple of decades and it has happened by no means by accident. It was a splendid verification of your position.

The same thing obviously can and must happen in the social sciences. Why this is not now being done itself is a subject for social science research. I believe that one of the centers of research you might consider, that might be considered for sponsorship by an agency of this sort, is to see what are the forces that encourage or prevent the growth of centers of excellence.

A great deal of work has been done, and there is a great deal of talk in addition, but the subject needs much more scholarly work and it is precisely the kind of thing that a center itself could be devoted to; that is, the increase of excellence of institutions in this country.

I might add to the point that it had better be soon. The colleges are facing in a few years a real crisis, a real financial crisis. The claims made upon them and the pressure of students and the pressure of work on the one hand and the availability of resources are simply no longer in phase. Most good college presidents will tell you privately and not in their action as fundraisers that they are truly and deeply concerned about the future for the colleges and universities in this country. There needs to be some stabilization in the relationship, the financial relationship between the Government on the one hand and the academic centers on the other hand, and I believe that unless there is a systematic investigation of how centers of excellence can be produced on a financially stable basis we will all bitterly regret it.

Now, the second point I want to——

Senator HARRIS. May I just interrupt to say Senator Gaylord Nelson, who is present this morning to present our next witness, has done some excellent work in another subcommittee of a different committee of the Senate on that very question. We also have been holding hearings, collateral to this particular issue, in our own subcommittee on the economic impact and the impact on education of the Government's programs for research and though we are not yet ready, because those hearings are still underway, to reach any definite conclusions, I think a tentative conclusion is that we are going to have to have much better coordination of all these programs which can have great impact on economic development and on higher education than we now have. We are going to have to recognize what is a truism, and that is, that excellence is primarily a local responsibility. MIT was a great institution before it received massive inputs of Federal money, but after it was a great institution and did receive massive inputs of Federal money, it became a greater institution in comparison to those which did not receive Federal inputs.

So I think we are going to need some sort of plan that coordinates these various programs and that requires some sort of planning and the institution of step-by-step action programs to help achieve the excellence that is required around the country, the additional excellence we need in these various fields on a cooperative basis between the local institution and Federal programs.

But at any rate that is the subject of different hearings, but one also very much involved in this subject.

Dr. HOLTON. Very good.

The second point refers to incentives to organizations that are not academic—industry, for example. I agree with your statement concerning the multiplier effect in academic work. There is to some degree an offsetting multiplier effect by work that would be done in industry. That is, if one of the great American industries undertook meaningful basic research and applied it in its own context, it has a large handle upon American life of the kind that no single academic department has. One can think about this again in terms of an analogy. There are incentives for research of a technological and basic—physics kind in many industries. I think we must provide, if not funding, at least incentives taxwise and in other ways, so that industry begins to wake up more to its functions as a transformer of society, and that it can do so with lots of expertise right on hand for people who can guide such work, making use of their own local resources.

Industry itself is a resource analogous to an academic center like MIT which can become enormously operative at a certain stage in its history. I think little money but a lot of encouragement will go a long way to produce more meaningful research by industry itself, the kind it ought to have been doing all along.

Not only industry, incidentally, but there are organizations like the professional societies which are not academic organizations which ought to qualify for some help. For example, it may surprise you to know that the most vigorous work in the history of scientific institutions is being done in this country in the American Institute of Physics itself. The American Institute of Physics which is the parent

organization for the physical societies, such as the American Physical Society, Acoustical Society and so forth, the parent organizations of physics in this country, is the place which had the first historian of a profession working in the offices of that professional organization. He has built up a center for the history and philosophy of science, in which also sociology of science is being done. It ought to be possible for organizations of this sort to benefit from a program as they only recently, for example, were able to do from the Office of Education programs when these widened their frame of reference.

Now, this multiplier effect, then, and the existence of excellence in nonacademic centers ought to be thought through and, if necessary, stimulated by block grants instead of by project grants. I am not sure about the details. But we have a great deal of material to work with.

Senator HARRIS. Fine, Dr. Holton, thank you very much for your presence and for your execllent testimony.

Dr. HOLTON. Thank you, sir.

(The prepared statement of Dr. Holton follows:)

STATEMENT OF DR. GERALD HOLTON, DEPARTMENT OF PHYSICS, HARVARD UNIVERSITY

I am happy to accept your kind invitation to testify on the Bill to provide for the establishment of the National Foundation for the Social Sciences. Like most scientists, I supported the establishment of the National Science Foundation when that Foundation went through its long struggle for recognition. And like most scholars, I welcomed the establishment more recently of the National Foundation for the Arts and Humanities. My interest in the present bill, and perhaps your interest in inviting my testimony today, stemmed from the fact that I have had some first-hand experience with a variety of fields; as professor in our Physics Department my research work is primarily in experimental molecular physics, but I also hold associate membership in our Department of the History of Science and have published in that field, which stretches from the social sciences to the humanities; and as co-director of a large, interdisciplinary national curriculum improvement project—one which tries to include a course in the natural sciences also the sociological and humanistic impact of science—I have had some occasion to think about the more practical aspects of education on a large scale.

I shall make my comments under several headings: 1) The mandate for organized and expanded research support for the social sciences; 2) the emerging need in the social sciences for new recognition and new professional styles; 3) the dangers of a monolithic approach to the organization and funding of research support in the social sciences; 4) some specific comments and recommendations concerning the present Bill, S. 836.

I. The Mandate for Organized and Expanded Research Support for the Social Sciences

In reading over some of the early testimony in this Hearing, through some of the Hearings on Federal Support of International Social Science and Behavioral Research, and through the four-volume staff study of House Subcommittee on Research and Technical Programs of the Committee on Government Operations (The Use of Social Research in Federal Domestic Programs), I found widespread agreement among the experts who were consulted, and which I share, that there does exist a real mandate. The question that comes up again and again is just how quickly and on what scale research support in the social sciences can be mobilized. On the very first day of these Hearings, on February 7, 1967, you heard Secretary of Labor W. Willard Wirtz say "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 . . ." and "research in the social sciences falls . . . far short of both its potential and of the imperative necessity for its infinitely larger development . . .". Dr. Haworth of the National Science Foundation remarked "I think either a new organizational struc-

ture or increased authority is what is needed" to give increased attention to the social sciences. Mr. T. L. Hughes reported that Secretary of State Rusk "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." Dr. I. L. Horowitz reported that he found "there is a consensus forming on the part of Congress, in our opinion, to enact legislation which would create a National Social Science Foundation . . .". And in the various testimonies from the professional social scientists themselves, the message came through quite clearly that increased, and perhaps vastly increased, research support is quite definitely needed at this point in history.

Very few would agree with one witness who said in his testimony, "The social sciences in my opinion are at last receiving the attention that they merit from the Federal Government".

The need for strongly expanded support is not simply told in terms of the figures for relative support, which you by now know very well (250 million dollars for all research and development in social sciences spent by all agencies and departments of the Federal Government, versus six and a half billion dollars for research and development in natural sciences from such sources, 800 million for studies on health problems, five and a half billion for space research and development). You must look to the future to understand the urgency of what we are facing.

A little projective arithmetic will help us to see that the situation, which is now thought to be seriously out of balance, is going to become drastically worse between now and the year 2000.

The National Register of Scientific and Technical Manpower lists between 43,000 and 45,000 persons employed in 1965 as social scientists and psychologists in colleges and universities; this is 18 per cent of a total of about 240,000 scientists of all kinds in such employment (Henry W. Riecken, "Government-Science Relations", American Psychologist, 22, p. 212, March 1967). In terms of sheer numbers the social scientists (including psychologists) in the academic world alone are already of the same order of magnitude as the physical and natural scientists in such positions at the time when the National Science Foundation was proposed to Congress. But the projections for the future show that there will be a staggering increase in the amount of research support needed by the social science community in the years ahead (data based on "Comparison of Earned Degrees Awarded 1901–1962 with Projections to 2000", National Science Foundation Publication, NSF 64–2 [January 13, 1964]). Thus while presently only some 18 per cent of the scientists are social scientists in the academic world (where most research is being done) we already have between 25 and 29 per cent of all new science Ph.D.'s coming from the social sciences roughly doubling the research potential for the very near future.

And while these new Ph.D.'s come from a generation which numbered 2,300,000 people of age 22 in 1962, this absolute number will rise to 5,609,000 at age 22 in the year 2000, more than a doubling of the manpower pool. Moreover, whereas the 1962 generation went to get a B.A. in some field in 17.8 per cent of the cases, the generation of comparable age in the year 2000 will go to the B.A. in 34 per cent of the cases, according to N.S.F. projections. This again is a doubling of the pool from which social scientists will grow who want to do research.

But this is not all. At the moment, twice the percentage of physicists, chemists, and biologists say that they do primarily research compared to the percentage of psychologists, sociologists and economists who say that research is their primary work (about 40 per cent versus about 20 per cent). It is a very wise guess that the fraction of social scientists who will do primarily research will rise. Finally, add to this that the expenditure to do meaningful social science research (in team work, in using computers, large-scale surveys, etc.) will become more expensive for each investigator, not only because of the inevitable inflation of research costs, but rather primarily because of the increasing sophistication and ambitions of researchers once they have established a style for meaningful large-scale research—and you have a rough estimate of the size of the job head of any funding agency or combination of agencies! As a conservative estimate—and borrowing an unforseen cut-off mechanism—I would judge that in the next thirty years there will be ten to 20 times the number of people wanting to do research in the social sciences, and that they will make a very good case for meaningful expenditures of the order of 20 to 50 times the amount of 1967 dollars. (I might

add that my expectation is that the quality of research will be at least as high as we now have; and the simplest way to indicate my feeling to you on this point is the bittersweet realization that we have been discovering that many of the young people with a kind of exceptional I.Q. and motivation that led them in unusual proportion toward the physical sciences now are being kidnapped quite frequently by the social sciences.)

To keep this impending growth orderly, to keep it from remaining too small compared with the potential or too large in a stampede of pressures, there will have to be some long-range planning to find what is good for the field itself. This does not mean that it needs one agency that does all the planning and intends to hand out all the money. On the contrary; but it does mean that here we have additional reason to ask for a more coherent mechanism for thinking about the needs of the field as a whole, an identified and focused agency that will take the job on itself to coordinate and administer a central portion of the plans and resources.

It may be argued that not all the social scientists who get their advanced degrees will go on to do basic or even applied research. This is quite true, and also applies to every other field; for example, many departments in the physical sciences turn out only a small fraction of their Ph.D students for further academic and basic research work. However, it should not be forgotten by any means that to train any person, whether he be a scientist, social scientist, or a humanist, to do excellent work even in the applied fields, he still has to be taken at some point—and preferably for a substantial period—through research on some original basis project. So even the training of sound, non-research personnel will require basic research money, facilities, and manpower. In this connection let me remind you that the training function was pressed again and again in these hearings. Thus, Dr. R. A. Levine of the Office of Economic Opportunity said "the one thing which strikes me the most sharply is the limited availability of first-class social science research manpower."

The second part of the mandate consists of clear evidence that the social sciences—more in some fields than in others, of course—have long reached a level of depth and scholarly maturity to qualify them for the nation's careful support. Quite on its own terms and regardless of the possibility of application, scholarship in the basic social sciences in the United States is the envy of the world, and most foreign scholars will agree that in most fields of scholarship in the social studies the leading work is in fact being done in this country. In terms of the social science research which I know more intimately, namely the field of history, philosophy and sociology of science, I can attest that in international congresses time after time it is the quantity and quality of American papers in these fields which are generally agreed to be among the best. This position of world leadership, however, is not by any means applicable to all the fields of the social sciences, and perhaps not to some of those which are going to turn out to be the most important ones; and in any case, leadership of this sort merely brings with it the obligation to gear up for continued improvement and growth.

The third part of the mandate comes from a direction where many of the social scientists themselves perhaps would rather wish that it did not come: namely, from the pressure of questions and answers in the field of applied social sciences. As Henry W. Riecken writes, with an almost audible and weary sigh, "There is a view of the social sciences and their relation to government which seems to conceive of them as somehow a substitute for, or an improvement on, established social institutions and procedures. Thus political science research is substituted for the ordinary process of policy formulation in foreign affairs; sociology is handed the task of eradicating the task of juvenile deliquency or poverty; the psychologists are given responsibility for eliminating mental illness. (The psychologists sometimes compound the confusion by volunteering for the job.)

"This conception of social science as a kind of super-effective, rational remedy for difficult situations is well known to any social scientist who has ever tried to work in a policy-making or administrative agency".

But just as was the case with physical scientists during and after World War II when they were given the task to help in the production of military and civilian technological systems—in return for which, partly as an act to "replenish the bank of ideas," the Congress and electorate supplied those scientists with the necessary funds and facilities for basic research—so, too, in the American context, the social scientists are being more and more widely drafted to apply

their skills and techniques, gained largely in basic research, to practical and sometimes exceedingly urgent problems. And indeed, for better or worse, we sometimes find that basic research has to catch up with the applications which have been initiated on a large scale. Thus, Dr. Cronbach in the Orlans study for the Subcommittee of Congressman Reuss (p. 5, v. 2) writes, "We professionals do not know enough about learning and instruction to design the desired reform" in education. And yet the large educational system—which now accounts for more than 40 billion dollars per year of the nation's total effort—has received a major infusion of government monies to meet some very necessary short-run and long-run needs. It is almost as if we were building nuclear power plants and Polaris submarines on the basis of a clear social need, but had not yet discovered the physics of nuclear fission.

And this is only one area where the enormous needs of our time are in danger of outstripping the amount of basic knowledge, sound though it may be, in many areas of the social sciences. Indeed, the analogy may be carried a little further: in many respects the social sciences seem to me comparable to the state of physics before the atomic bomb and Sputnik—namely, excellent but vastly improvable, with the improvement of basic knowledge being purchased by means of gains achieved of good will in Congress and the electorate because of the participation of the scientists in applied work.

If it took the atomic bomb and Sputnik to insure adequate scientific research money—and by no means all scientists were or are happy with this unforeseen turn of events—we cannot fail to notice that the same situation is already upon us in the social sciences. The social-science equivalent of the atomic bomb and Sputnik is with us right now, in terms of our domestic as well as our international problems. Some of these problems are obvious and stark, and some are still hidden and subtle. The list is long and has been mentioned in these Hearings again and again: race relations and civil rights; poverty; urban growth and blight; preservation of natural resources; and the fight against threats to the esthetic and other qualities of life; population pressure; unemployment; automation and other potential forces that can make for alienation and the loss of traditional freedoms; the nurturing of excellence and talent; mental health of individuals and social groups; the blind proliferation of the products of technology and their unexamined hazards, both physical and social; and so forth.

Many social scientists will fear the involvement in the applications of the social studies, perhaps at a time when some of them are not quite ready for such involvement; and they might well be right. But there is no longer any choice, except whether the job under these and other headings shall be done badly or well: Indeed, I propose that the magnitude of the work ahead is so large that what is needed is a Presidential declaration of a National Goal to make the basic and applied social sciences as strong in the foreseeable future as the physical and biological sciences have become in the last twenty years. This would be analogous to the only other declaration of a National Goal which a President has made in recent memory, namely, the—much simpler—decision to try to put a man on the moon by 1970.

I do not however have in mind a similar crash program; the analogy consists mostly in the need for a top-level commitment by the Congress, the Executive branch, and the profession itself, to provide the necessary structures for deliberate growth in the social sciences. The urgency is no less on the international scene (where, as the comment of Secretary Rusk cited above would indicate, one would gladly abbreviate the usual ten or 20 year lag between advancement in basic work and their practical applications). For the chief point of hoping for major advances in the application of social science in this field is not that we may hope from its fruits that are analogous to better airplanes, better drugs and better weapons—but the stability of the international order and indeed of life itself. The four related chief dangers—population pressure, unreasonable national ambition, famine and other horrors growing from the increasing gap between the rich and the poor, and war—are in a sense at our very gates in dimensions never before experienced. The advances which are *not* being initiated now because of insufficiency of basic and applied work will not just make the world of the year 2000 less interesting, less safe, less comfortable. It does in fact threaten its very existence. Between 6 and 7.15 billion people will try to live in 2000 AD on this planet (depending on whether there will be effective family planning or not), and as the report, "The World Food Problem", just published by the President's Science Advisory Committee shows, at present projections one may count on catastrophic famine and consequently political tumult.

We have been assured that there are no unsurmountable biological, technical or economic barriers to finding a solution to the world food problem during the next 20 years. Even at the present relatively low level of assistance the minimum estimate for U.S. economic assistance programs are a three-fold increase from the present level of 2.5 billion dollars a year. Even then the economies and agricultural systems of hungry nations cannot be modernized without a long-term strategy of which the most important components are skills and decisions that fall into the region of the social sciences. (For a brief review, see the article by Luther J. Carter, "Science", *56*, 1578–1579, 23 June 1967).

It is most unfortunate that it is precisely in the area of foreign regional studies that support for research in the social sciences seems weakest and most threatened. Even before the disclosure of the C.I.A. support of certain applied and even basic research operations in foreign areas, it was noted at these Hearings, "Does it seem to you rather anomalous in a civilian society that the military would be funding most of the social and behavioral science research we do in foreign countries?" To which the response was, "I think they [the Department of Defense] 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". As "Science" reports (23 June 1967), as a result of the C.I.A. and Camelot incidents, "a pattern is emerging of informal discouragement of the initiation of continuation of American social science research abroad. . . . Among some social scientists there appears to be a hope that some salvation at least would derive from establishment of a National Social Science Foundation, such as is now being discussed. The belief is that such a clearly civilian umbrella for research funds would erradicate some of the doubts that have arisen abroad as a result of military financing". (pgs. 1583–1584)

II. The Emerging Need in the Social Sciences for New Recognition and New Professional Styles

Possibly the single most significant advance in the social sciences that could be achieved even with a moderate initial investment of the kind envisaged in this Bill would be a strengthening throughout the field of the direction, purpose, and indigenous sense of identity. Any professional area must have its own rules in conduct of research, its mores, its interests, its corpus of knowledge, its fights, its excitement, its own successes (pure and applied), its morale for good work, and indeed its self confidence. Even as physics had to fight, long ago, to free itself from the ties with a more general Aristotelian natural philosophy, so from the end of the nineteenth century on, the self-development of the various social studies became evident, yielding political science, political economy, anthropology, psychology, sociology, and so forth.

The history of many of the social sciences is really remarkably brief—thus psychology at Harvard University freed itself from philosophy only in the 1920's—and many of the scars and pains of that recent struggle are still there. As Thomas J. Condon put it (American Council of Learned Societies Newsletter, April 1967, v. 18, #4, p. 4), "No sooner it seemed had science been uneasily and unwillingly accommodated into the structure of higher education, than an even more formidable challenge appeared on the scene after World War I in the form of the now more fully blown and more ambitious social sciences. This served to rend asunder the unity of the inheritors of the classical tradition. Rejecting the historical orientation and disinterest, if not disdain, for the present which they felt characterized the older humanistic disciplines, social scientists began to go their own way. Social scientists formed their own societies and councils and began to struggle to obtain a place in the curriculum and power structure of the American universities.

One result of this fight for identity has been that within the social scientists themselves there are to this day really two separate traditions—one which sees its historic destiny in an alliance with the so-called "hard" sciences which had been successful earlier in their break from the general humanistic tradition, and the other trend which still clings to some commonalities of method and hope that characterized these studies when they were still more closely allied with the humanistic ones.

This is a very important division, which runs through the discussion among social scientists and indeed through the Hearings that have been held so far. Before we briefly look at this schism in social science itself, we should acknowledge some similarity and unity of the social sciences with the hard sciences.

These similarities and unities refer to certain problems at which joint expertise is necessary (linguistics, philosophy of science, economics, for example); methodology (for example, the use of the experimental method and statistical tools for some social studies); some tools used, such as computers, apparatus for experimental psychology, etc.; social usefulness, both of its basic and particularly of its applied results; some institutions, such as universities, funding agencies, analogous societies, teamwork, etc.; and—most importantly but most difficult to discuss, in this presentation—the fundamental themes and imaginative assumptions that pervade both the sciences and the social studies; it is for this reason that the ideas of cybernetics could transform linguistics, or physical and mathematical models got into economics or psychology, or findings in psychology led to an advance in physics (as when Niels Bohr confessed that some of his fundamental ideas were triggered by a reading of William James), or philosophy of science influenced physics (as when Albert Einstein wrote similarly in his autobiographical notes that his conceptions in physics were profoundly influenced by a study of Hume, Kant, and Ernst Mach).

But these unities should not blind us to the existence of diversities between the sciences on the one hand and the social studies on the other. There are differences in methodology and models, in the time-scale of development of the field, in the possibility of including explicitly subjective or synthetic statements. But above all, a significant number of social scientists recognized that a major distinction between the "hard" sciences and the social studies is the possibility, nay, even the usefulness, of the inclusion of a normative component in their work.

Indeed, social scientists are among the inheritors of the "normative" discipline to a certain degree, and it may be argued that a proper model for a substantial part of the work in the social sciences is not physics or astronomy, as used to be the case in the late nineteenth century (in my opinion, owing to a profound oversimplification of physics or astronomy which was more current in those more positivistic days than is the case now), but rather, say, jurisprudence, about which Justice Cardozo, in describing the judicial process, said that the most important ingredients that entered into a decision were logic, history, and social utility. In reporting this story, the constitutional lawyer, Professor Paul A. Freund adds the significant remark, Judges are constrained, but not wholly so, and are freed, but by no means completely at large. This ought not to be so surprising when we recall that even scientists who are thought to be engaged in an exact discipline differ sharply when they reach frontier questions."

If we believe with one group that the social sciences are allied primarily to the "hard" sciences, we would tend to let them be primarily folded in with the latter. If on the other hand we see that there is a tension between two rather different traditions within the social sciences, that a normative component quite legitimately exists and waits to be developed, then we would tend to look for an organization that, in the context of other existing supporting agencies, would allow the social sciences more easily to find their particular indigenous existence, style, function, and indeed application.

The ground rules by which the National Science Foundation can support social sciences make it necessary for the N.S.F. to support those particular social sciences, or those parts of social sciences, which have a specifically scientific component.

There is some hope that in time the N.S.F. could go further in its support, but for the moment the growth of N.S.F. involvement is kept open for those research projects in the social sciences which can pass scientific muster. Perhaps as a result, it could be said that "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". (Testimony of Dr. Leland J. Haworth, February 7, 1967, p. 10) Similarly Dr. Miller of the Office of Education said in these Hearings (p. 179) in response to the question, "What do you think is the greatest challenge facing the social scientist today?" "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".

It seems to many observers that the scientific aspect of the social studies, which indeed deserves development and support, must be balanced by an indigenous component, one which is not fully to be comprehended by the terms humanistic or nonscientific, but which is certainly struggling for recognition. Thus, in writing about the National Academy of Sciences, D. S. Greenberg said recently ("Science", v. 156, p. 489, 28 April 1967): "There is at last an open recognition that the Academy has an obsolete approach in regard to the social and behavioral sciences. The dictum 'if you can't measure it, it doesn't count' serves well in the natural and physical sciences [and even there is an oversimplification. G.H.]; when applied to the behavioral and social sciences as the Academy has applied it, with few exceptions, in electing new members, the result is to exclude the producers of some of the most important, exciting and pioneering research in recent years."

It may well be that one component in this realization is the fact that the welfare revolution has shown the need for supplementing the non-scientific aspects of social studies; similarly, Greenberg adds, "One thing that encourages change is the fact that a lot of physical and natural scientists who once believed the methods and creations of their profession could be adapted to all manner of problems now feel challenged but stumped by many of this country's domestic problems. [As Harvey Brooks noted] 'To build something like a Polaris system all you had to do essentially was to convince half a dozen people and then you could go ahead and build it. It is not that easy when you try to bring improved housing technology to the cities.'"

Among the testimonies heard on this bill, the point I am summarizing here was well made at least on three occasions. Mr. T. Hughes of the State Department, Director of the Bureau of Intelligence and Research, said "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". (p. 134)

At the International Social Science Research Hearing, Dr. Gabriel Almond, president of the American Political Science Association, said "I would feel more comfortable myself if the principal government support for the social sciences came from an agency which gave some representation to history and the more speculative moral and legal disciplines than is true of the National Science Foundation."

And Senator Mundt, in responding to Dr. Miler at a later part in his testimony, said "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 need, because I think we have recognized there is a difference . . . so I think we waste a lot of time in futile arguments 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 behavioral 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."

At any rate, even if some social scientist should harbor the idea that they can be contributing at certain policy levels on the same basis as other scientists, they are likely to find out, for good reasons or bad, that this is not yet in the cards. As Harold Orlans writes in part 4 of his staff study (op. cit.). "The addition of one or more social scientists to the President's Science Advisory Committee it may be recalled was specifically recommended by the Organization for Economic Cooperation and Development. According to Presidential Science Advisor, Donald Hornig, this proposal has been considered—but not apparently favorably; and Hewlitt suggests why in his statement to the Subcommittee: 'The general conclusion has been that this field lacks the specific characteristic of the physical sciences and thus provides a greater opportunity for strongly

divergent views on technical subjects. This would indicate the necessity of having more than one, preferably several, social scientists on P.S.A.C. Each discussion that I have heard has resulted in the consensus that it would not be profitable to dilute P.S.A.C.'s limited manpower with two or more social scientists at a time when there are so many unsolved problems in the field of physical sciences.' "

I should say a word here about the prospect that the National Endowment for the Humanities (NEH) would fund a sizable fraction of the social science research. I have read the testimony which shows that out of its small initial funds the NEH has indeed spent a significant amount on some social science research grants and fellowships, in line with its policy, "NEH would continue to support the humanistic aspects of the social sciences". I also note as the following point of the Endowment policy, "NEH and NSF would jointly consider funding proposals in the social sciences which have broader implications than those which each agency would separately consider."

I believe that both of these policy points are much to be welcomed. As I shall indicate again below, it is essential in my view that strong support for various aspects of the social sciences should be developed and increased in the National Science Foundation, in the Humanities Endowment, and in all other agencies which now have competence and interest in the evaluation and support of social science programs. This multiplicity of support agencies is precisely what may be said to have made the physical sciences respond so well to the opportunities for a rapid development. And it insures the diffusion of the type of activity and applicable achievements of social sciences to all other fields that can benefit from it.

There is however no doubt that there needs to be also one agency within which the indigenous strengths of social science in all its aspects can develop—where the soft and hard traditions, the scientific and the humanistic ones, the applied and the pure, all meet and mingle.

I agree with the distinguished sociologist, Talcott Parsons, who holds that now neither a monolithic nor a dualistic view of culture is tenable as a frame of reference for the modern level of sophistication. The social sciences have emerged as studies in their own right, mediating or coupling connections between the sciences and humanities which by and large exclude, on the one hand, the category of subjectivity and individuality of meaning, and on the other, the predominance of analytical generality.

III. The Danger of a Monolithic Agency for Social Science Support

In this spirit, I now wish to turn to a point that seems particularly worrisome when I examine the hearings. At certain times here, as at other hearings and in some agencies, there are some voices that would like to have a single agency to do the "whole job". In my opinion, nothing could be more harmful to Social Science (—not even the absence of all Federal support—) than the decision to put all Federal support for the Social Sciences into a single agency, be it the NSF, or the NEH, or the NSSF, or some one overall Research Foundation.

One part of my point was made recently by T.H. White who wrote of the early post-World War II period during which some forces in Congress wanted to create "one enormous centralized government department to oversee all scientific effort."

"Conant and Bush scotched this effort and, departing, left behind what, to the administrative eye, seemd like the most wasteful, confusing and overlapping system of government aid to learning ever devised. When asked one day many years later about its apparent confusion, Conant replied, 'We planned it that way so that the NSF, the AEC, the NIH, the Army, the Air Force would all have independent funds for science—so that no one government agency could turn off all the spigots at once.' "

However, the main reason for my warning against monolithic support is not Machiavellian but Jeffersonian: One must be ever on guard against the aristocratic fallacy. You will remember the dispiriting conclusion to which Alexis de Tocqueville came at the end of his great work, *Democracy in America*.[1] He feared that democracy would lead inevitably to a deterioration of the great social examples imposed from above, the models of style and the elevated thought constructs that he thought to be characteristic of aristocratic society in all its

[1] The next few paragraphs are based on my essay in the *Journal of Education*, v. 15, No. 4

endeavors, including the sciences. In America, he said, "everyone is actively in motion," intent on some self-aggrandizement guaranteed by the openness of opportunity to all; and thus "there prevails among those populations a . . . sort of incessant jostling of men, which annoys and disturbs the mind, without exciting or elevating it." The emphasis in science and the arts is on the applied, not the theoretical—sometimes, admittedly, with great success: "These very Americans, who have not discovered one of the general laws of mechanics, have introduced into navigation an engine which changes the aspect of the world." But aside from giving credit to such practical triumphs as Robert Fuller's, Tocqueville nostalgically mourns the passing of the aristocratic age as he sees the great new mediocrity sweeping over everything: "When I survey this countless multitude of beings shaped in each other's likeness, amidst whom nothing rises and nothing falls the sign of such universal uniformity saddens and chills me, and I am tempted to regret the state of society which has ceased to be."

This attitude is the ideological heart of all plans which attempt to impose one solution found by an elite group upon a large fraction of the nation. There is no doubt that occasionally a large crash program seems the only sensible solution at the time (though, in retrospect, many of these, from the Manhattan Project on, do not stand as unalloyed blessings). But we should remember the real reason why Tocqueville's lugubrious prediction turned out to be wrong, why our nation, far from having sunk into some all-pervading mediocrity, has instead been setting standards of excellence which no aristocratically oriented society even hoped to achieve. The reason is that in place of aristocratic models of excellence, imposed by small groups upon the large mass, the peculiarly American talent is that for pluralistic excellence. By warding off monopolistic and monolithic practice, we have usually kept the social units of action manageable enough to give the varied exemplars of excellence in each unit a chance to assert themselves against the background noise of indifferent or hostile mediocrity. When social action is involved, the prototype of action at its best is still that of town-meeting government, rather than that of a one-way flow of directives from a central Paris or Madrid. Our commercial, political, and educational enterprises function in this way, and are characterized by a measure of local control and individual authority over manageable large groups. In the pursuit and support of research in science itself, we have also reached our place not by following the hierarchical model in which everything radiates down from the Ecole Normale and Ecole Polytechnique, but by encouraging excellence wherever and whenever it shows itself.

Thus, for programs in Social Science as well, our formula must be Excellence *and* Pluralism. It is certainly not an easy slogan to follow. It requires tolerance and encouragement for a multiplicity of diverging aims all around us, rather than adopting some great aim for all. It requires instigating a whole spectrum of efforts. It requires a total effort of an order of magnitude larger than exists now, for there seem to be a variety of ideas. It requires that we suppress the seductive nostalgia of Tocqueville for a single model, and our redoubling our efforts to seek out good people and good ideas. In the short run, it is the more expensive, the more difficult, slower way. But in the long run, it is the only wise way.

IV. Some specific comments and recommendations concerning S. 836

In response to your request for specific comments and recommendations concerning S–836, I wish to make now the following points:

1. I hope it is as clear in the bill as it is in your introductory speech of February 6, 1967, that the National Foundation for the Social Sciences is not intended as the sole sponsoring agency for work in the social sciences, but that there is intended to be a region of overlap with the activities of the National Science Foundation, the National Foundation for the Arts and Humanities, and other Federal (as well as private) agencies. We must exercise every ounce of ingenuity to assure that the sponsorship of research does not fall in to some monolithic pattern, to take advantage of lightly overlapping, multiple opportunities to do any one thing well. The danger is rather larger in the field of social sciences than in, say, the sciences, where there exists a variety of avenues of research sponsorship through ONR, AEC, the NSF, et cetera. A certain degree of healthy competition should indeed be fostered. I know of no better way than that to keep the administrations of smaller subject areas alert and on their toes.

If you would like to think in terms of analogy, I think it can be said that the National Science Foundation, for example—which one must regard by and large as a brilliant success—has in recent years given proportionately less attention to the important subject of molecular physics, having become committed more to areas such as nuclear and high-energy physics. This sort of thing is bound to happen, but at least it is not fatal to a branch of American science because such agencies as the Office of Naval Research (and others) exist to whom a molecular physicist can go to ask for the support of research. Moreover, my impression is that the N.S.F. would give even less attention to this branch of physics if it were not for the residual competition implied in the possibility of funding this type of work elsewhere.

Hence, it should be made explicitly clear that the National Foundation for the Social Sciences is not intended to relieve other Federal agencies of their function to support high quality work in appropriate areas of the social sciences.

In some fields such as the history, philosophy, and sociology of science there will indeed then be three agencies (including N.S.F. and the National Foundation for the Arts and Humanities) which could and should sponsor good work in this field.

2. To indicate in concrete terms the possibility and usefulness of overlap, and indeed to foster communication among the granting agencies whose spectra overlap, I would strongly suggest that the representation of experts on the Board of Trustees quite specifically include scientists who have interest in social science work, and humanists who have interest in the overlap between social science and humanistic studies. Indeed, there may also be common Trustees with the other Foundations.

For the same reason, and to symbolize by its very name the middle ground for this Foundation between the "hard" sciences at one end and the arts at the other. I suggest that you consider the name, "National Foundation for Social Studies", rather than National Foundation for the Social Sciences.

3. Along the same lines, I would like assurance that the Directors' offices of these three Foundations have, by law, the responsibility to consult with one another from time to time on areas and problems where their interests overlap. Inter-agency business is always difficult, in Washington as elsewhere, when these matters are left to the agencies themselves.

4. Perhaps the most worrisome problem will be that of assuring the sponsorship of imaginative projects of high quality which, for some reason, rightly or wrongly, may arouse the ire of some special interest group. In the sciences the danger is not quite as large as it is in the social sciences and the humanities and arts. I would be happier if the bill itself expressed that the sponsors recognize the problem and urge support of imaginative and sometimes perhaps controversial projects as long as the refereeing process has been properly used and the proposals have been accepted on the basis of peer judgment in the profession.

5. I hope you can modify the request on page four of S–836 that the President give "due consideration to the recommendations for nominations submitted to him by professional organizations" et cetera, so as to assure that the Board of Trustees will not have too many bland, quietly overcautious people. Here, more than ever, we need the presence of a certain essential number of people with a clear eye for the new and bold problems and solutions, and even one or two knowledgeable gadflies.

6. In section 5A the bill seems to follow the pattern set in the current structure of NSF, when it specified that the Director and Deputy Director shall be appointed by the President, and furthermore that the Director shall not only serve as voting Trustee of the Foundation but also shall be the chief executive officer of the Foundation. I would suggest that you reconsider carefully whether this structure is really suitable. In this connection an article by Dr. Eric A. Walker is relevant. Dr. Walker is president of the National Academy of Engineering, and president of the Pennsylvania State University. His article, "National Science Board: Its Place in National Policy" was published in the journal, *Science* (volume 156, pages 474–477), on 28 April 1967. He had been pondering his experience on the basis of a term on the National Science Board, as well as the Hearings before the House Subcommittee on Science Research and Development (the Daddario Committee). As a result he raises some fundamental questions about the kind of organization of the National Science Board which would make it more useful to help direct the nation's scientific and technological progress "particularly in terms of the useful application of our accumulated scientific knowledge and its relation to the national economy".

Dr. Walker shows that the present structure of the National Science Board is the result of a lengthy and sometime rather embattled history. "What it all adds up to is that gradually, by successive steps, the National Science Board—originally envisaged as a largely autonomous group of leaders who were to have a powerful voice in the conduct of scientific affairs of the nation—has become what amounts to little more than a routine committee for determining the specific awards and contracts of the National Science Foundation, with little power to enforce policy decisions. . . . The Board in its effort to carry out its responsibilities has found itself constantly hamstrung by operational restrictions and bureaucratic encumbrances.

It is not strange therefore that the Board has been regarded in some quarters as an ineffective body, nor that it has been charged with neglecting some of its basic duties." He details the problems the Board has had, for example, in obtaining any staff of its own, in getting at the facts on which to base policy, of having suggestions or directions of the Board implemented, and so forth. While current proposals to revamp the Foundation seem to him "a short step in the right direction," they are not sufficient: "Unless some provisions are made to really strengthen the National Science Board, we are likely to witness a gradual shift of the control of national science policies and programs from the scientific community to the bureaucracy—with a consequent weakening and distortion of the whole scientific effort".

I hope you will investigate this problem carefully, and reconstruct the Board of Trustees of the National Foundation for the Social Sciences in a different manner; for example, Dr. Walker implies strongly that the Director of the Foundation should be differently appointed and differently empowered. Although of course I have no personal knowledge of prediliction in the matter, it seems to me that Dr. Walker's warning may be timely indeed and should be followed up in connection with this bill.

7. On page six, lines 16 and 17, I am alarmed by the words, "the pursuit of a national policy for the promotion of programs of research" et cetera. For basic research ideas—as contrasted with, say, problems of foreign policy or a major project in development—there should not be *a* national policy, but a number of allowable policies. What is more, the specific American manner is not to settle for a single policy, whereas the tragedy of European programs has often been that their programs are geared to a monolithic policy. The use of the plural, therefore, is very much called for.

8. On page seven, line 13, I realize why the words, "to avoid the concentration of research grants in any one state" et cetera appear; but this can be truly a dangerous phrase. As now written, the language is so loose that even a distribution that is proportionate with respect to research talent in some one state or region could easily be challenged; it may even hinder rather than help in the creation of some regional organizations. The great function of this Foundation will be to support work of high quality, regardless of its geographic origin. This phraseology will make it more difficult, and could become a bone of contention.

9. I note that you are excluding industry from the list of supportable grant recipients. The Office of Education has recently widened its frame of references to include industry in its grants, and may or may not be pleased with the results. But precisely because so little social science research is done by the mightiest engine of social change in our time, namely American industry, I would suggest that you invite their participation to a certain degree, even if it has to be limited in some way during an early trial period.

10. Among the actions authorized for the Foundation I do not see three very important ones, namely education, evaluation, and a review or report or state-of-the-union survey pinpointing problem and growth areas.

With respect to the first, not everyone will agree that the support of education has been handled in a uniformly excellent manner by any agency in Washington: but this, to my mind, is precisely the argument for having it tried in as many places as possible. Curriculum development and training fellowships in the social sciences are just two of the areas in education which really require a sound extension of support. Moreover, a divorce of the research function and educational function in this field would be bad for both (as well as being quite unique compared to the other two Foundations).

The evaluation of the actual effectiveness of research or educational programs is still one of the least-developed activities in some agencies, although it is of course the essence of good management to make periodic and independent

evaluations of the quality and success of past and current programs. For example, there do not seem to be independent evaluation reports of highly-supported national educational curriculum development projects, although one is given handouts obtained from the project directors themselves. The U.S. Commissioner of Education has publicly deplored the tendency for the "evaluators to be captured by the innovators". Project grants are made in some agencies without obliging the projects to evaluate themselves, not to speak of providing independent and more certain evaluation. The speed with which essential statistics are being gathered and analyzed is pathetically slow, and the signs for the future are not encouraging.

In-house evaluations as well as evaluations commissioned from independent agencies seem to me the only way in which the new Foundation will really understand what it is accomplishing with its support. Hence, it seems necessary to amend the language on page eleven, line 20, which forbids the Foundation to contract for any research to be accomplished for its own purposes, or to do any research of this kind. Particularly in the social scienes, and partiularly with respet to evaluation in any field (including education), such research is essential and must be encouraged, and not forbidden.

11. The necessity to have a national body assess the state of a science or a field has been recognized recently in a number of ways, for example, by the proposal in S. 843 and by the Daddario Committee reports. I urge that you consider the inclusion in S. 836 of such a periodic survey of the functions of the Foundation and the needs of the area.

12. Going beyond that, I would urge that the Foundation be regarded not merely as a passive agency, as it were a cow to be milked by whoever attains enough prestige. Particularly in the field of social sciences, there are bound to be areas where work should be pursued on a vigorous scale, but for some reason is not. While editing the quarterly journal of the American Academy of Arts and Sciences, *Daedalus*, we came again and again to a realization that a whole field of scholarship in some areas of social studies is underdeveloped. Thus, when putting together an issue for release in Spring, 1960, on mass culture and mass media, for example, we discovered a very low level of expertise; the same happened again repeatedly, for example, for our Winter 1961 issue on the future of the metropolis, and for an issue intended for 1962 on the Negro American. In this last case it became disturbingly evident that for lack of proper professional understanding due to the absence of a whole layer of informed and competent professionals, the discussions and actions concerned with civil rights in this country were bound to be far more turbulent than they might otherwise have been.

In short, one function of this Foundation should encompass the assessment of strong and weak points in the professional preparedness in this country to deal with social problems and social studies. To be caught again by serious backwardness in some one area would be analogous to being caught again by a Sputnik—or by Watts riots. The least the Foundation must be able to do is to encourage groups which are apparently ready to undertake a project of fundamental research in areas that have evident application, and even that will sometimes require in-house surveys or research, or farmed-out research. This applies, for example, to such questions as the social effect of computerization in industry, the impact of segregated schooling, and other sensitive areas.

It seems to me that politically sensitive persons such as the sponsors of this bill must set up conditions that will allow the Foundation to deal with complicated and sensitive matters rather than creating a structure which will make it all-too-convenient to avoid them. In the long run, our society will not continue to support pure research unless, somewhere, there is a social benefit to such research. I know that nobody in Congress is more aware of this principle than the author and sponsors of this bill. I am therefore most hopeful that you will be able to shape the ground rules by which this Foundation will operate and succeed.

Thank you for the opportunity to share my views with you.

Senator HARRIS. We are very pleased to have to present as our next distinguished witness, Senator Gaylord Nelson, of Wisconsin. Senator Nelson is a cosponsor of S. 836, the bill to create a National Foundation for the Social Sciences. Because of other legislative measures which he has been interested in and because of his activities on a wide range

of related subjects, he has had dramatic and positive impact on higher education generally in the country and on the development of the social sciences as an area of importance. So we are pleased, Senator Nelson, to welcome you here this morning.

TESTIMONY OF HON. GAYLORD NELSON, U.S. SENATOR FROM THE STATE OF WISCONSIN

Senator NELSON. Mr. Chairman, I am very pleased to have had the privilege of joining you as a cosponsor of the bill that you authored to establish the National Foundation for the Social Sciences. I think it is a very creative, useful, and necessary proposal.

As the chairman perhaps knows, the State of Wisconsin has a long history in combining the political action of the State government along with the social research of its State university. That is where the famous Wisconsin idea came from that was established by Bob La Follette almost 70 years ago. For those who have some reservations about the practicality of the idea, I would like to point out that out of this combination of social research at the University of Wisconsin and political action by the government of the State of Wisconsin, our State founded the first workmen's compensation law and the first unemployment compensation law in the United States. Also, the very distinguished Dr. Witte is considered the father of the Social Security Act. Other professors, such as the late Dr. Glaeser, working with the State of Wisconsin, founded our public service commission which regulates the public utilities of the State of Wisconsin.

We have had a long and distinguished record in the State of using the creativity, research, and social ideas of the distinguished professors at our university to assist, cooperate, and work with the State government in solving very significant and important social problems. And so it is a practical idea, and I want to commend the chairman for this proposal.

I am pleased this morning to present to the committee Dr. Fred Harrington, who is a distinguished scholar and president of the University of Wisconsin. I regret that I am going to have to walk out on the president. I have hearings commencing at 10 o'clock and I have some briefing to do prior to that, but I am pleased to have you here today, Dr. Harrington.

I know that he will make useful contributions and suggestions concerning your proposal, Mr. Chairman.

Senator HARRIS. Well, let me say, Senator Nelson, we are very honored to have you here. We know that because of the long period during which the Senate met nearly all of each day and didn't have time to hold committee meetings, all of us have a good many hearings going on all the time. So we are pleased you could give us this much of your time.

Senator NELSON. If it was just a question of me being a member of the committee that is meeting I would forgo it, but I am chairing some drug hearings, so it is necessary for me to leave.

Thank you, Mr. Chairman.

Senator HARRIS. President Harrington, let me say that we are very honored to have you here. Without objection we will place in the record

at this point in addition to the excellent introduction made by Senator Nelson a brief biographical sketch concerning you which has been prepared by our staff.

Biographical Sketch: Dr. Fred Harrington

President, The University of Wisconsin, Madison, Wisconsin.

A.B., Cornell University, 1933; A.M., New York University, 1934; Ph. D. New York University, 1937. Instructor of History, Washington Square College, New York University, 1936–37; Instructor in History, University of Wisconsin, 1937–39; Assistant Professor of History, University of Wisconsin, 1939–40; Professor of History and Political Science, Head of the Department, University of Arkansas, 1940–44; Associate Professor of History, University of Wisconsin, 1944–47; Professor of History, University of Wisconsin, 1947—; Chairman of the Department, University of Wisconsin, 1952–55; Special Assistant to the President, University of Wisconsin, 1956–58; Vice President, Academic Affairs, University of Wisconsin, 1958–62; Vice President, University of Wisconsin, 1962; President, University of Wisconsin, 1962—.

Member of: American Historical Association; Mississippi Valley Historical Association; State Historical Society of Wisconsin; Phi Beta Kappa; Phi Kappa Phi; Theta Chi; University Club. 'Author: God, Mammon and the Japanese, 1944; Fighting Politician, 1948; Hanging Judge, 1951; An American History, 1950.

Senator HARRIS. We will be pleased to hear from you at this time.

TESTIMONY OF DR. FRED HARVEY HARRINGTON, PRESIDENT, THE UNIVERSITY OF WISCONSIN, MADISON, WIS.

Mr. HARRINGTON. Thank you, Senator Harris.

Since I have filed my testimony I will not repeat it but merely make a few comments.

Senator HARRIS. All right. We would like to have the entire statement for the record, so without objection we will place in the record the prepared statement and then you may comment on it or excerpt from it as you please.

Mr. HARRINGTON. Thank you, Senator Harris.

I would like to echo both the remarks which Senator Nelson has made and those which you yourself have made, Senator Harris. Senator Nelson is one of our distinguished Wisconsin citizens. He was Governor of the State when I became president of the University of Wisconsin. He is one of the few Wisconsin political figures who has served both in the Governor's chair and as U.S. Senator. I think we have only four in our history. And he has been very interested in this close relationship between research and action which is very much a part of Wisconsin history.

In like fashion I know that you, Senator Harris, have made very substantial contributions along this line. I was particularly impressed by your address to the Society for Applied Anthropology in May of this year in which you made several very striking points, answering people who had been criticizing this particular proposal. You pointed out that interdisciplinary research would not be barred by this Foundation. Nor would the establishment of a Social Science Foundation end the usefulness of other Federal agencies in social science research. You pointed out that this Foundation would give recognition to social science which badly needs it. It would give it status and it would enable social scientists to innovate.

I really want to say much the same thing. Recognition of the important position of social science is very much needed indeed. To have distinguished citizens associated with a foundation would give social science a spokesman in Washington and basic research would go forward.

There are a lot of people who feel that there is enough fundamental research already and that what we need now are applications. But when we have problems as large as those in the social science field, it is entirely clear that we need both the fundamental work and the applications. This Foundation would certainly move that forward.

There are those who say that enough is being done in social science research in present agencies. But those of us who are actually in the field know that much is missing. The National Science Foundation does put about $20 million a year into social science research, but the definitions are quite narrow. To qualify for social science research under the National Science Foundation you must work with numbers or otherwise follow a definition which is pattered after natural science, not after the social sciences.

In addition to that, the NSF with its very large and important responsibilities in physical and biological science cannot possibly give the attention to social science which the field deserves, Nor can the NSF staff be adequate in social science while at the same time giving its attention to natural science. So we very desperately need this separate foundation and we could take advantage of it.

There are good social scientists now in our universities who are not adequately supported. I would particularly call attention to those social scientists outside of the Northeast, outside of the great universities. This committee I know, and Senator Nelson's committee, have shown a great deal of interest in using the entire Nation to forward the national interests. It is certainly obvious to me—I have taught in all sections of the country—that there is a great deal of potential in the South, the Southwest, the Middle West, the Mountain States, the Far West, and a good deal indeed in the Northeast, outside of the great universities that is not being used at all.

Even in the great universities like my own—although there is a good deal of money coming in already through the private foundations and the Government for social science research—larger projects could be organized. But I would particularly put my emphasis on the usefulness of many universities that are not now adequately involved in research programs.

This is the main burden of what I have to say. I do want to support Senate bill 836, support it vigorously. It is very much needed.

I might suggest a few changes in it but overall the most important suggestion would be that it be increased in amount. I recognize that there may be difficulties in launching it with a large amount, but the size of the problem is very great indeed. As it has taken us many billions of dollars to solve some of the health problems that face us through medical research and applications, so we are going to need comparable sums in social science. We are going to need many billions of dollars.

It may be proper to start with a very small amount, though I would hope that the authorization could be for somewhat more than you have

in the bill here. But we will have to move quickly to very much larger amounts.

My predecessors at the University of Wisconsin, Dr. Fred and Dr. Elvehjem, both distinguished life scientists, testified here in the 1940's when the National Science Foundation was getting underway. It is worth noting that the National Science Foundation was regarded with doubt when it was established. It was established in a very small way and at first there was some question as to whether it would survive.

What it has done for the natural sciences, what the National Institute of Health has done for the life sciences, can be done for the social sciences and should be done because the social sciences have great potential with reference to solving these enormous problems which the American people have now decided must be solved—problems of poverty and prejudice, problems of law enforcement, transportation, housing, the urban problem, the problem of the rural areas of poverty.

You, Senator Harris, mentioned the Ozarks. I lived in the Ozarks for a number of years when I taught at the University of Arkansas, when now Senator Fulbright was president at that institution, and I know the difficulties which face rural areas such as we have in northern Wisconsin. Those rural problems and the city problems are in part natural science problems but basically they are social science problems and we are overdue in getting at them and trying to solve them.

Thank you.

Senator HARRIS. Well, President Harrington, thank you very much. I have read your excellent statement and listened to your oral comments and I appreciate them very much. I think your support of S. 836 in general will lend great weight and prestige to this measure and enhance considerably its chances of being enacted speedily into law.

I won't comment in detail on the suggestions which you make because by and large I have done so already in this hearing or in these hearings. A copy of the transcripts will be sent to you, but let me say that I agree in general with the suggestions you have made for including specific provisions for cooperation and multidisciplinary efforts between and among the various disciplines, and also the suggestion you have made about receiving funds from other agencies or departments of the Government. We have already decided, at least, I have already decided, that section 7(b) of the bill either must be eliminated altogether or severely restricted. I do think, however, we had a very sound basis for what we had intended to be accomplished by that section but because there are too many potential problems with it that I think should be avoided, we expect to change that section.

I also generally agree with what you have said about the need to increase the amount of the authorization in this bill. The amount it carries was chosen arbitrarily without any real basis and I said so at the time the bill was introduced on the floor. I have no doubt that that figure would have to be increased, either now or whenever possible, and to some degree that is tied in, I suppose, with how long we have to continue the massive expenditures we are making in Vietnam.

But we chose that figure and eventually, before this bill becomes law, we will have to have specific hearings on that very subject, to try to arrive at some reasonable figure that would realistically reflect a sum which could be well and efficiently spent with maximum results on the basis of existing manpower and the types of research that might be done.

I don't have anything else to say except, again to thank you and ask if you have anything further you want to say.

Mr. HARRINGTON. No, I think not, Senator. I do want to compliment you for moving forward in this important field. I know that getting the bill passed is the first thing and once the start has been made, I am sure that this Foundation will prove itself worthwhile, both in moving forward fundamental knowledge and in applications.

Senator HARRIS. Thank you very much.

(The statement previously referred to follows:)

STATEMENT OF DR. FRED HARVEY HARRINGTON, PRESIDENT, THE UNIVERSITY OF WISCONSIN

As president of a University which pioneered social science research and is today a leader in this field, I endorse the principle of S–836 which provides for the establishment of the National Foundation for the Social Sciences.

There are changes in the measure which I will suggest for your consideration, but I can support S–836 as it stands, and I urge early approval.

The need for creation of a Social Science Foundation to round out our government's coverage of the fields of knowledge is so self-evident that there is strong temptation to examine the motives of those who oppose it.

Instead, let me list three major advantages of such a foundation:

1. It would recognize the status of the social sciences as a vital field of fundamental research, and help correct the misconception that the only valid social studies are those which attack specific problems or provide handy answers.

2. It would give the social sciences a high level spokesman in the federal government and back him with a distinguished advisory board.

3. It would provide federal support for basic research in the social sciences. There is comparatively little of it today, and federal agencies which have provided grants for basic social studies have suffered congressional criticism for doing so.

In reviewing the February testimony before this committee on S–836, and the hearings last summer on international science and behavioral research, I was struct with the feeling that, in many respects, the social sciences are today where the physical and biological sciences were in the late forties. Then my predecessors in the presidency of the University of Wisconsin—Edwin B. Fred and the late Conrad Elvehjem—came here to plead for the creation of the National Science Foundation.

They described, for example, how University scientists had labored for years in fundamental studies of the atom—useless information at the time—and how in the dead of night in World War II, when the possible application of this "pursuit of knowledge for its own sake" was seen, Wisconsin's atom smasher was moved from the campus to Los Alamos. They called for post-war rebuilding of what they liked to call the "stockpile of basic scientific knowledge" which fuels economic and industrial progress and improvements in public health. They complained that governmental agencies—conscious of their legal goals—concentrated grants in problem-solving studies and areas where fast answers were needed. They warned that this was short-sighted, that the federal government had responsibility for building both the strength of the scientific community and the store of fundamental knowledge, and that if this was left undone the nation would suffer. Science must have a spokesman at the highest administrative councils, they said. The need for fundamental studies must be understood and funded.

My points to you today are virtually the same—but for the social sciences.

As long as there have been scholars in history, economics, political science, sociology, communication, and the other social studies, there has been fundamental research in these areas. All major Universities in America recognize the distinctive characteristics of the social sciences and tend to hold them together in recognition of their status with the biological and physical sciences, the arts and humanities. In some respects they are the bridge between C. P. Snow's two cultures, the reason why American universities do not have the great, impassable chasm he has so dramatically described.

That we look today to the social sciences for answers to our problems of poverty, international development, urban sprawl, and all the other social, economic, and political ills that man is heir to, is evidence enough of their importance to the nation. But the pressing nature of these problems has developed public impatience with the scholar who says we must know more about man and his institutions and interrelationships before we can come to long-range solutions.

Obviously, as in the physical and biological sciences, both applied and fundamental work must go on simultaneously in the social sciences. The National Foundation for the Social Sciences can make this possible, as did the National Science Foundation.

I understand quite well the concern which the House Research and Technical Programs Subcommittee has expressed for progress in the Social Sciences. Its report, released in April, quite properly called for better use of the knowledge we already have in these fields. I agree completely with its complaint that better balance is needed between research on causes of social problems and demonstration of remedies.

These are things the creation of the National Foundation for the Social Sciences would make possible. With such a foundation, a measure of current knowledge in the social sciences would be readily available. The searcher and the doer could find each other and help each other. Fundamental knowledge could flow more readily toward applications.

There are some who contend that these things could be accomplished within the present federal structure—that social sciences, as half-brother to the natural sciences on the one side and to the humanities on the other, could prosper. It is too early in the life of the National Foundation for the Arts and Humanities to ask that it produce some evidence of fair treatment of its half-brother. But the National Science Foundation, sincere in its efforts to spread its concern into the social sciences, has not yet proved, with a $21-million expenditure, its effectiveness in invigorating fundamental social studies.

There are some who contend that the creation of a third foundation would destroy the unity of knowledge or impair the interrelationship of scholars in the various fields. Quite the contrary, it would remove a source of irritation, improve interrelationships and interdisciplinary research efforts. There is no one so irrationally irritating at a family reunion as a poor relative. Raising the status and the funding of the social sciences would enhance the unity of knowledge.

There are some who contend that adding another foundation would fragment governmental support of fundamental research. It would, to the benefit of all. It would place in the hands of a social scientist administrator and a board of social scientists a considerable amount of responsibility for the progress in the social sciences. There may be some evil in this, but it is nothing compared with the suspicions spawned when this responsibility falls upon an administrator who is a physicist and a board heavily weighted with physical and biological scientists, regardless of their good intentions.

There are some who contend that establishment of the Foundation for the Social Sciences might reduce the support from other federal agencies for social science research. This is possible and may also be helpful. The creation of the National Science Foundation reduced appreciably the "bootlegging" of fundamental study support into project work in the natural sciences. Creation of the Social Science Foundation could be expected to have similar results.

And all this could bring some reason and regularity into the whole field of federal research support.

It would seem quite logical that, while some federal agencies might wish to continue support of fundamental studies which bear some relationship to the long-range goals of the agencies, a good share of the non-directional studies in the social sciences should be supported merely for the sake of learning and the

build-up of research competence. And these should be supported by the new Foundation.

It is in this area that I have some reservations about S–836 as drawn.

I have some doubts about Section 11(a)(3) which allows acceptance by the Foundation of outside funds with a condition or restriction, including that the Foundation use its own funds for the restricted purpose. Nor do I feel that the Foundation should act as a contracting agency for other departments of federal government.

My hope is that federal agencies will continue to support at a high level all fundamental and applied studies pertinent to the goals of the agencies.

Robert A. Levine of the Office of Economic Opportunity reported in some detail to your committee in February on a joint OEO-University of Wisconsin effort of this sort. The Institute for Research on Poverty which is located on our Madison campus is an excellent example of the utilization of University research to attack specific problems of great importance to a federal agency.

The establishment of a Social Science Foundation would not affect such a program in anything but a beneficial way. It would not assume the responsibilities of the OEO for problem-solving studies. But it could, and I hope would, build a base of knowledge over a span of years that such an institute could utilize, and build a level of research competence that would ease future staffing of such enterprises as these.

I would like to see included in the bill provision for the support of interdisciplinary research which reaches beyond the social sciences. All these foundations could work harmoniously in the support of fundamental studies which bridge traditional disciplines in search of knowledge.

And I have one more recommendation for change in S–836 which I consider extremely important.

Americans like to see quick results from expenditures of tax dollars, and I don't blame them. We ask a great deal of our people. But by its very nature, the National Foundation for the Social Sciences will not produce quick results. And by the modest appropriation level proposed, the possibility of major, fast advance through studies it supports is extremely limited.

The expenditures for social science studies at the University of Wisconsin are currently about $8-million a year. We produce few spectacular findings with this volume of work. Thus I would strongly recommend that you raise the fiscal sights of this bill to a point where the likelihood of significant, early progress is heightened. My personal feeling is that this could be accomplished with an annual appropriation of a half-billion dollars at the start with provision for escalation over the years at the rate of about 10 per cent per year.

This is a small percentage of our nation's annual investment in the repair of social damage. Prevention is always cheaper than a cure.

I see in the creation of the National Foundation for the Social Sciences a major step in the progress of America toward a good life for all its people and an approach to world peace and fellowship.

We should not quibble when the goals are of such a magnitude.

Senator HARRIS. Our last witness for the day, before I leave with the Vice President for South Korea, is Dr. Gardner Murphy. Dr. Gardner Murphy is Pfeiffer professor at the Menninger Foundation in Topeka, Kans. Without objections, we will place in the record a biographical sketch of his distinguished background.

Biographical Sketch: Dr. Gardner Murphy

Pfeiffer Professor, The Menninger Foundation, Topeka, Kansas.

A.B. Yale, 1916; A.M., Harvard, 1917; Ph.D. (psychology), Columbia, 1923. Hodgson Fellow, Psychology, Harvard, 1922–25; lecturer, Columbia, 1921–25, Instructor, 1925–29, Assistant Professor, 1929–40; Professor and Chairman, Department, City College, 1940–52; Director, Research, Menninger Foundation, 1952–. Consultant, Division Program Survey, U.S. Department of Agriculture, 1942–45.

U.S. Army, 1917–19. American Association for the Advancement of Science: Fellow American Psychological Association (President, 1944).

Author: Psychology of Personality; Social Psychology; Para-Psychology.

TESTIMONY OF GARDNER MURPHY, PFEIFFER PROFESSOR, THE MENNINGER FOUNDATION, TOPEKA, KANS.

Dr. MURPHY. Thank you.

First, I shall try to state and explain my position with respect to S. 836 and then at greater length give my reasons, trying to define the predicament in which our country stands now with respect to research in the social sciences.

In the light of the questions put to me, and in the light of the published hearings, I have tried to make a clean-cut, "yes-no" decision on this one issue, namely: Is it better to have the social sciences taken care of within the expanding framework of the National Science Foundation, or is it better to work for a National Foundation for the Social Sciences? I prefer the latter.

We need a new National Foundation for the Social Sciences. But in justification of this answer I shall attempt to go into some detail regarding my professional outlook. The spirit in which we make this decision will have all sorts of direct and indirect consequences spread over the years. We do not yet have the kind of information that would make possible good predictions as to the course of a decision reached by the Congress and implemented, over the years, through governmental action, and the consequent long-range effects upon the American community and the world order.

I think the most appropriate procedure for me to take is to indicate why I believe that this bill will have a highly salutary effect if certain specific provisos and understandings are worked out, and if the Congress and the American public are more clearly aware of the implications.

Everyone who has studied the matter seems to agree that science is transforming human civilization at lightning speed and that the social sciences will play their large part—perhaps even a larger part than the natural sciences—in this transformation if they can become more truly and fully sciences in the rigorous sense of the word. Who would be so penny-wise, pound-foolish as to hesitate in the creation of maximal social science facilities? Indeed, the recognition of the social sciences is much too little and too late.

Mankind has been, for a few years, hovering on the brink of an incredible holocaust, politically and militarily known as world war III, but in essence quite likely the eradication of human life as we know it. Against this vast threat we are talking about giving maybe 2 or 3 percent of our Federal budget, looking casually over our shoulders to see if we can do anything about the prevention of war.

Literally hundreds of systematic studies by social scientists, such for example, as Robert North of Stanford University, have been focusing for years on the roots of war and how to get at them. Momentary lipservice is paid to such studies. This is grossly insufficient.

Another example: The Arms Control and Disarmament Agency, working with a slight pittance in relation to the problems of preparation for war, has to spend a good part of its limited resources on studies of weaponry, and has even a smaller pittance left for basic social science studies of the conditions under which disarmament could actually occur. This is a social science problem.

Now it seems to me unrealistic to believe that any Federal agency could do much about basic social science research unless it is explicitly set up on a large scale, with full congressional support, and with the intent and understanding, on the part of the public, that we mean business.

Without a National Foundation for the Social Sciences who can do this? I cannot conceive how the existing National Science Foundation could give any large proportion of its budget to issues as remote as this from the basic hard-nosed science, the physics and chemistry, and related sciences, to which it has been devoted. It can indeed move over and make a little room for a strange bedfellow, and the individual good will and competence of those representing the National Science Foundation is obvious to any careful observer. This, however, is to suggest that the horse should not only pull a wagon, but a freight car, uphill.

If we are serious about the social sciences in modern life it will be something very big indeed that we will undertake. I am not saying it is physically impossible for the National Science Foundation to make a huge change, and go into social science at an adequate level. I ask, however, whether this is likely. I cannot imagine any conditions under which it would be likely.

I would agree as to the importance of recognizing the unity of all the sciences, and I hope that the rigorous and hard-nosed methods of the physical sciences can slowly extend themselves more and more through the biological and into the social sciences. But we face an almost limitless threat.

Indeed, here at home, the great decisions of race relations, labor-management relations, the poverty and delinquency problems of today, are not going to be solved with one finger from the left hand. Neither can the problems of war. The one and only reason why I support the plan for a National Social Science Foundation is that it can be conceived not only as a step in the right direction, but as a big step in an urgently needed direction.

Suppose, for example, that this bill is passed, and the National Foundation for the Social Sciences is quickly established. Suppose that it functions very well, and that the Congress and the public can see clear evidence, within a couple of years, that it is very useful. Then arises the central question: Can the basic social science research to which we are commited be increased, in volume and quantity, and increased again and again, in accordance with its evident value? Can it, for example, be increased to a level where it will have a large and unquestionable effect in reducing crime and delinquency? I do not ask that huge sums be appropriated on faith alone. I ask that the experiment be tried to see whether large-scale social science research, focused on critical problems, can justify itself objectively through its accomplishments. The same issues arise with respect to the prevention of war. I do not ask for faith. Rather, I respectfully suggest that a decent sum for basic research in war and disarmament be made available now, and that this research be increased exactly in proportion to its observed value.

When I say "big" I do not mean that the program must necessarily cover square miles of research buildings, or tens of thousands of white-

jacketed or computer-programing hyperspecialists. What I mean is that the central ideas have to be big. As we have seen in modern university structure, and in some Government agencies, and in some private planning groups like the Rand Corp., the process of group thinking can be ordered in the form of a pyramid, with a very large number of persons gathering and ordering data at various levels, and with highly competent and experienced personnel at the apex, drawing information from below, maintaining a broad strategy and purview of the field as a whole, and communicating through continuous feedback with lower levels of the structure. A fair parallel is General Eisenhower's planning of the invasion of northern France on D-day, 1944. As in that military achievement, there must be endless checking and doublechecking to be sure that the facts and the methods are reliable. There has to be, in other words, a broad strategy for research on the really large problems which confront American life. No serious business organization or military unit would think of the piecemeal manner in which we typically proceed in the matter of the social sciences. Project money, as we have always found in our research at the Menninger Foundation, is excellent for a short-run definition of a small problem, but program money, more in the pyramidal type of organization, with a chance to plan and follow through, is what is called for when really big ideas get mobilized into action. My suggestion is that the domestic and international ills of the United States are intimately related to the piecemeal manner in which scientific resources are used, and this applies especially to the resources of the social sciences.

Now, if this makes any sense to you, it will be evident that I am challenging the project method of research financing which is implied in the present bill, and indeed that beyond that I am implying that this procedure—while very much in the right direction—is rather timid and not likely to knock down the massive enemies; namely, ignorance, passion, hatred, and the rest of it which face humankind in this century. The one reason then, why I would support this bill, is that it is in the right direction. It is a beginning. I do not think that by itself it can possibly accomplish very much of it is going to be only a momentary effort on a small scale. I do not think that it can make very much difference whether this new effort is stowed away within an existing structure or whether it provides for a new structure, except that I think a new structure has some chance of being constantly enlarged if it does a good job. It may be thought that it has to be modest to have any chance of succeeding. I can see the sense in this. But I must say, at the same time, that in the desperate pass which man is now facing, it will be better to attempt something bold, and attempt something bolder and bolder each year. From a lifetime of studies in human psychology, and a view to the actual wretched scene being put before our eyes in the world's news day by day, I think you must think big, and still bigger.

Of course, any such conception of a pyramid of knowledge and of strategy requires what the scientists and the inventors call a "model." You cannot make the detail until you see how it is going to work in terms of the whole. A large part of modern scientific work, upon which later scientific applications depend, is called model building. The field of model building has influenced experimental psychology and

social psychology hugely in the last few years. The specialty of psychology related to this activity is entitled "the field of mathematical models." Now, models can be small, or middle sized, or big. I am suggesting the big one for our present problem. I am suggesting that we begin seriously to think of systematic model building with regard to American life, and international relations. This, of course, has already been done by various men in the Bureau of the Census. It was sketched in a primitive way by Stuart A. Rice, way back in 1928 (Quantitative Methods in Politics), and of course, it plays a very large part in the thinking of such servants of American policy as the Systems Development Corp.

We have had our own turn with model building in some large studies we have been carrying on at the Menninger Foundation in relation to the Vocational Rehabilitation Administration, having to do with discovery and application of principles related to helping impoverished, frightened, and disturbed people to find jobs, or forms of job training, devices by which they can get out of the slum misery in which they live by actually coming to believe that there is a way to get out and to discover and use the resources that are available to them.

You cannot do this on a piecemeal basis. It is a job for psychiatrists, psychologists, and sociologists and social workers, planning their strategy in view of their intimate knowledge of the city of Topeka, utilizing the resources which the city itself, as well as the State and Federal Governments, command. But there has to be a comprehensive model. Mere chipping around the edges will not do the job.

May I use this analogy as I turn to the problems of some of our major ills like violence, crime, delinquency, suspicion, irresponsibility which have been gnawing at our vitals these last few years? These are phenomena of demoralization, loss of classical forms of human belief and human values. Name calling or moralistic denunciation has not seemed to clear up the difficulties. What we have not tried in any serious way is to conceptualize richly and fully a strategy first for understanding and then for the remedial approach, ultimately the control—indeed the prevention—of major sources of such demoralization. We can spend tens of millions each year on delinquency research and not get anywhere, exactly as in polio research we spent richly and ineffectively from the March of Dimes, until we had a theoretical system relating to the disease which was sufficiently comprehensive to make local technical experimentation really productive. It was not the size of the budget that made possible the control of polio. It was the clarification of a system of concepts that was biologically pertinent to the issue. If we want to deal with the problems of crime and violence, we have to have social science thinking on a very large organized scale, and social science thinking which can be verified constantly by checking in terms of consistency and a capacity to predict actual behaviors from the developing system of concepts.

I am not talking about classical mid-19th century sociology, or about Hegel's philosophy of history. I am talking about the scientific model, developed with all the resources of science, dealing with human issues in national and international life, and capable of being constantly checked in representative detail by the capacity to predict social changes. As the data roll in we can find out where we were wrong, and

we can improve our model. This is the main way actually that science has progressed. There has to be a great deal of theory, and there has to be a great deal of hard-nosed testing of the correctness of the theory by reference to fresh facts. If we check around the base of our pyramid all the time, and send messages to the top, we can develop a science of society just as we have developed a science of physical particles. The important thing is that the Congress is beginning to move toward the requisite thinking as expressed in such bills as we now have. I wish, however, insofar as I can claim to represent the professional world of the social sciences, to say that the primary problem, if the work is to be effective, is to create conditions under which adequate large-scale social models can be developed and tested.

Shortly after World War II an earnest atempt was being made around the conference table to bring Soviet and American thinking into some sort of harmony with respect to nuclear weapons, and it became evident month after month that we simply did not know enough to communicate effectively, and get a workable meeting of the minds. During this period, setting this impasse, I attempted a model of this sort. I hold no brief for it. As the Shakespeare line has it, "A poor thing, but mine own." I take a moment of your time for it only because in smiling gently and disposing of it, you may think of something better. My proposal has three steps:

One. I suggest that we draw together hard-nosed and well-tested data about changes in Soviet foreign policy, using the resources of the State Department, the Department of Defense, and many other Federal agencies, but also the great Russian research centers at our universities, such as those at Columbia and at Harvard. The use of professionals equipped with the requisite computer equipment can create a sound, yet flexible and moving model of Marxist, nationalist, and other dominant dynamic components in the Soviet outlook.

Two. We now make bold to make predictions about minor themes developing all over the face of the earth—minor or major for that matter also—in the light of the model as a whole. We would expect the Soviet Union to take such-and-such a position with respect to issues in the Middle East or Southeast Asia, or Latin America, or the rest. We constantly profit by our mistakes; that is, we rectify our model not only in terms of new facts, but in terms of more sophisticated concepts of the relations between facts. In other words, we are improving our model as all science does in a systematic and critical way.

Three. When we have attempted this to a point at which our batting average is going up consistently so that we are predicting pretty well, meeting tough and demanding standards, and doing a little better, we begin systematically to apply this to our own steps, to see how relevant they are to the issues, and again if these steps prove to be effective we can learn something not only locally but generally, and not only in regard to detail, but in regard to the model as a whole.

You will recognize some similarities of this procedure to a number of others which have been suggested over the years, but I believe that the scheme as a whole conceived in social science terms has not been tried. I believe that we have preferred to fly by the seat of the pants rather than to have a working model. As I study wise men who have given their lives to diplomacy I find them groping toward something

a little more systematic, and something which can be improved by the intrinsic experimental methods I have suggested. As a matter of fact, the word "experimental" has been used more and more with regard to the social sciences, and it can be applied whenever the essential factors of clear and honest formulation of models and predictions is followed by daring to try on a small scale the steps which are indicated by the corrected model.

This does not mean taking wild chances. It does not mean one-way disarmament. It does not mean making everything unclassified. It does not mean forcing everything into cut-and-dried formulas and dispensing with the flexible or charismatic qualities of leaders. It means, on the contrary, gradual movement of social science in the direction in which the natural sciences are making their tremendous progress. As in all science it means the retention of the human element, but the strengthening of the human element by disciplined observation of facts in the light of well-defined theory.

I can hear a friendly critic saying: "But this is not really science. This overview is characteristic of philosophy, but experimental control, mathematical precision, verifiable prediction are the nature of science, and you are not yet there." "Yes," I would reply, "all science begins with a stage which we may call prescience. All science relating to the material world starts with the prescience of the Greek philosophers, the prescience of Roger Bacon, and the young Galileo, who had been steeped in Greek philosophy and mathematics, and who knew their prescience so well that they created science from it." Galileo and Newton stood upon the shoulders of the prescientists and they had science moving simply because the foundations for science had been well laid.

The parallel is reasonably close to our own situation. There are in existence today decidedly good beginnings in the construction of a prescience type of model, including mathematical models. You will find in the issues of our social science journals of today many data which are reminiscent of classical economics, but have gone far beyond this in terms of verifiation, replication, clarification, and the development of genuine mathematical models. The mathematical models developed in psychology are beginning to articulate with those from political science, sociology, and economics. Just as the physical sciences themselves undergo huge theoretical alterations while doing business in the meantime, and keep on giving us good applications through the labors of the engineers and mathematicians, so the half-articulate scientific formulations of psychologists, sociologists, political scientists, and economists are rapidly working toward a level of skill in model building which may be comparable to that taken for granted in the natural sciences. It makes no difference to me whether we say that the social sciences are sciences already in the full sense, or whether we say that they are presciences, not yet solid enough to be fully relied upon. This is like asking whether the train is in Grand Central Station, or is headed east from Niagara Falls. To the train dispatcher this is all important, but the main thing for the rest of us is that the train be headed in the right direction.

Much has been made of the point that science is a unity, and we must not fractionate it to natural versus social science. With this I

very fully agree. I do not feel that administrative unification, however, is the same thing as conceptual unification. In the three dozen research projects we are carrying on at the Menninger Foundation we are constantly using hard-nosed physical and physiological experimentation with the human nervous system and vital organs, as related to mental and emotional processes. We are also using interviewing and testing, and life history techniques. We are likewise studying disturbed people who are not patients, but are living in their own normal environment in Topeka. We are studying children in the schools, and indeed in the Headstart and day care programs. We do not split or fractionate these individuals when we study them. We do have to have, however, different specialties in order that depth in training in one field be combined with depth in training in another field. It is hard to see how an administrative arrangement in Washington could do very much either to split or to bring together the various specializations that are intrinsic to the human nature and to the present stage of science.

There is, however, one massive exception to what I have been saying, which is the fact that really large-scale thinking in the development of comprehensive models has to put the social scene very near the top of that pyramid which I was describing. In other words, it is a social science point of view that the statesman and the legislator have to take if they are to fulfill their socially essential roles. A National Science Foundation will have to include systematic studies of the ways in which natural sciences are used, and the ways in which people are trained in multidisciplinary use of all the sciences.

The social sciences will not be a mere detail of the total, and they will not be at the mercy of the limited grantsmanship of those who want to study multidisciplinary issues of human problems if the field is big enough for the National Social Science Foundation to take hold of and in which it can maintain a broad view.

Thank you.

Senator HARRIS. Thank you for both your support for the National Social Sciences Foundation and for your suggestions concerning some directions that it might take.

I, as principal author of this bill, am hopeful that the National Social Science Foundation would not just be a passive agency, as I have said earlier this morning, which would wait for individual investigators to come and ask for money to look into problems which excite their interests, but that it might also take a systems approach to some of the more complex social science problems and might go out looking——

Dr. MURPHY. It must.

Senator HARRIS (continuing). For projects.

Dr. MURPHY. Yes.

Senator HARRIS. I share with you, and I hope more and more people will, the sense of urgency that I think there must be about this, and the sense of consternation we must feel when we consider how little we really know about so many of these pressing problems.

I am really intrigued by your brief statement about what you are doing down there at the Menninger Foundation for the Vocational Rehabilitation Administration. It is a subject of really great interest

to me and I wonder if you might elaborate on that a little, what you are talking about, concerning motivation and training, and so forth, for people from improvished backgrounds.

Dr. MURPHY. Yes. Instead of waiting for people to come and knock on the doctor's door, we have psychiatric teams, including psychiatrists, psychologists and social workers who go out to certain selected parts of the city of Topeka and simply knock on the door: "Anybody here who has a work problem" and then explaining it in terms of whatever terms come readily to expression. People out of work, people who have tried, people who have just lost a job, people who want to get upgraded, people who don't know how to use the agencies. Typically people at this socioeconomic level don't know how to use the facilities available from many sources. We will work with them, and keep coming back as long as we can be useful.

To make this a really scientific and not just a short-range humanitarian project we have carefully chosen control groups as if we were doing a large survey study with large maps of the areas. We have a hundred experimental families and a hundred control families and we have a plan for a 5-year followthrough. We have funds from the Vocational Rehabilitation Administration with an independent team who has never seen our subjects, and who are "uncontaminated", to evaluate how good a job has been done, comparing the experimental with the control.

Now, all of this can be done on a multidisciplinary basis if it is planned as a whole. It could never be done bit by bit.

Senator HARRIS. What sort of methodology do you use? Do you use individual counseling or group dynamics or both?

Dr. MURPHY. Well, it is nearer—it is typically two people visting the home who get the preliminary data and get acquainted with the family, not just one person, typically whoever is at home. They follow through on this as many times as is needed so they get to be friends of the family and often the original basis of the inquiry is forgotten.

Of course, the work problem is interwoven with problems of personal morale, hopes and fears, marginal mental conditions. These people are of course not committable—they are chosen as people who normally function in society but a lot of them are deeply disturbed, unhappy, or apathetic and helpless people, so the psychiatrist can really use his skill, but it is not limited to a psychiatric approach. We use the economic, social, and political facilities of the city, country, State, Federal aid. Of course, it is a case of a strategy that has to be worked through from many viewpoints at once.

Senator HARRIS. I think that illustrates we are going to need research on problems like that, and the one you referred to, it seems to me, is basic to so many things we are trying to do in this country and in foreign countries. We must have a great deal more of that kind of effort, but it must be on a wider scale for a longer period of time than is normally allowed for under 1- or 2-year grants that are presently available. And we need a larger kind of sampling than you normally can afford with some of the grants that are now available on a small-scale basis, and a period of followup time.

Dr. MURPHY. The same is true of our day care and Headstart, and other programs under the OEO, and so on. We need large-scale inte-

grated and long-range followups. This is just absolutely fundamental, and if S. 836 could help in any way in developing the morale of the public in the sense that you are going to get long-range results you have got to have a long-range study. Typically the piecemeal ameliorative levels are not going to do the job.

Senator HARRIS. Are you prepearing interim reports or will you have a final report on this particular project?

Dr. MURPHY. We are within a month of the end of the primary data taking but then there is the evaluation study by a separate team to be made next winter and its writeup will take another year, so I am afraid it will be at least a year and a half before the complete published report is available.

Senator HARRIS. Will you remember me personally when it is completed?

Dr. MURPHY. Of course.

Senator HARRIS. I would appreciate it. Maybe you could send me a copy because I am very interested.

I am also interested in your ideas about the need to have large-scale research projects in regard to international affairs. Senator Fulbright, I think, is doing some very, very interesting work which is just beginning, on psychological factors involved in international affairs. I suppose that is something no one would have said very much about, out loud, a very short time ago. But, he is commencing to do some work in that field and had some preliminary hearings on it. I think that is an excellent development.

Dr. MURPHY. Yes. It is very fundamental.

Senator HARRIS. Well, I don't really have anything to add or to question you about because I think you have covered the subject very well in this excellent statement.

I do—there is one sentence that I would want to emphasize. I want to say that—let me just read what you say:

> I am not saying it is physically impossible for the National Science Foundation to make a huge change and go into social science at an adequate level. I ask, however, whether this is likely. I cannot imagine any conditions under which it would be likely.

I want to say, as I have said often, that I think there should be nothing but commendation and praise for Dr. Leland Haworth and for the National Science Foundation, concerning what they are doing, both in the natural sciences and for their efforts in the social science field. I agree with you that it isn't impossible that they could take on this added chore that you and I have been talking about this morning in the social science field. I just think that it is unlikely we would ever get the kind of heavily increased interest in the social science fields that I think we need, the kind of quantum jump, as Dr. Holton said before this committee last night, that we need in the social sciences. So I agree with that and I just want to emphasize it here.

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

Dr. MURPHY. Thank you.

Senator HARRIS. The subcommittee will recess at the call of the Chair.

(Whereupon, at 9:50 a.m., the subcommittee was recessed subject to the call of the Chair.)

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NATIONAL FOUNDATION FOR SOCIAL SCIENCES

WEDNESDAY, JULY 12, 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 3110, New Senate Office Building, Senator Fred R. Harris (chairman of the subcommittee) 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 continuing hearings on S. 836, a bill to create a National Foundation for the Social Sciences. Our first witness this morning is Dr. Austin Ranney. Dr. Ranney is professor of political science, in the Department of Political Science at the University of Wisconsin.

Without objection we will place in the record a biographical sketch concerning him and I might also note that he is managing editor of the American Political Science Review.

Dr. Ranney, we are delighted you are here and will be pleased to hear from you at this time.

Biographical Sketch: Dr. Austin Ranney

Professor of Political Science, The University of Wisconsin, Madison, Wisconsin. B.S. Northwestern, 41; M.A., Oregon, 43; Ph.D, Yale, 48.

Teaching assistant at the University of Oregon and Yale University; Member of the Department of Political Science, University of Illinois, 1947–63; Member of the Department of Political Science, University of Wisconsin, 1963—; present rank, Professor of Political Science.

Member—Commission on Political Activity of Government Employees; American and International Political Science Associations; American Association of University Professors. Books Published—*The Doctrine of Responsible Party Government, Democracy and the American Party System, The Governing of Men, Essays on the Behavioral Study of Politics, Pathways to Parliament.*

TESTIMONY OF DR. AUSTIN RANNEY, PROFESSOR OF POLITICAL SCIENCE, UNIVERSITY OF WISCONSIN, MADISON, WIS.

Mr. RANNEY. I want to begin, as so many of your other witnesses have, by thanking you and the other members of the subcommittee for this opportunity to appear here to discuss the problems that your subcommittee is considering.

As you will see later, I think S. 836 is a tremendous contribution to the national welfare and to the field of social science.

If there is anything I can do to help it along it will be my honor.

As I am sure you know, Senator, I am only 4 days back from Europe, and I have not prepared a formal statement. I have had, however, time to go over the preceding hearings, at least the published ones, and I have had a good deal of informal talk with my colleagues in various social sciences over the past year or two. So, with your permission, I will make an initial statement on some of the issues that seem to me to have been most prominent in your previous discussions and I assume and hope that you will interrupt me at any time you wish for clarification.

The first issue I want to comment on is the question of the general level of support for social science, regardless, for the moment, of its source.

I take it that every witness who has appeared before you agrees that the level of support is inadequate. Some of the figures that you are familiar with are that somewhere between 5 and 8 percent of all Federal research money goes to social science and in the National Science Foundation only somewhere between 8 and 10 percent goes to social science, and all of your witnesses, whom I certainly agree with, feel this is inadequate.

One of the things I have noticed is that nobody has gone much into just how inadequate it is. In other words, what would be an optimum level of support? Let me hasten to say I am not prepared to answer that global question but I think I can give you one illustration from a grant award committee I am connected with that will give an idea of the gap in what we have and what we would like to have.

If you will forgive the personal reference, Mr. Chairman, I am chairman of the Social Science Research Council's Committee on Governmental and Legal Processes, which I believe is the only grant-giving agency now in the country which supports basic research in American governmental and legal processes.

For the most part, if we do not support this kind of research it does not get supported. We have been operating under a 5-year grant from the Ford Foundation which gives us approximately $60,000 a year to allocate to all research projects.

In our last grant-awarding year—the applications were due in November of 1966 and we made awards early this year—and with our $60,000 to award, we had a total of 53 applications, which added together came to $590,925; with $60,000 to hand out we had applications totaling $590,000 and as a result we had to turn down a great many meritorious projects that we felt should have had support.

In fact, we went out of our way to try to find other sources of support but we were largely unsuccessful.

The subcommittee might be interested in knowing some of the projects passed over to give you an idea of the things not supported simply because of the distance between the amount we had and the amount we needed.

There was a proposal to study the Federal district court judges—their training, their previous careers, their attitudes both before and after becoming judges. Ninety percent of all the cases get settled in these courts, and we know nothing about what kind of people are Federal district court judges.

Another one—the effect of the council manager form of government and of the nonpartisan form of elections on political behavior and governmental output in selected cities in the Rocky Mountain region.

Here, we have long been arguing whether the council manager form of government is good but no one can give you a systematic answer as to what difference it makes, if any.

We could not support this project.

Still another one, related to a current study of Congress that is being directed by Ralph Huitt and Robert Peabody was a study of the role of bill managers in the House of Representative. Obviously a very important topic; again one we know little about. We could not support this.

Still another was a study of the U.S. Court of Military Appeals, its decisions on civil liberties, its stands on the rights of the individual in the whole area of military law.

Still another topic that we could not support was a study of the processes—if you will forgive this—of socialization of freshman legislators in a State legislature.

Senator HARRIS. I am glad you mentioned freshman legislators.

Dr. RANNEY. You Congressmen can hardly get your work done because of political scientists interviewing you.

Senator HARRIS. I was referring to the State legislators.

Dr. RANNEY. This is a topic I am sure you had many thoughts on yourself.

How does a freshman legislator learn the ropes, what does he see as a proper role for himself? We don't know. We couldn't support it.

Another one—the administration of justice in inferior courts which are not courts of record. There are a good many courts which are not courts of record where a good deal of minor criminal law is administered. We have no idea how well it is administered—what kind of people, what kind of training they have.

One more—the impact of the antipoverty and community action programs on local political systems. We have heard it argued that OEO coming in with programs swings about with both fists and upsets the local political structures and has caused a great deal of resentment. We don't know whether that is true and if so, under what conditions it is true.

As I said, these were all projects that we couldn't support and of these to my knowledge only one has received very small support and that from its own university and the others may well not be done at all.

You might want to know what kind of projects we did support; but I will not go into that here.

I think in some sense if you go back to the difference between the $60,000 that we had and the $590,000 we needed to support everything, I think this might give the subcommittee an idea of what the need consists of in terms of research that is not being done.

I take it that it is simply not regarded as controversial before this subcommittee or among your witnesses that more total support for social sciences is needed and that the disagreements are largely on the very important questions of where should this support come from and under what conditions should it be administered, and I want to address myself to those questions for a minute or two.

One of the questions that you asked your witnesses to comment on, and quite properly, is: What role has the Federal Government in providing this additional support?

I think the answer to this one, Senator, is very, very simple.

If there is going to be a substantial increase in the total level for support in social sciences most will come from the Federal Government.

It will not all come from the Federal Government. Private foundations hopefully will extend their support and an increasing number of universities both State and private are assuming somewhat larger obligations for social science research.

In terms of proportions of what is going to be needed to do some of the things we are not doing, there is no question most will come from the Federal Government, or it will not come.

The only choices are increased support from the Federal Government or no increased support. I don't believe there is a third alternative.

Some of my colleagues, including those who have appeared and some who have not appeared, are a little disturbed by this; many more are not disturbed. They have the fear that Federal support somehow or other means political control. I don't know quite what ghosts are bothering them.

They have visions of Representatives and Senators sending their assistants down and saying—we don't want you to do that kind of research; cut that down, do something else.

It is quite clear in almost all of the areas where the Federal Government has been supporting social science research in general—at the present time the National Science Foundation has various programs and so have the National Institutes of Health—and this has not been a problem. I have talked to a lot of people who have this kind of support and I have heard almost no complaints about interference with their definition of their research objectives; in their methodolgy, or way of doing it; and reporting the results.

I would like to put on the record of this subcommittee that in expressing our fears of Federal support we sometimes forget there can be a good deal of interference in the allocation of private financing of social science research.

The principal granting and funding agencies in the social science area, most notably the Ford Foundation, but also the Carnegie Corp. and the Rockefeller Foundation, have for many years pursued certain kinds of programs; that is, none of them have set up general programs of support for social scientists, saying—you tell us what you want to do and we will give you the money to do it.

They have set up a whole series of programs to get certain kinds of research done. It became possible to get this kind of money only by getting the project reviewed and if the researcher was willing to follow the particular kind of problems and to some degree even the methodological techniques that were favored in the private foundation at the time.

This is quite understandable. Every private foundation executive wants to feel, as any of us would feel in the same circumstances, that at the end of his term of office, he can say we got this kind of change, made our municipal transportation system better, it was our research that made them revise the public health system.

They want to have some visible impact just as a wealthy alumnus wants his name on the building as concrete evidence he helped.

As a result of this, you might be interested to know, I have heard a good deal more complaint from my colleagues doing research about private foundations literally interfering with what they should do than I have heard from them about the Government, and I think it might be put on this record that this problem is no monopoly of Government support and in fact the evidence of interference is somewhat more the other way around.

I myself have no fears of any kind on the basis of getting support from the Federal Government as opposed to purely private financing, although I will argue a bit later on in my testimony that I hope and expect that we could move ahead on all of these fronts at once—with no particular form of support excluding other forms of support.

If there is pretty general agreement that a substantial increase in the total Federal support of social science research is needed, then, of course, there are certain questions. One on which I gather there has been a great amount of discussion before your committee is the question of what form increased support should take.

The two alternatives which have received the most attention, not only before this subcommittee but also among social scientists as they discuss this around the country, have been some kind of beefing up of the Social Science Division of the National Science Foundation and your own proposal in S. 836 for a National Social Science Foundation.

Let me deal for a moment with the first of these alternatives. I presume that when people talk about a beefed-up Social Science Division in the National Science Foundation they mean several things.

They certainly mean more money in absolute terms for the Social Science Division of the National Science Foundation and presumably they also mean a somewhat greater voice in the whole Foundation decisionmaking process for social scientists than they now have.

Not just more money but also more say in the allocating of the money.

I think it should be said in all fairness there is no question of the fact that particularly in the last 5 years the National Science Foundation has become notably more sympathetic to social science research, broadly speaking.

You have observed from Dr. Haworth's testimony, and elsewhere, the increase in the dollar amount allocated for social science research.

Another illustration, especially significant for any political scientist, is that for about the first 15 years of existence of the National Science Foundation political science was notably excluded because it was believed not sufficiently scientific and because it was felt that political scientists dealt with matters Congressmen feel strongly about and the Congressmen would be angry and the Foundation would be hurt.

Two years ago this changed and political science is now a full-fledged science as far as the National Science Foundation is concerned and, of course, with my parochial interest I cannot but regard this as a gain.

From Dr. Haworth's statement to the committee and from what I have heard both directly and indirectly of what he has said privately, unquestionably there is a sincere and very welcome desire on his part

to increase the role of the social sciences in the National Science Foundation and I think that we should not minimize this change nor denigrate it.

We should welcome it. We should be pleased by it. However, I would not be candid with the committee if I did not state as forcibly as I can my view that as a general solution to the problem of social science support a beefing up of the Social Science Division in NSF clearly will not be satisfactory. There are a variety of reasons for this that I think are inherent in the nature of the situation.

To begin with, social scientists are now, and I am quite confident always will be a relatively small minority in the National Science Foundation because of the nature of research, because of the history of the organization; for a whole variety of reasons.

Social scientists, although they may become a somewhat more prominent minority than they are now, they will certainly remain a minority.

I have asked a couple of my friends who are rather sympathetic to this alternative, when do they expect that a social scientist will be named Director of the National Science Foundation? They were not willing to predict that this would happen within a hundred years.

I think that is important both symbolically and organizationally. It means that at the present time if the President or Congress or any one of the agencies wishes to get some authoritative, top level statement about what the physical sciences, what the natural sciences are doing, they can go to the National Science Foundation and get such a statement.

If they want to know the same kind of statement about the arts and humanities they can go to the National Endowment for Arts and Humanities.

If they want such a statement about the social sciences there is no fully established Government organization they can go to.

They can go to the Director of the Social Science Division of the National Science Foundation who is a fine man with splendid ideas and splendid objectives and accomplishments but who is a subordinate official in a very large organization and by no means of the status of the Director of NSF or the Director of the National Endowment of Arts and Humanities.

Furthermore, the Social Science Division of the National Science Foundation is bound to support the kind of social science that is defined by and approved by the physical and biological scientists.

It is they who will ultimately decide what is scientific and what is not for NSF support.

An illustration of this, again, is the long exclusion of political science from NSF support because it was felt not to be a science, because too small a segment of it was highly quantitative, highly mathematical in form and methodology. Another illustration at the present time by the total exclusion of all history except the history of science.

Whereas, of course, there is a good deal of scientific work in history, as I would define the term science, and it is certainly as scientific as a good many things that go on in economics or anthropology or sociology or political science and the exclusion of history by definition seems to me to be a price one pays for having social science defined, regulated, and determined by physical and biological scientists.

One of the points that my colleagues make and one that appears very frequently in the records and for which I have considerable sympathy is the feeling there is a growing unity of science and that—and I remember the last sentence now in Dr. Haworth's testimony: "Now is the time to unify the sciences, not to separate them."

As far as the National Science Foundation bringing about this unity of science—let's think about that for a minute.

If there is a growing unity in the sciences, it is an intellectual matter and not an organizational matter. It comes about because of the fact that increasingly physical scientists are aware that a good many of the things they are doing have very strong social and political implications. And also the methods and techniques and achievements of the social sciences are growing more and more reliable and reproducible in the manner of the natural sciences.

This, as I said, is an intellectual matter more than an organizational matter. Professor Horowitz pointed out a year ago in the hearings (it seems to me a very important point that many of my colleagues lose sight of and I hope the subcommittee will not) that in almost every university and certainly in every major university there is a very sharp and distinct organizational division, at the very least, between the physical scientists, the humanities, and the social scientists, who have their own dean; who have parallel and equal standing in the university; and in many universities there is a fourth division; biological sciences.

Why has this come about in the universities?

It has come about because in every one of these divisions, and quite properly so, there is a feeling that the best way to evaluate the quality of what is being done and its merit or lack of it for future support is judgment by peers. Most feel that a physical scientist is really not competent to pass upon the quality of the work that is being done in the study of 15th century British literature and an art critic is not competent to pass upon work being done in econometrics.

Within the physical and life and social science divisions there is sufficient overlap and sympathy that it does make sense for each to evaluate the claims of its separate disciplines and then to present some kind of a united program to the overall university administration.

It seems to me that the same logic that would argue that social scientists ought to be a subordinate part of a National Science Foundation dominated by natural scientists would also argue that we ought to revise the organization of our universities and put the social scientists in a subordinate position under the natural sciences. That, let me assure you, would not be welcomed by university social scientists.

When these separations took place as they did in most universities a generation or more ago, the fact is that in many ways the relation between the physical scientist and the social scientist got better rather than worse; the reason being that before that time the social sciences were in many universities dependent upon the natural sciences for support for graduate students, for facilities, for promotions, for all of the things that academicians want support for and there were constant "civil wars."

When the social sciences achieved organizational equality with the natural sciences, in many instances they found themselves as allies

on a great many questions and I am quite sure this point could be well established in most universities.

The relationship between the two actually improved. As social scientists got status they no longer felt they were being treated like poor cousins.

I, myself, see no reason why the same kind of thing could not apply here.

Furthermore, you yourself, Mr. Chairman, have made several times in discussions with witnesses and in your speeches a point which seems to me to be crucial to this whole affair which some of my colleagues are well aware of and others are not.

That is that Federal support for research or for anything else is not a zero-sum game, in which what some people win has to be taken away from somebody else.

The whole history of the support of science is that as new agencies—as an example, when the National Institutes of Health began to support social science research, as well as biological research; when the National Science Foundation began to do it, that did not mean there was less support.

There was in fact an increment of total support for the social sciences and I think if one can predict anything with confidence it is that the establishment of some kind of new agency to support social science research and training and everything else that needs to be supported would not reduce the total amount of support; nor, for that matter, would it reduce the National Science Foundation's social science program.

I suspect this program would continue. As a matter of fact in some ways it might furnish even more than it does now if for no other reason than response to competition.

I think it is quite wrong to feel if the money is given to the National Science Foundation it will automatically be taken away from all of the other agencies that are supporting research.

As you gather, it is no secret from my remarks that I myself support strongly the idea of a National Foundation for the Social Sciences, and if anything I support it more strongly than I did a year ago.

I know a good many of my colleagues whom I respect, whom I admire, have many doubts and hesitations about this. As I talk to them and as I read the record what I see is doubt and hesitation, not irreconcilable opposition, not a digging in of heels and saying "over our dead bodies" but a feeling social science is doing a good deal better than it was 30 years ago and the National Science Foundation is becoming more sympathetic to social science.

You know—why rock the boat at this time? It's this kind of doubt and hesitation and these are brilliant and distinguished men. Whenever they say something I don't agree with I really reexamine my views.

It may be the same would apply to the distinguished Pendleton Herring, a man whose contribution to social science simply cannot be measured—he is the great statesman of social science research organization and a good deal of the greatly improved position in support of social science today is certainly due to Pendleton Herring. When he

expresses these doubts and hesitations they should be considered seriously.

I feel that the establishment of the National Social Science Foundation would, on balance, for a variety of reasons be a wonderful thing for social science and in my view for the public welfare because I believe that social science already is making a great contribution to the public welfare and I believe it can make a much greater contribution in the years to come.

Let me just detail one or two of the reasons why I believe it would be a good thing.

To begin with, it would, as several witnesses have remarked give social science the same kind of national visibility and respectability that it has long had in the universities.

This is, of course, in some sense a purely symbolic matter, yet as anyone active in political activities, as you gentlemen know, the symbolic happenings in politics can often be just as important as the bread and butter happenings.

In other words, there are still in many parts of our country people who could use the techniques and knowledge of social science but who feel there is something ridiculous on the face of it about the idea of studying human relations in a scientific way. Simply giving social science this kind of status, to put it on the plane of organizational equality with the natural sciences and the arts and humanities would, I think, make it that much easier to use the results of social science and would also make it that much easier to recruit able young people into various social science professions.

I also believe, as I have already mentioned, that it would inevitably increase substantially the total support for social science. In my opinion this is not only desirable, but I would say at this stage in our Nation and in the world it is a development that must come and it must come very soon for I think social science is one of the principal weapons we have to turn to try to produce the social and political and economic conditions that will permit us to live with these fantastic advances in material technology that we have witnessed in the past generation and more.

I think my most important reason for believing an NSSF would be a good thing is the following:

By conviction and by experience I believe in what political scientists and sociologists call pluralism. I think one of the greatest strengths of our Nation is precisely the fact we are so varied and so different and there is no single dominant ethnic strain or racial group or notion about public policy.

There is an enormous variety of views. I am very conscious, just having returned from a month's lecturing in Vienna, of what damage a country can do to itself when it decides it is not going to have certain kinds of people. I am thinking of the contributions the Austrian and German Jews have made to this country and I think we should build a statue to Mr. Hitler, thanking him for giving us this talent.

It is this diversity that I think is highly desirable. It seems to me very much the same thing applies to science and particularly to social science. The very fact that social science generally speaking is so far from being at its final stages of development; the fact that there are

some exciting innovations coming, some of which are good and some of which are not so good, surely means this is the time for experimentation and for adopting a variety of approaches to the difficult problems that face us. It seems to me, therefore, highly undesirable to have a single monolithic agency that controls all social science research, whether it be a private foundation or the National Science Foundation. Such an agency would inevitably develop an institutional point of view about what is the right way to go about studying these things, and approaches, techniques, definitions of problems that did not fit the official lines would be starved

Whereas, if we advance from the situation that we already have with the NSF and the Social Science Research Council, which I hope will continue to operate and with growing support from the Foundations.

Although, let me put in a minor footnote plug—I hope that the support the SSRC gets from the private foundations will be money that the Council allocates rather than a grant to accomplish a specific program. But certainly I hope and believe that private support of social science research will grow and expand and flourish.

I certainly hope and expect that the National Science Foundation social science program will continue to grow and expand and any contribution I can make to that I certainly will be delighted to make.

It seems to me to add to the NSF and SSRC a National Social Science Foundation will promote a broader conception of what is a science and what is not a science. Moreover that conception will be defined by social scientists, as it is now, in the Social Sicence Research Council, and not by the natural scientists. That is the diversity of approach, of techniques, of the kind of projects, the kind of people supported, the kind of programs supported coming from this diversity of support which seems to me to be an excellent thing.

What about the possible abuses of such a thing; the possibility of its becoming a so-called political football, whatever that is?

This doesn't worry me very much. There are abuses in the private foundations. There are abuses in the National Science Foundation. There are a variety of ways for reducing these abuses and keeping them in line and they are built into your proposal for a National Social Science Foundation, particularly in its board of directors which I hope and assume would be largely composed of distinguished social scientists whose professional standing is unchallenged.

As long as there are the decisionmakers I can see no abuses which would be any greater than abuses that exist in other forms of support.

I would conclude by saying that I think we all feel strongly it is time to act now.

I happen to be engaged in the political science section of the NRC–SSRC 2-year survey of the social sciences. A good deal of useful information will come out of this. But it seems to be quite clear that it would be wrong to wait until that committee reports. The kind of information that committee is going to report is going to bear on what kind of policies the Board of Directors of the National Social Science Foundation ought to pursue.

It certainly will not bear upon the question of whether or not there ought to be such a foundation and to wait until the report is out seems to me quite pointless.

The need exists now. It grows more acute every day and I for one would like to see speedy action.

I may also say—and this is more than the expected form of politeness of a witness like myself—that all Americans, whether social scientists or not, are very much in your debt and in the debt of your subcommittee not only for creating the possibility of this major advance for social science but also for forcing a good many of us in the profession to take a hard look at ourselves and what we are doing and our obligations as scholars and citizens.

And for this, however we may feel about the specific proposal, we are very much in your debt.

Thank you.

Senator HARRIS. Thank you, very much. You are very good, so soon after returning from a teaching assignment in Europe to come here to give your testimony on this bill.

Dr. Ranney, your testimony is very lucid and persuasive. I am not just saying that because, unlike the friend you mentioned—because you agree with me I have a feeling that you must be right.

I think you have given a good deal of thought to the previous testimony before this committee and to the measures we are considering. I think what you have to say will be very helpful.

You have examined most of the arguments that have been made and the fears that have been expressed against the establishment of a National Social Science Foundation and like virtually every witness, if not every witness at least most witnesses, you have pointed out there is an important and pressing need for additional Federal support of social science, for research, and for scholarship in those disciplines.

You gave some listing of the types of research projects which the Social Science Research Council, because of the lack of funds, was unable to approve and you offered to list some of those that were approved.

I wonder if you would, with the minimum amount of difficulty, give us some idea of the kind of applications you were able to approve, totaling some $60,000.

Dr. RANNEY. Yes; I would be glad to.

I will pick a few examples at random.

The first one happens to be very convenient. I guess there is no point in mentioning names. There is a grant to a distinguished professor in history who has pioneered in the application of quantitative methods in the analysis of census data and a variety of other things as to the study of elections.

And it turns out, as Will Rogers, your fellow Oklahoman said, "It isn't that we don't know much but that so much of what we know ain't so."

He discovered a good deal of what appears in history books ain't so and he has a pilot study for compiling biographical information about American Congressmen from the first Congress in 1789 to the present.

He has done an enormous job of collecting data and making it available on cards and magnetic tapes.

We refinanced his exploratory efforts.

This project is underway and I think it will make a very substantial contribution.

Another project which I think has very considerable interest to us is a study of appellate court judges. I mentioned a project we could not support, a study of district court judges, but this is a study not of the district court but of the court of appeals to see what kind of problems they have to deal with, their voting patterns their backgrounds, their patterns in reversals by the Supreme Court.

Another one that we think is outstanding, and which will have real impact on public policy, is a study of the process by which individuals get their notions about politics and government, their attitudes on government.

Senator HARRIS. What is socialization in that context—when you were talking about a freshman State legislator? I had a vision of moving around at parties, and so forth.

Dr. RANNEY. That is part of it; you might say that is socializing. Socializing is part of socialization.

This is a study of how people find out about the circumstances in which they live. In the case of legislators, how do they find out how you get bills introduced; how do they find out how you can advance a bill; how do they find out who are the kinds of people you talk to.

The broader subject of political socialization is about people in general. People have certain kinds of attitudes toward the Government of the United States.

They either think it is a valuable, expressive instrument—as in a democracy you can get things done—and there are others who think it is a put-up job.

How do these people get these differing ideas?

There has been a good deal of research. We are funding a project that is going to relate this also to the study of curriculum.

Most of the socialization studies up to this time have been on the role of the parent and the family in socialization. This is a study on the role of the schools which could have major implication for civic education in the school. That is a project we feel is very important.

Another project which also happens to be related to the interest of this subcommittee is a study of the whole process in certain areas, mostly natural sciences, but some social science, of the Federal support of science; a study particularly in the immediate prewar, during the war, postwar period, of the processes by which agencies of the Federal Government have decided to support certain kinds of science.

Some supported basic research. Others wanted specific things studied. Why did some kind of agencies support one kind and other agencies will support another kind? This will have implications for this subcommittee.

I am beginning to run short on our $60,000 already.

Another project which we think is very important is by two very distinguished students of the American judicial system. They have a national sample survey of the attitudes of people toward the Supreme Court in particular and the judicial system in general during the period of great controversy as caused by great decisions; for example, the school prayer decision, and the decisions on the rights of people accused of crime.

There is a general feeling that we have been going through a great crisis comparable to the thirties when President Roosevelt tried to revamp the Supreme Court.

This will be a very serious study of how much people know about this, what kind of people react to it in what way, et etcera.

I think this is a representative sample.

Senator HARRIS. Senator Hansen?

Senator HANSEN. I don't have any questions but I wanted to say I was very much impressed, Dr. Ranney, with your presentation. I appreciate particularly your reviewing and bringing into proper focus, I think, a number of questions that I have asked and dealt with and which have been discussed by previous witnesses before this subcommittee.

I am grateful to you for your summing up the important elements that ought to be part of a judgment as to what we might do and what the Government might do in regard to support of the social sciences and the important role that you feel could be better done by social science with this sort of support—an excellent statement.

Dr. RANNEY. Thank you, very much.

Senator HARRIS. Thank you very much, Dr. Ranney.

Our next witness is Dr. Robert B. McKay. Dr. McKay is associate dean of the New York University School of Law.

Without objection we will place in the record at this point a biographical sketch concerning Dr. McKay which has been prepared by our subcommittee staff.

Dr. McKay, we are very honored to have you here.

Dr. MCKAY. Thank you, Senator.

Biographical Sketch: Dr. Robert Budge McKay

Dean of the New York University School of Law, Washington Square, New York. B.S., U. Kansas, 40; LL.B, Yale, 47. Admitted to Kansas and D.C. bars, 48.

Department of Justice, 1947–50; Assistant, then Associate Professor of Law, Emory Univ., 1950–53; professor of law, N.Y.U., 1953–, Associate Dean, School of Law, 1963–1967. Dean, 1967–.

Member Exec. Committee Assn. American Law Schools, 1964–65. Member, Am., N.Y. State Bar Assns. Chairman, Special Committee on Financial Resources, Association of American Law Schools, effective Sept. 1, 1967.

TESTIMONY OF DR. ROBERT B. McKAY, DEAN, NEW YORK UNIVERSITY SCHOOL OF LAW, WASHINGTON SQUARE, N.Y.

Dr. MCKAY. I appear today as chairman of a Special Committee on Financial Resources of the Association of American Law Schools, established a year and a half ago by the Association of American Law Schools.

My purpose is to make available to you the results of a study conducted for that committee to determine the extent of present financial support for legal education and legal research.

In my prepared statement I wish to highlight some of the conclusions arising out of this study.

Prof. Wex S. Malone, president of the Association of American Law Schools, testified on June 21, 1967, on the merits of S. 836, expressing for himself and unofficially for the leadership of the association warm support for the objectives of the bill.

I share that enthusiasm which has now been shared by the representatives of the American Bar Association, the American Association of Law Libraries and the Association of American Law Schools.

I agree with Dr. Ranney who expressed the concern of social science when the physical and biological sciences are allowed to define what is science to determine in large part the allocation of grants.

How well that demonstrates the point that I wish to make about the law, not only in relation to the physical and social sciences but as well in relation to the social sciences themselves.

If the social science is a subculture of the natural sciences the law is almost an invisible component of the whole, which is essentially the point I wish to make today.

However, I have the lawyer's caveat as to a reservation about the bill which I think Dr. Ranney expressed in some part as well.

If we have any reservation about the proposal, it is only that we fear that the urgently needed support for legal education and legal research would not be likely to emerge from a foundation concerned primarily with the social sciences.

It is not that we would not support it as warmly as Dr. Ranney—our concern is whether there should not be some more visible reasons for support for legal education and legal research.

I have a prepared statement which is available for the record.

Senator HARRIS. We would like to have it for the record, however, and therefore without objection we will place the entire statement in the record and you may comment on it or excerpt from it as you desire.

Dr. MCKAY. I should like to make briefly some preliminary points which I make at greater length in the statement.

The first point which I take it is obvious and requires no elaborate explanation is that the law is a part of the social process as a whole and that the law needs more study.

I was pleased to learn from Dr. Ranney that the social scientists are studying the law themselves and they have much to tell us about the behavior of the law and lawyers and judges.

Law is a separate discipline. It is not until very recent years that lawyers and law schools thought there was anything particular to be learned thorugh the study of law as a discipline except some kind of things that can be done in the library by case study and treatises.

We realize there are techniques of research that we learn from our social science colleagues that will allow us to make more probing explorations into the law and the contribution that the law can make to the social processes.

We are now ready to do that and we are now willing to go ahead. We lack the financial resources to do that.

The second preliminary point has to do with the nature of the law as it relates to the social sciences.

I come reluctantly to the conclusion that law is not about to be accepted as one of the social sciences. I had long taken the view that the law was one of the social sciences and was very happy in the belief we were in that company.

It has been made clear before the testimony in this committee last year and this year that social scientists do not consider this to be so. Dr. Henry Riecken of the Social Science Research Council elaborated on and defined what are considered to be the social sciences.

And I am somewhat dismayed to find that my fellow lawyers do not believe that law is a social science.

So I lose on both scores.

I am perfectly aware that S. 836 includes law as one of the social sciences—at least within the purpose of the Foundation—right between history and social statistics.

But I fear that even congressional fiat cannot decree in the hearts of social scientists or lawyers, if I may distinguish them as I fear it is necessarily a condition that one is willing to accept——

So reluctantly I moved to the position that law must be treated as a somewhat separate discipline.

Thus, I am concerned that even if law is recognized as a social science within the granting groups there is a danger it would never receive more than a token recogniton from lawyers.

If I may borrow from Dr. Ranney—I would find it hard to visualize the president or chairman of a social science foundation who was a lawyer.

We in the law are somewhat fearful that rather substantial undertakings in the field of law are not likely to get very substantial support in the Foundation for the Social Sciences.

Let me turn now very directly to the nature of a study made in behalf of the Special Committee on Financial Resources.

It was commissioned by the American Bar Association and by the Association of American Law Schools and financed by the Walter E. Meyer Research Institute of Law in what would be considered very modest terms, indeed.

The purpose was to ascertain the level of private philanthropic contributions, defined as private foundations, to legal education and legal research.

Because there were few significant contributions of this character before 1955, the year of the first large grants for international legal studies, the period studied was from 1955 through August 1966. Foundation grants of $10,000 or more were included where the grantee was any of the following:

Any American law school that received support for any purpose, whether research, curriculum development, scholarships and fellowships, bricks and mortar, endowment, or general support.

Second, any organization conducting legal research, including the American Bar Foundation, the American Law Institute, various bar associations, and a wide variety of other organizations.

For this compilation "legal research" was viewed in its broadest sense to encompass traditional or doctrinal research, empirical research, action research, and information-gathering activities.

Third, organizations rendering legal assistance, including legal aid societies, the National Legal Aid & Defender Association, the NAACP Legal Defense & Educational Fund, Inc., and the Lawyers Constitutional Defense Committee.

Fourth, and finally, any organization providing continuing legal education for both the bar and the judiciary.

As you see the net was broadly cast to sweep into the total anything that might even remotely support legal education or legal research in the United States.

Analysis of the data thus collected justifies the following conclusions:

First, during this slightly more than 10-year period total grants of about $62 million were given for the entire period, of which about $41 million went to law schools in the United States.

The vast bulk of this not very large amount went for bricks and mortar, fellowships, and individual research.

Only a modest amount was made available for empirical research. The remaining $21 million was distributed among a wide variety of organizations, including the National Legal Aid & Defender Association, the American Bar Foundation, the American Law Institute, the American Association, the National Juvenile Court Foundation, the National Municipal League, and the American Society of International Law.

Of the $41 million granted to law schools—the distribution was by no means uniform about the country—approximately $25 million, more than 60 percent, went to five schools; $32 million, nearly 80 percent, went to 10 schools.

More than two-thirds of all foundation support for legal activities in the period studied came from a single source, the Ford Foundation.

The bulk of the Ford money went to three fields—international legal studies, graduate fellowships for law teachers and the administration of justice, particularly in the criminal area.

Parenthetically, I might say that support for those activities has largely been withdrawn by Ford and some of the others who were recent substantial contributors.

There are only two private foundations exclusively concerned with legal research, the American Bar Foundation and the Walter E. Meyer Research Institute of Law, but neither of them makes substantial annual appropriations, even though each of them is a grantee of one or more other foundations.

The third edition of "The Foundation Directory," published in 1967, reporting on private foundation grants of $10,000 or more in 1966, confirms the small share of private philanthropy that goes to law.

Of all giving in that year 11 percent was for the sciences, defined broadly to include the life sciences, social sciences, and physical sciences.

Of this portion of the whole, 12 percent went to law. Twelve percent of eleven percent, or a grand total of just over 1 percent of private philanthropy, isn't very much.

At the same time Government support for legal research is negligible.

First, the National Science Foundation has made no grants for legal education, legal research, or bricks and mortar for law schools. You heard testimony at your February 1967 hearings on S. 836 to the effect that $40 to $50 million of a current National Science Foundation budget of nearly a half billion dollars would go to the social sciences, not of course including law.

While the sum allotted to the social sciences was not large in relation to the total budget of the National Science Foundation, it is nonetheless striking that that $40 to $50 million figure for 1 year is about two-thirds as large as all the private support for law-related activities during the most recent 10-year period.

The gap is further emphasized by the fact that there was almost no Government support for law during this period.

Moreover, in approximately the same timespan, from fiscal 1956 to fiscal 1967, Dr. Leland Haworth stated at your February hearing that Federal support for the social sciences increased from more than $30 million in 1956 to more than $221 million in 1967.

Second, again relating to Government support, the first round of grants by the National Endowment for the Humanities, totaling approximately $4 million, including no grants to lawyers for legal research. This may not be surprising. But the point is that law apparently has no Government home.

If law is neither a social science nor one of the humanities, it must be equally clear that it is not a natural science or a biological science.

Third, there has been limited Government support for law-related programs, principally of a nonresearch character.

A few law school building construction grants have been made under title IV of the National Defense Education Act. However, there have been no NDEA fellowship grants for lawyers interested in graduate training leading to law teaching.

A modest number of individual law teachers and law students have received Fulbright grants.

There have been some grants to law schools and to individual law professors out of the Department of Health, Education, and Welfare but nothing as compared with the other disciplines.

Important as they are, they have been for limited purposes and amounts.

The more recent Law Enforcement Assistance Act offers some promise of useful support, but again principally in the area of action programs.

State legislatures and other local governmental bodies have made some grants to law schools and to individual lawyers or law teachers. But the sum has not been significant and has seldom involved projects other than review of legislative codes.

From figures like these the point is often made that legal education and legal research have fared much less well in terms of financial support than other disciplines; and lawyers tend to point envious fingers at the largesse bestowed on medicine.

While this is factually true, primary emphasis should go elsewhere. The real point, in my judgment, is that the law and lawyers now know what they can do; they stand ready to do the necessary; and they are competent to provide the requisite legal training and to undertake the important research tasks.

What I have said so far may seem a plaintive lament about past discrimination against the law in terms of support for legal education and legal research. I do not wish to give that impression.

Clearly the law schools could have used more fellowship support, particularly for graduate legal education where very little money is available; and no doubt larger sums for legal research could have been used effectively in the recent past.

But in all candor it must be conceded that it is only in very recent years that the legal profession as a whole has awakened to the contribution that law can make to the solution of the problems of society.

Now that lawyers have come to realize the service role of law and have become aware of their own capacity to solve social problems, the

moment has arrived, in my judgment, to capitalize as quickly as possible on this newly discovered potential.

Accordingly, I speak today not to complain about the past, but in behalf of the bright future for legal contributions to the solution of the ills of the social process.

When I speak of the new awareness of the legal profession, it may be useful to give examples. Undoubtedly, the most drastic reversal of attitude is the present interest of the organized bar in devising new ways to meet the legal needs of the poor.

Until quite recently there were thought to be ethical barriers and other professional difficulties that stood in the way of group legal services, neighborhood law offices that advise on a broad range of issues has now become common, and other new programs designed to aid the indigent.

Now all those questions are being rethought; the term professional responsibility is assuming a new affirmative significance that augurs well for the profession and for society.

Another manifestation of newly developing attitudes in law is particularly relevant in these hearings. Regular and close cooperation between the organized bar and the academic elements of the legal community is now an accomplished fact.

One of the best examples of this attitude is the joint effort by leaders of the American Bar Association and the Association of American Law Schools in recent years to determine what should be the role of law in emerging aspects of the social process; to ascertain what matters could be fruitfully studied; and to learn how these expensive undertakings could best be supported.

It is not unnatural that lawyers so minded should think first of seeking financial support from traditional do-it-yourself library research supported by little more than purchase of research time, secretarial assistance, and publication costs.

For this kind of endeavor, which will of course continue in the areas where it has proved magnificently valuable, traditional support will probably continue from private philanthropy. But it is now apparent that the massive undertakings that are needed in the immediate future are unlikely to be financed out of private sources.

The Bar Association, the Association of American Law Libraries have joined to draft a proposal for a National Foundation of Law to meet the impressive challenge of the future.

It is in my judgment a major breakthrough for these three organizations to work together at the highest leadership levels in support of this common cause. The proposal calls for a foundation to support, among others, the following activities:

Programs for the improvement of the administration of justice; assistance for legal education; support for law libraries; research and innovation for the future; development and revision of the law; increased availability of needed legal services to the public; and greater recognition of professional responsibilities on the part of the legal profession.

We earnestly hope this committee will be able to study this proposal when presented to you in the form of suggested legislation.

My final point is addressed to the question that I know must concern you.

Why should the law ask for a separate foundation when law is one of the included disciplines in the proposed National Foundation for Social Sciences? My answer is in two parts.

First, as I have already suggested, social scientists do not regard law as a kindred discipline. Accordingly, it seems likely that in a social sciences foundation the law would always be a poor relation and that the important tasks we believe should be undertaken would not be supported except where there was an interdisciplinary study to be made in which law could play a complementary, but secondary, role.

My second point grows out of the reading of the testimony in your previous hearings. I was entirely fascinated by the social scientists—as Dr. Ranney mentioned—in Government and out, who spoke in favor of the principle of increased support for the social sciences but nevertheless, almost without exception, did not really favor a separate Social Sciences Foundation. Why?

The answer is not altogether clear to me. Perhaps it is in part a don't-rock-the-boat philosophy, perhaps in part a concern lest the sometimes controversial work of social science become too visible, thus risking congressional sanction.

The law, which deals with equally controversial matters, does not share that concern, I am happy to say. We are not only willing to accept visibility. We seek the light of day so that we can better fulfill our professional obligations to the whole of society.

Senator HARRIS. I want to thank you, Dr. McKay, for your testimony and for your report on the study which has been undertaken on the condition of research and scholarship in the law throughout the United States and I commend you, through the Association of American Law Schools, for pressing forward on that long overdue look at research in law.

That old saying that one swallow doesn't make a summer I think, could be paraphrased—one witness before this subcommittee does not fail to make law a social science.

There has only been one witness before this subcommittee—and one you alluded to—who did not feel law is a social science. Every other witness without exception has felt that law is a social science and I must say that I agree with the overwhelming testimony before this subcommittee on that score.

We have heard up to now on this question from Prof. Geoffrey Hazard; the gentleman to whom you alluded, who is executive secretary of the American Bar Foundation; from Mr. Malone, of the Association of American Law Schools; from Dr. McDougal of the Yale University Law School; from Dean Lewis Pollack, dean of Yale Law School; from Dr. Lasswell of Yale University and there are several witnesses who will be appearing and who have corresponded with this committee on that general subject.

I think there is no question but that there must be more support and more Federal support for legal education and legal research.

An overwhelming number of persons who have either corresponded—and I am talking about social scientists—including those who have come before us with a background and training in law—an overwhelming number have supported the principal aim of S. 836; that is, the establishment of a separate National Social Science Foundation.

I take it from your beginning statement that, aside from the question of what will eventually happen insofar as law is concerned, on the premise of whether or not there should be a separate social science foundation, you generally, as an individual, would respond affirmatively.

Is that correct?

Dr. McKAY. Yes, that is right.

It seems to me this will have a very useful impact in at least two ways.

It seems to me now is a very good time for law to make application into the National Science Foundation but until now there has been no incentive to and in fact there has been no background that we can expect to come in and it seems to me we will have the same problem under the National Foundation for the Social Sciences.

We will be given some things and we will have representation but the major thrust is going to look toward the traditional, whether law is a social science or a nontraditional social science.

I think it does not make much difference because we don't stand in with the social sciences and they regard us with suspicion.

Senator HARRIS. I understand your fear but I don't share the depth of your concern because the overwhelming testimony before this subcommittee is that law is and should be a social science.

Secondly, if we can make them judges by an act of Congress I think we can make them social scientists and that would be the intent of this bill.

Furthermore, those who come from the discipline of law would be represented on the governing body of the National Social Science Foundation under the terms of this bill.

The second question I was going to ask you is that you say you agree with the general aim of the bill, while your principal desire is somewhat in the future for a separate foundation for law—if S. 836 is enacted and it should include law as a discipline within its jurisdiction for research and scholarship, would you support it?

Dr. McKAY. Yes, I would.

Senator HARRIS. Then the next question I would ask as a practical matter.

First let me say that while there is overwhelming support before this subcommittee from the social scientists, nevertheless there is quite understandably a problem about the creation of any new agency within the Federal Government and that will have to be met.

I haven't any question in my mind this bill will pass. I think it has a backing and a logic of its own and I think it is inevitable that it will become law.

The Arts and Humanities Foundation was first proposed seriously in 1955 and it was enacted into law in 1965, some 9 or 10 years later.

I believe I can say to you, without fear of contradiction, that it will not take anywhere near so long to get the Foundation for the Social Sciences enacted into law. I think it is going to become law. If this committee decided to oppose it, we could not very long keep that idea from coming into fruition.

A separate foundation that would have to do with law alone is somewhere down the line. It has not been proposed yet. It is still under

study. It would stand alone with support from the academic community, primarily on the basis of support that would come from within that discipline, law.

Whereas, the Social Science Foundation, I think, has the overwhelming support of the disciplines enumerated in this bill.

As a practical matter, if there needs to be additional support for law, and you could almost say support, based on your testimony, and you and I think there should be, at least for the short run, it would seem to be the best kind of practicality to support the Social Science Foundation and then hope you might get a foundation separately—wouldn't you think so?

Dr. McKAY. That is exactly consistent with our aim. We have had an enormous amount of progress to have come to the realization as lawyers and law teachers and members of the organized bar that the law is not a self-discipline in which you sit within the confines of a library.

It has taken a long time to make that rather fundamental step.

The organized bar and the academic bar and the library and research components are now in solid agreement on that central point. That has moved rather fast and we have come to the conclusion within the last year that some kind of separate financing is necessary.

We want to rely as traditionally we have upon private sources and the purpose of our study was to see what was the prospect for a new private foundation.

We concluded that is not possible in view of the dimensions of the problem and for that reason we have come to you with the proposal.

Senator HARRIS. I said yesterday in other hearings being conducted by this committee that I had received all my education at public expense. In some measure these committees have been an extension of that public education process for me personally and I think I could particularly say that—or exemplify that by recalling the kind of testimony we have heard concerning the law and its relationship to the social sciences.

I had a vague and general feeling from my own legal education that somehow it did not quite fit some of the things I should have been called upon to do once I left law school. I quite agree with Dr. Hazard that legal education ought to have as its aim the production of policymakers, because lawyers, I think, are policymakers and they find their way into the policymaking process, whether it is quite as formal and direct as being in a legislative body or is simply in the everyday policymaking process of law.

And it seems to me we have not really recognized that as well as we ought to.

The other thing—as I have said previously in these hearings—is that the study of criminal law in law school was a rather depressing experience for me because I felt that we were going about it in a rather naive and limited way, looking at it on a doctrinaire basis—to use a word that you cite—rather than on the basis of the whole social process and on the social science questions involved in criminology.

I think there is hardly any social science that you can do serious research in that does not somehow impinge upon law and somehow does not involve legal questions and that is a new thought for me this year which has come out of these hearings.

I think the professional associations which you represent here today informally are certainly to be commended for bringing you here. I would think most lawyers, products of law schools, would have the same lack of understanding about these matters that I had prior to these hearings and I think there will be a tremendous but necessary job for those who see the need for greater research and scholarships in law to try to bring to their clientele; that is, practicing lawyers some of the same sort of thinking relating to education.

Dr. McKAY. I am in accord. The social sciences have a component of law. The doors on legal education have now been thrown open to these new ideas and it is very recent.

If I may be permitted one footnote—it was driven home to me this past week and like Dr. Ranney I was in Europe, in England for a conference on Anglo-American education.

As you know, we lawyers have looked to our English forebears with special respect and affection and they have not turned the same corner as American lawyers.

They regard the law as a narrow, practical discipline, in which you serve the interests of your immediate client, with no concern over law reform and public reform which is no longer true in the United States and which I think is a happy development.

Senator HARRIS. I think that is a very happy development.

I think that is a very major development related to the future of this country if we are to face up to the very serious and complex questions that more and more underlie our lives and press upon us for answers.

I appreciate your testimony and I appreciate what you and the Association of American Law Schools are doing.

Senator Hansen?

Senator HANSEN. Dean McKay, I want to compliment you on your excellent statement you made here this morning and to say I am quite in agreement with you that the legal processes are a vital part of the entire social process and I suspect if there is one single thing which is of growing concern to an increasing number of people in America today, it is respect for law, on the one hand, and trying to work out solutions to social problems, on the other.

I happen to subscribe to the belief that more and more people, rather than fewer, need to be impressed with what I think is a fact—that we cannot hope to solve social problems by saying we can short circuit established legal axioms.

My feeling is that all of us, not only majority ethnic groups, but minority groups in this country as well, have far more at stake—if we think that the end justifies the means, if we believe that we can fail to obey, or we can ignore, those laws which we find unpalatable for a particular reason in order to obtain or achieve an objective, to which we might all subscribe, we are wrong.

Because of that I want to say that I think your statement has an added interest in that I, too, would like to have focused public attention and interest created on the role I think the law can and must play in helping to solve some of these pressing social problems.

I think this is true not only in America, but I think it is true internationally and perhaps when the millennium arrives, when there will be peace; that is still beyond the horizon, that will still be true.

I am inclined to believe we are never going to see it happen until we recognize that the law is a necessary element in living together, one person with another.

To think for a moment that we can live together in any sort of amorphy and at the same time endure these vital elements, in the face of all that has gone before us, all that is traditional, all the social consciousness in civilization that we have been building up is unrealistic —you made an excellent statement.

Senator HARRIS. Thank you very much, Dean McKay.

(Dr. McKay's prepared statement follows:)

STATEMENT OF ROBERT B. MCKAY, DEAN AND PROFESSOR OF LAW, NEW YORK UNIVERSITY SCHOOL OF LAW, APPEARING AS CHAIRMAN OF THE SPECIAL COMMITTEE ON FINANCIAL RESOURCES OF THE ASSOCIATION OF AMERICAN LAW SCHOOLS

My name is Robert B. McKay, Associate Dean and Professor of Law at New York University School of Law. Today I appear as chairman of a Special Committee on Financial Resources of the Association of American Law Schools. My purpose is to make available to you the results of a study conducted for that committee to determine the extent of present financial support for legal education and legal research. In my prepared statement I wish to highlight some of the conclusions arising out of this study.

Professor Wex S. Malone, President of the Association of American Law Schools, testified on June 21, 1967, on the merits of S. 836, expressing for himself and unofficially for the leadership of the Association warm support for the objectives of the bill. I share that enthusiasm. If we have any reservation about the proposal, it is only that we fear that the urgently needed support for legal education and legal research would not be likely to emerge from a foundation concerned primarily with the social sciences.

My purpose today is to state some facts about the present level of support for legal education and research, the needs we see, and what we conceive to be appropriate next steps. Accordingly, I shall not address my comments specifically to the questions posed in the invitation to appear at this hearing, although I hope my comments will be relevant to the general scope of these useful hearings.

Before presenting the conclusions derived from the data collected for the Association of American Law Schools' Committee on Financial Resources, I wish to make two basic points, one of which I hope will gain general acceptance while the other may seem less obvious.

Law and the Social Process. The first proposition, on which I hope there is no dissent, is that the legal process is a vital part of the entire social process. There should also be general agreement that the legal process could be improved and that its operations should be carefully studied in order to determine the best means of improvement. We need more reliable data about the operations of the legislative process; we need to know why the courts fail to operate as effectively as they should; and we imperatively need better information on the relationship between criminal law and its enforcement to crime rates that seem always to increase. Despite these obvious needs and others generally urgent, all requiring more study, the amount of organized research into the legal aspects of these social problems is unfortunately insubstantial in the law schools and among the component parts of the organized bar.

In the not-too-distant past there may have been two reasons for this lack of attention to the contribution of law to the social process; but now I am satisfied there is only one. The difficulty that has been overcome is the earlier failure to understand how legal research could contribute to the solution of social problems. The kind of research that lawyers have always understood, and have done superbly, is traditional library research that can be done by individuals or by small teams working together, requiring little support other than contributions of time and publication costs. This is what Professor David Cavers has called, in his expressive phrase, research *in* law (doctrinal research) as opposed to research *about* law (empirical research). The latter in particular is concerned with the larger role of law in the social process.

Through these traditional research techniques lawyers have made great progress in systematizing the law and have even made great contributions toward unification of the law despite the obstacles presented by a confusingly diverse federal system of more than fifty separate jurisdictions. The great work of the American Law Institute and the Commissioners of Uniform State Laws are examples of what lawyers can do with sums of money so modest that they are scarcely worth mention in comparison with the expenditures that have been reported to this committee.

Until recently lawyers have believed that their distincitive contributions did not go much beyond the kind of individual study and analysis that could be completed in a law library and published in a law review or between the hard covers of a conventional treatise. Moreover, lawyers kept assuring each other that they were not, and did not want to become, scientists trained to do empirical research. For some reason lawyers long failed to take advantage of the fact that they operated continuously in the most extensive laboratory of all, the society about them.

All that is now changed. The American Bar Asociation has its own American Bar Foundation devoted to just that kind of research. Excellent work is being done there under the direction of Professor Geoffrey Hazard, but necessarily the projects are limited by the funds and personnel now available. In the law schools, too, there is a new spirit of restless inquiry. A growing number of law teachers are interested in, and competent to do, the kind of empirical research about law that we now know is needed.

This leads to the other limitation on legal research capacity that has been in the past, and remains still, an obstacle. I refer of course to the lack of financial resources, the matter I seek to document today. Before turning to that, however, I must still make my second introductory point, which is one that I have been slow to comprehend.

Law and the Social Sciences. The conclusion I now reluctantly accept is that law is not regarded as one of the social sciences, either by those who call themselves social scientists or by lawyers. This I consider regrettable; but I must defer to a tradition that is unlikely to change in the near future, if at all.

I am of course aware that S. 836 classifies "law" as one of the social sciences—between "history" and "social statistics." But I fear that even congressional fiat will not make it so in the hearts of non-lawyers who regard themselves as the true social scientists, or of lawyers who do not think of themselves as social scientists. It follows that if S. 836 is enacted, the governing Board of Trustees for the Social Sciences Foundation could be expected to include only nominal representation for the law; but the interest and enthusiasm—and money—would quite understandably be alloted primarily to the traditional social sciences. And there is no real doubt what they are considered to be. You will recall the statement of Dr. Henry W. Riecken, Vice-President of the prestigious Social Science Research Council, which was submitted for the record in your hearings in June and July of 1966 on Federal Support of International Social Science and Behavioral Research (pp. 269–70).

"The major commonly recognized fields of the social sciences are:

"1. *Anthropology*, the science of man and his culture;

"2. *Economics*, the science of man's behavior in obtaining goods and services in making a living;

"3. *Political Science*, the science of government;

"4. *Psychology*, the science of the functioning of the human individual in his social relationships;

"5. *Sociology*, the science society;

"6. *Social Statistics*, the science of quantitative method applied to social phenomena;

"7. *History*, the systematic study and explanation of past events as steps in a sequence of human activities;

"8. Certain *interdisciplinary sciences* which have significant social implication but touch on or also form part of biological and physical sciences. These include:

"(a) *Demography*, the science of population;

"(b) *Physical Anthropology*, the science of the races of man and their physical characteristics;

"(c) *Social Geography*, the science of man's relation to his physical environment;

"(d) *Linguistics*, the science of language and its use in human communication."

Building from my first proposition above, that legal research into the social process is essential, I wish now to turn to the main point of my comments today, a statement of the need for increased financial support for legal education and legal research. You will recall my earlier statement that I wish to report the results of a recent inquiry into the extent of financial support for legal education and legal research. The inescapable conclusion of that study is that the kind of costly research now under discussion, and the broad support for legal education now urgently needed, is simply not available at the present time.

The reasons are not difficult to understand. As I have already mentioned, lawyers themselves have been slow to recognize their potential contribution to the social process. Perhaps also they have been too proud, unlike their medical brethren, to admit the insufficiency of available resources to do the job at hand. But now the needs that lawyers know they can satisfy are so vast and so visible to the legal profession itself that hesitance to seek outside assistance, from private sources or from government, has been largely overcome. To date, however, the money has not become available in any significant amount. Our study also documents the conclusion that private sources are not likely to provide any substantial part of the support now thought necessary for legal education and for meaningful legal research into the social process. The study, based on data through the summer of 1966, warrants the following conclusions.

1. *Private foundation support for legal education and legal research has not been large.* The conclusions stated below are based on a study commissioned by the American Bar Association and the Association of American Law Schools; it was made possible by a grant from the Walter E. Meyer Research Institute of Law. The purpose was to ascertain the level of private philanthropic contributions, defined as private foundations, to legal education and legal research. Because there were few significant contributions of this character before 1955, the year of the first large grants for international legal studies, the period studied was from 1955 through August 1966. Foundation grants of $10,000 or more were included where the grantee was:

a. Any American law school that received support for any purpose, whether research, curriculum development, scholarships and fellowships, bricks and mortar, endowment, or general support.

b. Any organization conducting legal research, including the American Bar Foundation, the American Law Institute, various bar associations, and a wide variety of other organizations. For this compilation "legal research" was viewed in its broadest sense to encompass traditional or doctrinal research, empirical research, action research, and information-gathering activities.

c. Organizations rendering legal assistance, including legal aid societies, the National Legal Aid and Defender Association, the NAACP Legal Defense and Educational Fund, Inc., and the Lawyers Constitutional Defense Committee.

d. Organizations providing continuing legal education for both the bar and the judiciary.

Analysis of the resulting data warrants the following conclusions:

(a) Total grants of about 62 million dollars, of which about 41 million dollars went to law schools in the United States. The vast bulk of this amount went for bricks and mortar, fellowships, and individual research. Only a modest amount was made available for empirical research. The remaining 21 million dollars were distributed among a wide variety of organizations, including the National Legal Aid and Defender Association, the American Bar Foundation, the American Law Institute, the American Bar Association, the National Juvenile Court Foundation, the National Municipal League, and the American Society of International Law.

(b) Of the 41 million dollars granted to law schools approximately 25 million dollars (more than 60 per cent) went to five schools; 32 million dollars (nearly 80 per cent) went to ten schools.

(c) More than two thirds of all foundation support for legal activities in the period studied came from a single source, the Ford Foundation. The bulk of the Ford money went to three fields.

(1) International legal studies.

(2) Graduate fellowships for law teachers.

(3) The administration of justice, particularly in the criminal area.

(d) There are only two private foundations exclusively concerned with legal research, the American Bar Foundation and the Walter E. Meyer Research Institute of Law; but neither of them makes substantial annual appropriations, even though each of them is a grantee of one or more other foundations.

(e) The third edition of *The Foundation Directory* (1967), reporting on private foundation grants of $10,000 or more in 1966, confirms the small share of private philanthropy that goes to law. Of all giving in that year 11 per cent was for the sciences, defined broadly to include the life sciences, social sciences, and physical sciences. Of this portion of the whole 12 per cent went to law. Twelve per cent of 11 per cent, for a grand total of just over 1 per cent of private philanthropy, isn't very much.

2. *Government support for legal research is negligible.*

(a) The National Science Foundation has made no grants for legal education, legal research, or bricks and mortar for law schools. You heard testimony at your February 1967 hearings on S. 836 to the effect that 40 to 50 million dollars of a current National Science Foundation budget of nearly half a billion dollars would go to the social sciences, not of course including law. While the sum alloted to the social sciences was not large in relation to the total budget of the National Science Foundation, it is nonetheless striking that that 40–50 million dollar figure for one year is about two thirds as large as *all* the private support for law-related activities during the most recent ten-year period. The gap is further emphasized by the fact that there was almost no government support for law during this period. Moreover, in approximately the same time span, from fiscal 1956 to fiscal 1967, Dr. Leland Haworth stated at your February hearing that federal support for the social sciences increased from more than 30 million dollars in 1956 to more than 221 million dollars in 1967.

(b) The first round of grants by the National Endowment for the Humanities, totaling approximately 4 million dollars, included no grants to lawyers for legal research. This may not be surprising. But the point is that law apparently has no government home. If law is neither a social science nor one of the humanities, it must be equally clear that it is not a natural science or a biological science.

(c) There has been limited government support for law-related programs, principally of a non-research character.

(1) A few law school building construction grants have been made under Title IV of the National Defense Education Act. However, there has been no NDEA fellowship grants for lawyers interested in graduate training leading to law teaching.

(2) A modest number of individual law teachers and law students have received Fulbright grants.

(3) There have been some grants to law schools and to individual law professors out of the Department of Health, Education, and Welfare. Important as they are, they have been for limited purposes. Grants from the Office of Economic Opportunity have been primarily for action programs with a minimal research component; and grants from the National Institute of Mental Health have been limited in purpose and amount.

(4) The Law Enforcement Assistance Act offers some promise of useful support, but again principally in the area of action programs.

(5) State Legislatures and other local governmental bodies have made some grants to law schools and to individual lawyers or law teachers. But the sum has not been significant and has seldom involved projects other than review of legislative codes.

From figures like these the point is often made that legal education and legal research have fared much less well in terms of financial support than other disciplines; and lawyers tend to point envious fingers at the largesse bestowed on medicine. While this is factually true, primary emphasis should go elsewhere. The real point, in my judgment, is that the law and lawyers now know what they can do; they stand ready to do the necessary; and they are competent to provide the requisite legal training and to undertake the important research tasks.

What I have said so far may seem a plaintive lament about past discrimination against the law in terms of support for legal education and legal research. I do not mean to give that impression.

Clearly the law schools could have used more fellowship support, particularly for graduate legal education where very little money is available; and no doubt larger sums for legal research could have been used effectively in the recent past.

But in all candor it must be conceded that it is only in very recent years that the legal profession as a whole has awakened to the contribution that law can make to the solution of the problems of society. Now that lawyers have come to realize the service role of law and have become aware of their own capacity to solve social problems, the moment has arrived, in my judgment, to capitalize as quickly as possible on this newly discovered potential. Accordingly, I speak today not to complain about the past, but in behalf of the bright future for legal contributions to the solution of the ills of the social process.

When I speak of the new awareness of the legal profession, it may be useful to give examples. Undoubtedly, the most drastic reversal of attitude is the present interest of the organized bar in devising new ways to meet the legal needs of the poor. Until quite recently there were thought to be ethical barriers and other professional difficulties that stood in the way of group legal services, neighborhood law offices that advise on as broad a range of issues as is now common, and other new programs designed to aid the indigent. Now all those questions are being rethought; the term professional responsibility is assuming a new affirmative significance that augurs well for the profession and for society.

Another manifestation of newly developing attitudes in law is particularly relevant in these hearings. Regular and close cooperation between the organized bar and the academic elements of the legal community is now an accomplished fact. One of the best examples of this attitude is the joint effort by leaders of the American Bar Association and the Association of American Law Schools in recent years to determine what should be the role of law in emerging aspects of the social process; to ascertain what matters could be fruitfully studied; and to learn how these expensive undertakings could best be supported.

It is not unnatural that lawyers so minded should think first of seeking financial support from traditional do-it-yourself library research supported by little more than purchase of research time, secretarial assistance, and publication costs. For this kind of endeavor, which will of course continue in the areas where it has proved magnificently valuable, traditional support will probably continue from private philanthropy. But it is now apparent that the massive undertakings that are needed in the immediate future are unlikely to be financed out of private sources.

The Bar Association, the Association of American Law Schools, and the American Association of Law Libraries have joined to draft a proposal for a National Foundation of Law to meet the impressive challenge of the future. It is in my judgment a major breakthrough for these three organizations to work together at the highest leadership levels in support of this common cause. The proposal calls for a foundation to support, among others, the following activities: Programs for the improvement of the administration of justice; assistance for legal education; support for law libraries; research and innovation for the future; development and revision of the law; increased availability of needed legal services to the public; and greater recognition of professional responsibilities on the part of the legal profession. We earnestly hope this committee will be able to study this proposal when presented to you in the form of suggested legislation.

My final point is addressed to the question that I know must concern you. Why should the law ask for a separate foundation when law is one of the included disciplines in the proposed National Foundation for Social Sciences. My answer is in two parts.

First, as I have already suggested, social scientists do not regard law as a kindred discipline. Accordingly, it seems likely that in a Social Sciences Foundation the law would always be a poor relation and that the important tasks we believe should be undertaken would not be supported except where there was an interdisciplinary study to be made in which law could play a complementary, but secondary, role.

My second point grows out of the reading of the testimony in your previous hearings. I was entirely fascinated by the social scientists in government and out, who spoke in favor of the principle of increased support for the social sciences but nevetheless, almost without exception, did not really favor a separate Social Sciences Foundation. Why? The answer is not altogether clear to me. Perhaps it is in part a don't-rock-the-boat philosophy, perhaps in part a concern lest the sometimes controversial work of social science become too visible, thus risking congressional sanction. The law, which deals with equally controversial matters, does not share that concern, I am happy to say. We are not only willing to accept visibility. We seek the light of day so that we can better fulfill our professional obligations to the whole of society.

Senator HARRIS. Our next witness is Dr. Paul Bohannan. Dr. Bohannan is professor of anthropology at Northwestern University.

Without objection we will place in the record a biographical sketch concerning Dr. Bohannan. I believe you have a prepared statement.

Biographical Sketch: Dr. Paul Bohannan

Professor of Anthropology, Northwestern Univ., Evanston, Illinois. B.A., Arizona, 47; B.S., Oxford, 49, D.Phil, 51, Rhodes Scholar, 1947.

Formerly lecturer in Anthropology Oxford University; Associate Professor, Princeton University. Ethnographic field work in Nigeria, Kenya; research on divorce among middle class Americans, San Francisco and Chicago; President of African Studies Association, 1963–64; Director, Social Science Research Council, 1961–64; Executive Director of Human Environments in Middle Africa Project, 1959–62. Fellow, Center for Advanced Study in the Behavioral Sciences, 1963–64.

Author—*Justice and Judgment among the Tiv, Social Anthropology, Africa and Africans, Law and Warfare: Studies in the Anthropology of Conflict.*

TESTIMONY OF DR. PAUL BOHANNAN, PROFESSOR, DEPARTMENT OF ANTHROPOLOGY, NORTHWESTERN UNIVERSITY, EVANSTON, ILL.

Dr. BOHANNAN. Thank you very much, Mr. Chairman. I am a little nonplused about how to go about my presentation today.

I could make up a story that Dr. Ranney and I, during the coffee conversation before the meeting was called to order, exchanged notes and he gave my speech. But that would not be true.

I have decided on the alternative: My old professor told us the way you know when your field work is finished is that if you could predict what people were going to say and do before they have said it and done it and be right about 80 percent of the time, then you could go home.

I felt this morning that perhaps you are approaching that situation. You have done your jobs. I do want to underline two or three statements out——

Senator HARRIS. We want to put your excellent statement in the record which we will do at the end of your presentation without objection and you can go ahead and comment from it.

Dr. BOHANNAN. There are only a few comments that I do want to make from it.

Dr. Alex Inkeles of Harvard in his testimony before this subcommittee in July a year ago said—and I think this is terribly important and would like to repeat now the part I have underlined in my statement:

> The basic pattern of support for social science in foreign areas has been allowed to grow up spontaneously and without careful review for lack of a definite policy and it seems clear that the time for establishing such a policy has arrived.

In talking about this with my colleagues and in reading the evidence that is before this committee I have a feeling that the initial thing that has happened is that the social science establishment, if we can call it that, has said truthfully two things that are important.

One is that we have come a long way; if you look back, that is certainly so. But there is a lurking hypothesis, a lurking assumption—"don't rock the boat." The assumption is that the old way is the best way simply because it has allowed us to make so much progress. I am not convinced that is in fact true.

The second point is one that Dr. Ranney has already made but I want to say this is in a somewhat different way. It is undoubtedly true that we have never before so much needed the natural and physical sciences as we do today. However, I think that is also a reversible proposition.

I think they have never before so badly needed the social sciences. Many of them pay lipservice to this notion. But it is like the old saying about a Hungarian friend—with this kind of a friend, you don't need enemies.

My point is that the physical sciences have taken the lead and the social sciences have tended to follow their lead. The physical sciences turn to the social sciences as to a younger brother. They both want us to help and to tell us what to do. Social scientists have concurred instead of standing on their own two feet and saying—if you don't know what we have done, you better read the newspapers.

Physical scientists, legislators, and a lot of other people are at a disadvantage when it comes to dealing with the social sciences. Unlike physics which deals with factual material social science deals with the kind of material that everybody else has experience in. We talk about government, about economies, about families. Everybody knows about families and everybody knows something about government and people feel very strongly about these things.

You simply cannot feel strongly about the structure of the atom. You can have very grave moral concerns about the use to which scientific information is put, but this is a slightly different matter. It doesn't get in the way of your seeing what has happened to the atom.

From this point of view it seems to me that our partnership with the natural sciences has to be reexamined and I think it has to be recast. Social scientists must become an autonomous group of people. With that goal realized then, without any difficulty, we can turn ourselves into cooperators on an equalitarian basis with the natural and physical scientists.

It is true we need these people today. It is true that never since the renaissance have we had such unity in the scientific community as we have today.

It is also true that without the autonomy of the individuals who are making policy and doing research that policy and research necessarily are warped. This idea is at the basis of the American way of life.

I am fully convinced that we can do better in cooperating with the physical and natural sciences, and indeed with the humanities, if we do have a National Social Science Foundation than we can do under any other circumstances.

I don't for a minute mean by this—and this has been repeated many times this morning but I think it must be said—I don't mean we should remove all social science research from other institutions. I don't care whether it is the National Institute of Mental Health which supports a lot of research or the National Science Foundation or other organizations doing social science research—I belong to a profession fortunate enough to draw on all of these sources. I hope we can continue to cooperate with all of them.

Nevertheless I still think that in the middle there is a blind spot because all of these people think they know what the social sciences ought to do for them. Without for a moment wanting to deny that the social scientist serves a role to all these people, the social scientist stands in the middle of what is going to be remembered as one of the major contributions of the 20th century. It is the social science century.

In closing I want to point out that in my statement I have given a couple of examples of the way in which social science can be judged other than by social science research. It changes people's attitudes instead of changing people's ideas. Studying physics, you change your ideas about the nature of the atom. Your life is not changed except by the result of this in social terms. If you go to biology, it comes a little bit closer into the person because that changes ideas about nature and man and the human body.

You do have a great deal more the moment you come in to affect ideas and change institutions. People must realize that their very feelings are scientific data for some of the rest of us.

Therefore the difficulties if there be any, and I hope and trust there will not be very many—the difficulties such a foundation will face are going to be with people who are a little anxious because some of their ideas are going to be investigated and subject to question. If we have a social science foundation we are going to stand out there for the natural scientists, for the legislators, and sometimes for the general public to take potshots at us.

But I think that the tenor of opinion of the social science community is that if they want to take potshots at us we will be in a better position to field their potshots—I continually mix metaphors when I talk extemporaneously.

Senator HARRIS. Thank you very much. Secretary Willard Wirtz testified before this committee earlier this year and he said somewhat the same thing that you have said.

He said everybody feels he is an expert in the social sciences and that is one of our major problems and he said that he thought the state of the social sciences, therefore, now was about what it was in the natural and physical sciences when people noticed that the sun came up in the morning and went down in the night and those people said that is about all we need to know and we understand that pretty well.

I think that is one of our problems; first, from the general public as to what sort of things social science does and whether the social scientists really have any contribution to make. As you said, that problem is heightened by the illustration of Margaret Mead's studies that we know a lot of things today that we don't realize we know as a result of social scientists' research and writings.

It is also heightened by what you point out, particularly the attitudes on the part of the general public and reflected too often in the attitudes of the natural and physical scientists.

And you said, by reading "science" and Scientific American magazines you get the impression that the natural and physical sciences do not really have an awareness of what contributions can be made and are being made by the social sciences.

Dr. BOHANNAN. I wonder if I may give you a prime example.

Senator HARRIS. Yes.

Dr. BOHANNAN. Dr. Herman J. Muller, the 1946 Nobel Prize winner in the field of medicine and physiology, a geneticist, during the last years of his life became interested in eugenics.

He wrote an article in "Science" which said if we could get high caliber women whose husbands are not physically up to snuff to undergo artificial insemination we could raise the caliber of the general population.

He then went on to add that he hoped we could get these men to accept such children. If he had known anything about the literature of social science he would have known we can document that in Africa, the Pacific, and Asia men do indeed accept their wife's children and become adequate and good fathers to them.

This is an example that is so far out that none of us can take it seriously at the present stage. It does, however, show the—and I am going to use the word "ignorance"—of what is going on in the social sciences by a very great life scientist.

We are also ignorant of their materials; this is a two-way street. We need this foundation so we will not have to put up with their—what word shall I use—their "kindness," so that the two-way street is actually opened.

Senator HARRIS. Then you feel by the enactment of S. 836, by the establishment of a separate national social science foundation, we can best meet some of these problems that you and I have been discussing.

Dr. BOHANNAN. Yes. I know of no better way to allow the social sciences to come of age.

Senator HARRIS. What do you think of this?

At least one witness has alluded to some studies that show, by and large, those students who go into the social sciences are less capable according to test scores, than those who enter the natural and physical science fields of study.

Do you think that by giving some separate recognition to the social sciences that this bill would, and with additional support for research and scholarship, there might be a greater incentive for young students to go into the social sciences?

Dr. BOHANNAN. Senator, I would first like to question the premise.

Senator HARRIS. I don't know enough about it to accept the premise either.

Dr. BOHANNAN. I might look more to such facts as that only two kinds of secondary and primary teachers cannot get draft deferments. They are the physical education teachers and the social science teachers.

It is also true that the number of students going into physical sciences has been declining in the last 3 to 4 years. The number of people in physics has dropped immensely. It is also certainly true in the universities social sciences have had and are having great difficulty in adequately staffing their departments. The fastest growing of the social sciences is anthropology. The year before last we turned out about 85 new Ph. D. anthropologists and there were I believe something like 450 new university positions in anthropology.

This is a tremendous problem. Every university I know has all but doubled the production of Ph. D.'s within the last 3 or 4 years and this is going to continue to go up.

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If that statement was true 5 years ago—I think it is no longer true.

There is also a further factor. As social sciences are introduced in the secondary schools, the students will know more about what choices are open to them when they come to college and more of them are choosing and will chose social sciences.

I think it is a matter of educating the general public. I think a Social Science Foundation would help there, too.

Senator HARRIS. Would you put any prefix before anthropologist as that title relates to you personally, such as applied or social? What sort of anthropologist are you, if any prefix is warranted?

Dr. BOHANNAN. I am a social anthropologist and I have a National Science Foundation senior post doctoral grant to turn myself into a psychological anthropologist. I am interested in evolution and in the educational processes—but I will not wear out any more academic adjectives.

The application of social science is something which in the past has scared some social scientists. I was told one time in Washington by a government official that anthropology was dangerous. And when I asked him why, he replied—they keep wanting you to explain the premises on which you are acting, and that is dangerous.

I think we should live more dangerously.

Senator HARRIS. I agree.

Dr. BOHANNAN. We should all explain the premises on which we are acting and bring to it the capacity to look stereoscopically at the issue.

You look at an issue from the standpoint of this collection of cultures and over here from the standpoint of your own culture. Each can illuminate the other in such a way that you can begin to see some of your prejudices, some of your uninvestigated assumptions, and I myself think that is the main role of the anthropologist.

My own view of my position in the subject is a sort of a gadfly. I like to think that I keep digging at people and asking them, "Why are you doing it that way?"

I am not sure there is a single adjective you can apply to it.

Senator HARRIS. Thank you very much, Dr. Bohannan.

(Dr. Bohannan's prepared statement follows:)

STATEMENT OF DR. PAUL BOHANNAN

In his testimony before this subcommittee in July a year ago, Dr. Alex Inkeles of Harvard noted that some government sponsored research in social science has been eminently sucessful, "But on balance the results seem unfortunate, and the situation may be worsening. I believe that the condition we now face results in good part from *the basic pattern of support for social science* in foreign areas *which has been allowed to grow up spontaneously and without* careful review for lack of *a definite policy*. It seems clear that *the time for establishing such a policy has arrived* (p. 185). I have added italics to make the point more general.

We must create an overt policy for the government role in behavioral sciences: one that gives both the behavioral sciences and the government maximum rewards but does not hamper in any way the autonomy of either party.

Broadly speaking, there are two roads for arriving at such a policy. They are not mutually exclusive and they should not be considered as alternatives. Neither are they overlapping and they should not be considered as duplications. First, there is the extension of the mandate and atcivities of the National Science Foundation, the National Institute of Mental Health, and the so-called mission-oriented agencies. Second, there is the possibility of establishing a National Foundation for the Social Sciences.

Both these possibilities should be examined carefully. The position of the present social science establishment, as I read it from conversations and in the evidence already before this committee, can be summed up, "We have come a long way." That is true. They also seem to add, "Don't rock the boat." This argument is bolstered by another truth: never in history have natural science and social science needed each other so much; never since the Renaissance has science been so unitary in its concerns. So much is true. But there is also a lurking hypothesis: the supposition that the present state of science is best served by the present organization, on the ground that the present organization has got it where it is. I do not want so much either to agree or disagree with this viewpoint, as to demand further exploration.

Unfortunately only part of the information we need for such exploration is available. We do indeed need to know how much social science has been done under the auspices of existing agencies. Dr. Haworth and Dr. Herring have shown you that the answer is, "Quite a lot." But we also need another kind of information: how much cooperation and education has there in fact been among the social and natural sciences? The performance is not as impressive as we would all like. I am not talking about interdisciplinary projects. Interdisciplinary individuals will always push and carry out interdisciplinary projects. I am talking about the continuing education of the scientific community. And frankly, when I read *Science* and the *Scientific American* it seems to me that there has been woefully little education of natural scientists in the approaches and possibilities and purposes of the social sciences. Surely we must ask whether or not a single organization is in fact the best way to create significant dialogue between behavioral and natural scientists.

In order to arrive at an optimal policy, social scientists must shake off the role in which they have shown a discouraging tendency to acquiesce: that of the little brother asking for a lift. There have been documents written and pleas made to juries of natural scientists—and without much effect. There have been discussions about whether one or two social scientists should be represented on PSAC rather than bold statements (which I consider to be more apt) about whether there should not be a PSSAC. If the natural scientists and policy makers do not already know what the vital contribution to our time of the social scientists is and has been, then a report requesting recognition is not going to help very much. A couple of good stories in the *Washington Post* would do a lot more good.

There are many factors, I think, that have led to this paternalistic attitude toward social sciences. But most important is that social scientists deal, by and large, with ideas and areas of living in which most individuals have direct experience. The general public—and particularly people who are genuinely experts in something else—therefore think that they are "experts" in the subject matter of the social sciences because they are concerned with it and happen to "know something about that." This difficulty is reflected in pleas by physical scientists that the social scientists should get busy and teach us now to control and use natural sciences—a misrepresentation of social science by people who should know better. Science, social or natural, provides some of the information and formulations on which moral decisions are made.

However, since social scientists deal directly in morally charged subject matter, they are judged by different canons from those used to judge natural sciences. It is quite easy to judge the success of physical and natural science: all you have to do is write a history of science and see what effects research has had. Natural science deals primarily in the area of things we *know*. Social science on the other hand, deals primarily in subjects which the ordinary citizen *feels*—which he sometimes mistakes for knowledge. That is the difference between hard and soft science—the common man thinks the one is precise because it deals with "facts" and that the other is imprecise because it deals with something he merely feels uncertainty about.

I want to give two brief illustrations. Forty years ago, (if the lady will forgive me for being so specific) Margaret Mead began publishing a series of influential books that had a tremendous impact on the ways in which Americans rear and train their children. Most of the parents and children whose lives were so greatly affected by Dr. Mead's studies in the South Pacific do not even know that they were influenced by "social science." Neither do many pediatricians. Another and similar example is the way in which the researches of W. Lloyd Warner and his colleagues, before World War II, on the social stratification system in America

have fed back into that stratification system. Today the Warner model is the "natural" way for Americans to see their system of social stratification. Believe me, it was not so before the 1930s.

In both of these examples the "right" analysis and data of social science have worked a sea-change in the country we live in. But, in doing so, they tend to block out our capacity to remember the preexisting situation. It is very difficult to remember, even if one lived in it, what the stratification system or the method of child rearing were like thirty or forty years ago. In fact, we have to be students of social history—and a very esoteric field of social history at that—to judge the contributions of behavioral sciences to American life.

Therefore, social sciences have the appearance—even to themselves—of being eternally young, eternally on the verge of some big discovery: of maturity. Yet, achieving that "maturity" is made the more difficult because everything we do that is "right" or "important" for American social is immediately taken over by American society.

I do not mean to imply that this kind of thing does not happen in the natural sciences—try to find out what the "scientific" theories about blood were before Harvey's research and discoveries. Nevertheless Warner did not discover the stratification system in *quite* the same sense as Harvey discovered the circulation of the blood. The latter happens that way whether you believe it or not.

All this is a necessary background to appreciate one possible difficulty the new foundation might encounter: it would be possible for the Government and the natural scientists to isolate the social scientists in it—"go ahead, have fun in your new playhouse." That would be an irreparable loss to us all.

On the other hand, not to have the foundation means that the natural sciences will continue in the saddle, and we will still be asking whether there should be one or two social science representatives on PSAC. After all, the problems of population, of poverty, of geriatrics, of crime, of social conflict, of education: all are primarily problems for the social sciences. At the same time, the human and social aspects of the space program, the nuclear program, the anti-pollution programs, the highway safety programs—none of these can be overlooked. All need social science representatives. The problem, simply, is that the social sciences are about human living, and are therefore relevant in some degree or another to everything that human beings are already interested in, and have ideas about.

The most cogent reason for establishing a new foundation is one that I have not seen reflected in the testimony. Perhaps it is in bad taste for me to mention it—perhaps I will be labeled "ungrateful" because I have in my work been assisted generously by the present establishment. But I am going to say it: the natural scientists are our best friends—and who needs enemies? Perhaps more than any other single thing, we have to convince the natural scientists that we are not just backward scientists, but that we deal in somewhat different matters in somewhat different ways. Dr. Silvert touched on these points in his testimony when he said that social scientists must on occasion deal with unique and historical facts as well as with recurring phenomena. The analogy to topology is an informative one: it is geometry on a rubber sheet. In our case it may never be stretched quite the same way twice. When I say "Who needs enemies?" I refer to whatever physicist who is about to say "We understand that—we have these problems too," and then immediately tucks what you have tried to tell him into some category that he is comfortable with already.

As you can see, I am concerned with the future of social sciences. I think that future is assured *if* the public or the Government dosen't get cold feet. And the best way to assure that they do not is to give the social scientists the security and the position that comes with autonomy. Autonomy is not merely a state of independence: we are not asking for independence from either the natural sciences or any other group. Autonomy is rather a situation in which the individual scientists and the scientific bodies can decide, themselves, what is important and what must be worked on, and what associations they will make with other scientists and policy makers. I have no doubt that we will choose to cooperate closely with natural science—we need them and they need us. But I also have no doubt that we will do it better in an atmosphere of autonomous choice, where the natural scientists and the Government fail to listen only at their peril.

Senator HARRIS. Our last witness for the morning is Dr. Joe B. Frantz. Dr. Frantz is a professor of history at the University of Texas, Austin, Tex.,

Without objection we will place the biographical sketch concerning Dr. Frantz, which has been prepared by our staff, in the record at this point.

I believe you have a prepared statement, Dr. Frantz.

Biographical Sketch: Dr. Joe Bertram Frantz

Professor of History, The University of Texas, Austin, Texas. B.A., Journalism, University of Texas, 1938; M.A., 1940; Ph.D., 1948; fellow, business history, Harvard, 1948–49.

Editorial Staff Temple (Texas) Daily Telegram, 1939; archivist, acting director, San Jacinto Museum, Houston, 1942–43; Assistant Professor of History, then Associate Professor, University of Texas, 1949–59, Professor of History, Chairman, Department 1959–65; consultant, Borden Company, New York City, 1956–58.

Ford Foundation Fellow, 1953–54; Social Science Research Council Fellow, 1953–54; E. D. Farmer Fellow, 1959. Member of advisory board of National Park Service, 1964–. Served to Lieutenant, United States Naval Reserve, 1943–46. Fellow, Texas Historical Association; Texas Institute of Letters; Member, American Mississippi Valley Historical Associations (Executive Council 1961–63), Southwest Social Science Association (vice president, 1961–), Business History Society, Phi Alpha Theta (national councilor 1956–58, President, 1962–64).

Publications—Bail Borden, Dairyman to a Nation (Texas Institute of Letters award 1951), 1951; (with J. E. Choate) The American Cowboy: Myth or Reality, 1955, Editor: An Honest Preface and Other Essays, 1959; (with Cordia S. Duke) 6000 Miles of Fence, 1961; (with others) Readings in American History, 1964.

TESTIMONY OF DR. JOE B. FRANTZ, PROFESSOR, DEPARTMENT OF HISTORY, UNIVERSITY OF TEXAS, AUSTIN, TEX.

Dr. FRANTZ. Thank you, gentlemen, for inviting me to appear with you today. I have read most of the previous testimony given on this bill before your subcommittee and I must indeed salute your gracious patience.

Some of my colleagues have a rare talent for expanding a half dozen paragraphs into a few thousand well-chosen words, to my dismay, and I am sure, to yours.

Senator HARRIS. I would say if that is any standard by which to establish whether or not a fellow is a social scientist, we politicians certainly have been covered, by definition.

Dr. FRANTZ. Yes; you have some colleagues that will qualify.

And so, though this is my first appearance before a Senate subcommittee, I would like to assure you that unlike Whitman's hero, I shall not be—"Loth, O loth to depart! Garrulous to the very last."

I can guarantee that what I shall say will be concise; I can only hope that you will also find it cogent.

I will put a parenthesis here for the moment because of those things that have been said here this morning and which you have in the bill. You are already full of statistics and arguments by now, but I will now document these by a personal experience.

I am on the National Historical Publications Commission—this is in line with what Professor Ranney said—and we do have some budget to spend in getting definitive editions of the great papers of our national heritage. There is no argument about what we are doing—it ranks with motherhood.

There are enough absolutely essential projects, such as the Adams' papers and such as the Jefferson papers, that have been authorized. They are generation-long projects.

So we have reached the point in our meetings when we meet regularly through the year that we have only a pittance for new projects. Funds are committed for years in advance, years for which we do not have any budget, for which we have only hopes. But meanwhile we have to take care of ongoing projects, while other worthy projects that cry for assistance cannot be funded. They have to be turned down.

I can get quite vocal; like the Spanish Archives of 350 years ago, in New Mexico. And the same thing is true in the Bexar Archives of Texas—but these projects just have to stand by and wait. This means we fund less ambitious projects. We even have men who are willing to move themselves from the institutions where they are to where the papers are located, and we have schools that would love to have those men and will help with the editing. But there simply is no way to fund the projects.

The needs are always there.

Senator HARRIS. What group is that?

Dr. FRANTZ. This is the National Historical Publications Commission.

Senator HARRIS. What is that?

Dr. FRANTZ. It is a congressionally authorized commission under the aegis of the National Archives which consists of one of your Senators, Claiborne Pell since Senator Saltonstall has retired, and one Congressman, one Supreme Court Justice, one man from the Department of Defense, one from the Department of State, one from the Library of Congress, the Archivist of the United States, two Presidential appointees, and two appointments from the outside professions, by organizations working together.

Senator HARRIS. And you are a member of that Commission?

Dr. FRANTZ. That is right.

Senator HARRIS. One of the Presidential appointees?

Dr. FRANTZ. That is right.

Senator HARRIS. What sort of funds do they operate on?

Dr. FRANTZ. They have had authorized funds of $500,000 a year for several years, but in what I think is false economy they have actually been appropriated $350,000, none of which is used for administration. This is purely grant money.

The National Archives picks up the tab for the administration of the program. You find yourself in this situation: with $350,000, you will likely have $30,000 committed from last year and the year before on these major projects that were overdue and had to be started. You take something like the Adams' papers—it's going to run into several dozen volumes, so that the project will outlive a couple of lifetimes, but it is vital.

Senator HARRIS. That is important testimony to have in our record.

Dr. FRANTZ. I might say we accept money from private foundations, but you cannot budget what a foundation may give you down the line and you do not have any sort of assurance.

I would like to say one other thing, backing what Dr. Bohannan had to say, and that is the fact that everyone does feel that he is an expert in one or more of the social sciences.

I can give a specific example of that regarding my particular discipline, history. Right after World War II one of the smaller State schools in our area, caught with a shortage of professors and a run of GI students, sent a notice around among its faculty saying everybody was going to have to take on a heavier teaching load and asking what else could they teach. Eighty-three percent of the faculty said they would teach history.

This included the piano teacher, the coach, and so on.

I think outside we are all experts—we all know how to rear the neighbors' children and we all know what the coach should have done in a given situation.

I think regarding social scientists, it may be the fact that so much of what he has done is done in English, which is understandable to a part of the public. This gives your body at large the right to intervene and to be an expert in your particular field.

I will go back to my statement now.

The history of the recent past has played into the hands of science and scientists. As man has progressed, his needs have acquired a quality of immediacy that only a scientist can begin to answer.

In a world in which we had been perpetually short of the material necessities, intelligent man had a duty to learn new and better ways of production and of distribution, to withdraw the covering cloth from the laden table of undiscovered knowledge, and to contribute constructively to the material shaping of civilization.

In these endeavors the scientist has succeeded marvelously, revealing insights into knowledge and procedures that cascade into an ever-swiftening current.

I need hardly tell you, and you in particular, that the current frequently threatens to turn torrent, and that like the blessed water, for which we in the Southwest hold prayer meetings and rain dances, the blessing all too often arrives in such profusion as to become a curse and a destruction.

Now the last thing which we wish to do is close the floodgate of scientific knowledge, but we have a crucial problem in bringing our environment forward to the point that it can absorb and understand what the scientist is turning loose all about us.

For this reason—and I am quite evangelical on this—we need Federal assistance in the social assessment of knowledge, to turn the raging flood into a controlled stream which can be handled and utilized to irrigate and cleanse the minds and spirits of harried men in a pellmell world.

The problems are known to you—ugly urbanism that is an inexorable concomitant of material knowledge and material needs; breakthroughs of knowledge that threaten the very existence of the world as we would like to cherish it; tensions between crowded peoples, between crowded ethnic groups, and between social and economic classes apparently intent on elbowing each other out of the way; deterioration of the cities not only as social organisms but as political organisms, and the contradiction of corrosive poverty living in the next neighborhood alongside an affluence that threatens to drown some of us with the sheer volume of things and gadgets.

We can point out crime in the streets, disrespect for property and person, outmoded but still virulent nationalism living alongside dictatorships without mercy or justice.

The list is endless, depressing, and to you in the political world, redundant.

What we need desperately are men trained generally in the art of revealing ourselves to ourselves. We have information; we need wisdom. We need to see the relationships inherent in these continuing cloudbursts of knowledge.

We need to collect evidence, sift evidence, and assay evidence. Unlike the scientists, we can never be precise or confident in the hypotheses we advance as we study relationships.

After all, we cannot work under controlled laboratory conditions, but must always work with the cheap stuff or civilization, which has to be mankind.

We need to run regular reviews of what we have learned; we need the sort of light that is generated by conflicts between clashing viewpoints; and we need the everlasting uncertainty that can only come with receptive, critical, questing minds.

Unlike the scientists, we social scientists cannot guarantee that in the year 1970 or 1980 or 1990 we will make a significant advance that will land us on the moon, that will bring us truly perpetual motion, or that will even guarantee a better mousetrap or a tie that will resist gravy spots. (If I were talking to my students instead of someone like you I would undoubtedly have to identify the word "gravy".)

But if we don't try, we can guarantee you something else. We can face social loss. We can then guarantee vast social loss; we can guarantee that the dam will burst, and that we will all go under.

As political persons, you know what we are talking about, for you are social scientists yourselves, as we have already agreed, only operating from a different vantage point.

Like us, you see problems, you grapple and sometimes triumph, and see that in winning you have created a new set of problems and unleashed a new Pandora's box of patterns.

So you bow your neck and go to work on the latest batch. We do the same. Unlike the mathematician's problem, we do not guarantee solutions. But if we approach the problems with an undergirding of profound understanding, then we leave the problem, we hope, better than we found it. Beyond that, we can only hope. Hope, and keep working.

Without in any sense demeaning the great work of the scientists, intelligent probing by the social scientists is necessary to pick up the baton where the scientists necessarily drop it. This then raises the fundamental question: What can we social scientists do with a National Foundation for the Social Sciences?

We can think, that's what. If this answer seems a little airy and impractical, let us remind ourselves that a good portion of the world proceeds illogically and irrationally.

So we can observe this great portion of the world, finding historic patterns that may shed light, finding contemporary relevance that may illumine our tortuous path forward, and forever studying human beings in their relationships one with another.

When the narrowly specialized person has run the course of his specialization, we can move in to try to relate it to the overview of the world. We can try, and, I truly think, do a better job of it, to

see things whole, to place new knowledge in context, and to relate all knowledge to the present and to the future.

I am not sure then that we are airy and impractical; we may well be the most practical practitioners on the scene. For we can go beyond tangible knowledge to the intangibles that pull men's emotions toward worthy goals.

It may be "quite all right," as one social scientists has observed, "to study rust in oil pipes, the tensile strength of fiber, and the stresses and strains of skyscraper construction, but [it is] a little risky to examine the canker of society, the tensile strength of poverty, or the stresses and strains of human maladjustment."

We ask you, however, to take the risk through the creation of a National Foundation for the Social Sciences.

We believe, with Ibsen, that "the spirit of truth and the spirit of freedom—they are the pillars of society."

Further, we believe that through the study of mankind and the social being, we really get a second look at ourselves, which not only gives us the grand opportunity to live our lives twice but also the sometime opportunity to do something constructive about that life.

To the cold clear judgments of science, with all its promises of a better material world, we believe that through Government financial assistance we can inject the cement of the compassion and the girders of understanding that will help us to control and to use for ever-widening good the flood of knowledge that, without wisdom, threatens to overwhelm us.

Again, Senator Harris, thank you very much.

Senator HARRIS. Let me say that not only do we appreciate the thoughts expressed in your paper but the wonderfully eloquent way in which they are expressed and I can certainly say that the manner in which you have said what you have, will be most useful to us.

It will be quoted not only by me but, I think, by others in the future as they read and study the record of these hearings.

I don't really have any questions other than those I asked you during your testimony.

It's been very helpful.

I might say that I am quite a fan of yours through reading the book you did with Mr. Savoie of Loftinville, on the American cowboy. This was probably done by the University of Oklahoma.

Dr. FRANTZ. That is right.

Senator HARRIS. I served as legal adviser when he was administrative assistant to the dean of the College of Law at the University of Oklahoma and he and I have had a long and good association. We hate to lose him down there.

I think he built up the institution and that will continue.

Dr. Frantz, I am very happy to have you here this morning.

This afternoon on this same subject we will hear from Dr. William J. Baumol, of the department of economics at Princeton, representing the American Council on Education, and Dr. James A. Robinson, director of the Mershon Center for Education in National Security and professor of political science at Ohio State University.

The subcommittee will stand recessed until 1:30 this afternoon.

(Whereupon, at 12:25 p.m. the subcommittee recessed to reconvene at 1:30 p.m., July 12, 1967.)

The subcommittee reconvened at 1:35 p.m.

Senator HARRIS. Our first witness for this afternoon is Dr. William J. Baumol, speaking for the American Council on Education.

Biographical Sketch: Dr. William J. Baumol

Professor of Economics, Princeton University, Princeton, New Jersey. B.S.S, City Col., 42; Ph.D, London, 49.

Economist, U.S. Department of Agriculture, 42, 43, 46; Assistant Professor Economics, Princeton, 49–52, Associate Professor 52–54, Professor 54–. Guggenheim Fellow, 58.

Member—Econ. Assn; Economet. Soc. Economic Theory. "Economic Processes and Policies"; "Business Behavior Value and Growth"; "Economic Theory and Operations Analysis".

Senator HARRIS. Dr. Baumol, we are glad to have you here.

TESTIMONY OF DR. WILLIAM J. BAUMOL, PROFESSOR OF ECONOMICS, PRINCETON UNIVERSITY, SPEAKING FOR THE AMERICAN COUNCIL ON EDUCATION OF WASHINGTON, D.C.

Dr. BAUMOL. Thank you very much, sir.

Let me extend my sympathy for your schedule, and the pressure under which you are operating.

I am here representing the American Council on Education which in turn is composed of over 1,200 colleges and nearly 250 other educational organizations. We are, therefore, shall I say, hampered in what we say in that we do try to present the point of view which is held in common by all these groups.

I have a statement which was prepared for me by the council, and with your permission, I would like to submit it, and then add a few comments.

Senator HARRIS. All right. Without objection, we will place that in the record.

Senator HARRIS. What, if any, relationship does the American Council on Education have with the National Education Association, or could you distinguish between the two organizations for me and for the record.

Dr. BAUMOL. The American Council on Education is essentially an organization of higher education—that is, it is composed exclusively of colleges and universities. Whereas, as I understand it, though I have no official relationship, and never have had with the National Education Association its interests are concerned with education generally, and it is heavily oriented toward education at the precollege level.

Senator HARRIS. What is the governing body of the American Council on Education?

Dr. BAUMOL. Well, the American Council, I believe, does itself have a council, but its position on issues such as this are in the first instance formulated by the Commission on Federal Relations which is largely composed of representative college administrators throughout the country.

Senator HARRIS. Now, this statement that you have filed with us is the statement of the American Council on Education?

What decisionmaking body or person within the American Council on Education has approved this statement?

Dr. BAUMOL. It was not officially approved by the council. It was prepared by members of their staff, and represents the position that was taken in discussion by the Commission on Federal Relations, as I understand it.

I am a former member of that commission, but I was not present when discussions on this subject were held.

Senator HARRIS. Very well.

Dr. BAUMOL. Now, the main point in our positions that we clearly support the objectives of the National Social Science Foundation and we agree with extreme enthusiasm on its general statement of purposes.

There is no question that there is a crying need for additional support for the social sciences, not only financial, but also organizational support.

The social sciences need the resources and freedom for imaginative research. They need freedom from suspicion of military and political involvement. They need facilities for the exchange of information to prevent duplication of research and to encourage cooperative activity. They need support for basic research and they need support for large-scale research projects.

On this latter point, it is important to note that there is a general view that research in the social sciences is inexpensive and needs no funds of the order of magnitude that is usually employed in the sciences. This is a mistake. It stems in part from the very fact that past research has been inexpensive simply because it was limited in its funds. Some of the most pressing problems which face our society today require answers and we have no answers because in fact we have had no funds which to do the necessary investigation.

For example, we have really conducted no systematic studies, or certainly no studies of the magnitude that are required to implement the educational policies and aspirations which we have for the underprivileged. We do not know something as elementary as the consequences of an increase in the size of elementary school classes. There is the general opinion that smaller classes make for better education. But preliminary research suggests that this may not be the case, and certainly this is a topical matter which is of the utmost importance for the national purpose, because if it does turn out that smaller classes are not the best way to attack the educational needs of the underprivileged, we may be able to make very good use of the funds that are released as a result of this consideration.

In addition, of course, the social sciences need more systematic representation of their interests before the Federal agencies, and all of the purposes that I have listed would no doubt be served effectively by a National Social Science Foundation.

What is not clear, however, at least to us, is whether the same job could not also be done by some existing organizations, such as the National Science Foundation itself. In the past there is no question that the help which has been received by the social sciences from the National Science Foundation has been limited. But perhaps that can be improved.

And in any event, it is important to recognize that the establishment of a new agency incurs very real costs—and I do not mean just the financial costs—I mean the costs of administration which takes time

both on the part of the colleges and universities that are already heavily engaged in carrying out their liaison with the various Federal agencies, and the time of the scholars themselves.

For example, under the bill that is now proposed, it is suggested that there be a 24-member board of distinguished scholars which would meet at least twice a year. The very real cost in research time that this involves may not in the long run be a negligible factor, especially since it is likely that this panel might very well include some of the most productive and distinguished members of the disciplines that are involved.

You may be assured, sir, that our raising of these questions does not constitute any lack of appreciation of your efforts or any doubt about your purposes. Rather we merely seek to emphasize, as you would surely wish us to do, that no benefits can be expected to be achieved without some outlay of costs. The benefits that are offered by a National Social Science Foundation require as their price the administrative burden which follows inescapably from the establishment of yet another agency.

What requires some further exploration and further consideration is whether this means is the least costly way to achieve the objectives.

Now, I would also like to take about 5 minutes, if I may indulge myself, in discussing another matter that is peripheral to the central issue, but since this subcommittee is so well known for its interests in the needs of research, I would like to call your attention to a problem which threatens to hamper seriously research and education in the social sciences and in other academic areas.

Here I speak for myself and cannot claim to represent the American Council on Education, though I do have their permission to raise the issue.

As of July 1, computer time at Princeton University is now required to be charged directly rather than as an overhead cost. I mention the case of Princeton University because it is a test case—it is not Princeton University in particular that is in question. This directive by the Bureau of the Budget applies to all educational institutions using Federal funds in the financing of computer facilities.

Now, this sounds like a very minor change, but in fact it causes a very serious misallocation and waste of resources that can really only be described as highly significant.

The direct charging of computer costs incurs extremely high costs of administration. It involves keeping track of microseconds of computer time in many bits and pieces. It involves deciding when there is an error, to whom that error should be charged, because it is not always clear whether the source of that error was the user's faulty programing, the mistake of the operator, a malfunction of the machine, or a mistake in the canned program, and this may require hours of negotiation for a few microseconds of time. It involves a substantial amount of computer operating time to be used in the accounting process.

But this is only a minor part of the cost of the direct charging decision. In fact, it enforces misuse of machines and the use of the wrong machines.

For example, many social scientists and scientists under the terms of their grants have free access to certain Government machines if

time is available on that equipment. Even though his university computer has time available, it may pay a particular scientist or social scientists to travel at Government expense halfway across the country to where he can use a computer which will not be charged to him.

But while this saves his budget money, it does not save a nickel to the Government, since the cost of the computer is still determined by taking the total cost of operation and simply dividing it by the amount of time that will be used so that the cost per hour is raised correspondingly and the total cost is still borne by the Government.

Another source of misallocation is the fact that if an installation has two machines, the machine which starts out cheaper becomes still cheaper with the passage of time because it becomes profitable for the user to direct his work to that machine rather than to the machine which is initially the more expensive. As a result the cheaper machine spreads its overhead even more thinly, and becomes less expensive but still more crowded, whereas the underused machine becomes less effectively used still.

In the extreme case—and this was, for example, what happened at Stanford University as a result of the direct charging of computers—computers actually are forced to stand idle because the funds are not available for many social scientists and scientists to make use of them even though their use would incur virtually no additional cost in real resources.

Students, assistant professors, instructors who do not have ready access to funds find it harder and harder to get on computers under these circumstances, and in many cases are unable to do pieces of research which might otherwise not only be of use to themselves and to society, but which might otherwise have served the research needs of the Government.

Thus the Government is likely to end up paying more and getting less computation for its money.

I hope that something can be done to eliminate this monstrous source of inefficiency. It is intolerable that compliance with stultifying accounting conventions where they are totally inappropriate should be permitted to waste national resources and to impede research and education without saving a nickel to the Government. I hope most strongly that someone on this distinguished subcommittee will consider it appropriate to look further into this matter.

Thank you very much.

Senator HARRIS. Thank you, Dr. Baumol, for your presence and for your testimony.

You are a professor of economics yourself. I was wondering about the American Council on Education. Is it made up of professors of various disciplines?

Dr. BAUMOL. No. The council itself is—has as its members the institutions, and the council and the Commission on Federal Relations by and large are composed of college and university presidents, a few deans, and generally one or two professors. But by and large the membership is not made up of professors.

Senator HARRIS. The council itself is not just people who are in the education profession, but are institutions and therefore represent a wide spectrum of disciplines?

Dr. BAUMOL. Oh, yes, indeed. Certainly not any one discipline.

Senator HARRIS. It would represent, for example, the natural and physical sciences as much as it represents the social sciences?

Dr. BAUMOL. Absolutely, yes. It has no particular bias as far as I know towards any one of the areas or disciplines.

Senator HARRIS. What about the Commission on Federal Relations? What sort of membership does it have?

Dr. BAUMOL. As I say, mostly college and university administrators. The preponderance of them are presidents of institutions, many of them very noted institutions. And I know all of them are highly interested in social sciences as well as the sciences and humanities, and I do know that the members who are on it—and I was until recently, on the Commission—felt very strongly that it was important to rectify the imbalance in Federal support that had gone over toward the direction of the physical sciences.

Senator HARRIS. Did that committee have a formal meeting to discuss the legislation?

Dr. BAUMOL. I understand that it did.

Senator HARRIS. And it took a position which I believe is, one, agreeing virtually with every witness that has appeared before this committee, that there needs to be additional Federal support for research and scholarship in the social sciences?

Dr. BAUMOL. Right.

Senator HARRIS. You took no position on whether that should be done by increasing the jurisdiction of the National Science Foundation, or by the establishment of the National Social Science Foundation?

Dr. BAUMOL. As I understand it, that is precisely the position they took.

Senator HARRIS. That is, by and large, the official position of the Government at this time, though a good many of the Government witnesses who appeared indicated preference for the establishment of a separate National Social Science Foundation in discussion which was had afterward, though quite understandably the administration must speak with one voice, and the one voice is generally along the lines that you have indicated, if not against the creation of a new agency directly.

Now, then, I want to examine some of the points you have raised both orally and also in your paper.

What is the precise point you make with regard to the computers? Does that bear on this second question at all, as to the form of additional Federal support for the social sciences?

Dr. BAUMOL. No, I think not. But I think that as a group which is interested in increasing support of the social sciences, I would expect that you would also be interested in what the government gets for its dollar, and would also therefore be interested in making sure that it gets as much as possible for its money. And I raise it merely because I think there is just not the slightest doubt that the accounting procedures involved are significantly reducing the amount of research that the available Federal funds will be able to produce.

Senator HARRIS. Now, taking the question you raise in your prepared statement:

First we must assure ourselves that there is clear evidence that a new agency operating under fresh congressional charter can do a better job of accomplishing specific tasks or meeting specific needs than can an established agency operating under an amended charter directing it to undertake the accomplishment of such tasks. We wonder, for example, whether the committee in the course of its own research into the matter has heard testimony from or consulted studies by any of those social scientists in field of public administration whose expertise revolves around the Federal bureaucracy. Do new agencies out perform old ones?

First you might consider the statement in this legislation itself and in the record of these hearings which will be included in the report of this subcommittee that this is not a nice mathematical question of either/or, but it is in furtherance of the pluralistic system that our Government and country fortunately has—additional funding for social science research and scholarship, on top of the funding which is available from other sources, and which, if history is any judge, will continue, and not only continue, but will continue on an increased level.

For example, the National Foundation for the Arts and Humanities has within its statutory jurisdiction disciplines which are also under the statutory jurisdiction of the National Science Foundation. Yet the testimony before this subcommittee from Dr. Leland Haworth, Director of the National Science Foundation, is that rather than abate or decrease or even maintain at the same level their efforts in those shared disciplines, they are increasing their funding in those efforts in the National Science Foundation and that their plan is to increase their efforts even further, in those shared disciplines.

Dr. BAUMOL. Sir, may I comment on that?

Senator HARRIS. Yes.

Dr. BAUMOL. That being the case—on the premise that this would hold in the case of the social sciences as well—I would then, speaking only for myself, be much more favorably inclined toward the establishment of a new foundation—and not because it would involve more money but precisely because it does, as you say, involve an expansion of the pluralistic system of control. I believe passionately that this makes for quality, for variety, gives space for innovation, and for precisely those reasons, I think that this constitutes prima facie reason for support of a new agency if its administrative costs are at all within reason.

Senator HARRIS. Whether or not a new agency can adapt to new goals—the question that you ask—on balance, wouldn't you say it is more likely that a new agency could adapt to new goals much easier, than an old agency which would have to convert to new goals?

Dr. BAUMOL. Well, sir; my inclination would be to agree. But I think it is precisely because of the questions such as this, that one does want social science research. I think we guess too often at the answers to this sort of question. And I think it is precisely in the spirit of this bill that we would want to find out rather than guess.

Senator HARRIS. Don't you think the enactment of the legislation establishing the Office of Economic Opportunity has caused this Government to start trying to change in response to the changed social problems faster than it would have, say, for example, if we had left manpower training and development programs totally within the established programs under the Department of Labor, or educational programs totally within the Office of Education? Isn't that demonstrably true?

Dr. BAUMOL. Well, again, in some cases I think it is demonstrably true that new agencies have indeed stimulated new research, new ideas, and added innovation.

In other cases, while they may have produced some stimulation, it may not have been worth the cost. And as an economist I am always inclined to say one must indeed examine the benefits, but one must always weigh them against the costs.

This is why I was so impressed by the point you raised just before, because I think pluralism is so important a benefit that on the face of it I think it does outweigh the costs that I see in prospect.

Senator HARRIS. As an economist, you know what the total Federal budget is this fiscal year and what we are being asked to adopt as the total Federal budget for the next fiscal year. And you know the arbitrary sum we chose to include for the new National Social Science Foundation, $20 million, is an almost infinitessimal speck in comparison to that overall Federal expenditure, do you not?

Dr. BAUMOL. Yes, sir. But I was referring not so much to the financial costs, because $20 million, whether channeled through the National Social Science Foundation or National Science Foundation would constitute the same financial cost to the Government. The issue that is involved in the establishment of a new agency is the administrative cost of running a new agency, the added administrative cost of the universities and colleges who are the recipients of the funds, and the time of the scholars that is going to be spent in liaison. There will be some such cost. The question it seems to me—is it worth that cost, and probably it is.

Senator HARRIS. Well, that is a question I wanted to ask you. I do not see how you can seriously put forth the objection you did in your testimony—a new Government agency getting started, and so forth, is going to have too great administrative costs—then the fact of the matter is, that if you expand by legislation, as has been proposed, the social science efforts of the National Science Foundation, you are going to have expanded administrative costs there also, are you not?

Dr. BAUMOL. Yes. But again I have not seen any estimated comparison of costs.

Senator HARRIS. My point is, that the difference between the expanded agency and a new one, such administrative costs in one as opposed to the other, is not a very serious problem.

Dr. BAUMOL. That is probably not the most important consideration.

Senator HARRIS. Now, you raise another question, and that is whether or not you would necessarily stimulate innovative research by the creation of a National Social Science Foundation any more than you would by leaving that effort within the National Science Foundation.

Now, again, thinking about our pluralistic society, and again recognizing that we are adding another source, not an exclusive source, not taking any away, for social science research and scholarship funding, isn't it just a matter of commonsense that you are more likely to take new approaches in a separate and new organization, than you are if you stay with the present sources of funding?

Dr. BAUMOL. Again, I agree that it is likely to cause some stimulation. How much, I do not know.

Senator HARRIS. The probabilities would appear to be, however, that if you had more independent sources of funding for social science

research, rather than only the existing sources, the probabilities would be that you are more likely, rather than less likely, to stimulate innovative research.

Dr. BAUMOL. As I have just said, the idea of increasing the pluralism of the sources of funds is extremely attractive to me. This is something I am on record supporting in the past, and I certainly am still in favor of it.

Senator HARRIS. Have you read the book "Up the Down Staircase?"

Dr. BAUMOL. No; I have not.

Senator HARRIS. It is an excellent book. I commend it to you.

Dr. BAUMOL. Thank you, sir.

Senator HARRIS. There is also a new movie based on the book which is rather faithful to the book itself.

I would think that as an educator, if you look at that book or see that movie, you would be rather shamefaced in talking to the Government about having to fill out some more forms, because I would think that if there is any group that has you fill out a lot of forms, it is university groups and school administrators.

Dr. BAUMOL. I readily agree that we are not an outstanding example in that respect.

Senator HARRIS. I am rather surprised, then, that you raise the final caveat in your statement that there should be given any weight whatsoever—and I underline "whatsoever"—to the argument that a new Social Science Foundation would require additional forms.

Dr. BAUMOL. Sir, if I may protest slightly—it is not simply an issue of forms. I was for many years a member of the research board at Princeton University which essentially acts as liaison between Government agencies and the research being done by the individual faculty members. And it is not simply a matter of filling out forms or different reporting dates. These are trivial matters, minor nuisances which would occur no matter with whom we are dealing, and we are in fact well aware that people go out of their way to make these things easy. This is not the issue. The issue is that once you come to an agreement with one organization and say—"here is a way in which we can live comfortably and effectively"—they often respond by saying—"Yes, we will do it, but we will do it provided such and such another agency does it."

One of the difficulties, for example, in the direct charging of computers is that we can get many Government agencies to agree to indirect charging, provided the other agencies will do it. And the problem is that there will always be one agency which does not see the difficulties it is causing. It requires negotiating one by one, arranging one by one, organizing one by one, which is not only time-consuming and stultifying, but it in fact sometimes results in very painful and very unhappy consequences as in the case I mentioned.

So it is not simply a matter of a little bit of extra paperwork. That has really nothing to do with the issue.

Senator HARRIS. That is what that final caveat sounds like to me.

Dr. BAUMOL. If so, it is my fault for not changing the wording.

Senator HARRIS. Isn't it true that, as Dr. Haworth testified, that if you take the other alternative, other than the creation of a separate National Social Science Foundation, it requires substantial legislative and administrative changes in the National Science Foundation to ac-

complish these ends, and that therefore you are going to have some changed forms over there?

Dr. BAUMOL. But I think the administrative ground rules which are a matter of usage rather than specific regulations, those do not change when you are dealing with the same liaison groups, and you have learned to live with each other——

Senator HARRIS. Are you assuming, then, that you would continue the same management and direction of the National Science Foundation if it were to move in a greater way into the social sciences, and that it would go unchanged administratively, and that social science people should be content to allow the National Physical Science Orientation to continue in its direction and management.

Dr. BAUMOL. Surely not. But this doesn't mean that, for example, the accounting procedures of the National Science Foundation would change as a result. Surely the social sciences would want more of a voice in the direction of the organization, would want a more direct hearing. This is true. But this does not mean that the individual relationships between the day-to-day operating groups at the universities, and the day-to-day operating groups at the institution would change.

Sir—I can see that you might end up having the same name for two organizations and save nothing thereby. But the reverse is also possible—and all I do here is ask a question.

Senator HARRIS. Don't you think that is kind of picking at gnats?

Dr. BAUMOL. No, sir.

Senator HARRIS. That is your major objection to the creation of a separate Social Science Foundation?

Dr. BAUMOL. Not a major one. We are not taking the position that we oppose a National Social Science Foundation. Let me say on the contrary—I think this should be made clear for the record—we would be made very happy by the establishment of a National Social Science Foundation. However, here are two happy alternatives—either one of these is a good alternative as we see it and we are asking which is better. We ask about the advantages of the one procedure as against the other. We have seen, as more agencies come into the picture, that in many cases the new agencies bring with them new difficulties in administration—and I don't mean just from filling—major changes in procedure which make it more difficult to live with the old organizations. We hope that this would not occur as a result of the establishment of a National Social Science Foundation. It may well not occur. But at least one should give explicit consideration to that possibility. All we ask is some assurance on this point—we are not saying that it is going to be worse.

I want to make it clear—we are not saying that we are opposed to the National Social Science Foundation. We are not saying we are sure that the administrative costs are going to be serious and burdensome. We are saying that the possibility is serious enough so that it requires explicit thought and reassurance. No more than that.

Senator HARRIS. That brings me to the statement which is that you want to be convinced by the burden of proof that the new device is the one that should be chosen.

First, let me say to you as of tomorrow when we conclude the hearings on S. 836 we will have heard this year in excess of 90 witnesses,

the overwhelming percentage of which—and the same is true about our correspondence—has been in favor of S. 836 and its principal aims, and, therefore, if there is a burden of proof, I would think it has been sustained.

Let me make a little lecture, if I can, about what kind of world it is we live in.

In connection with that question you raise—that is, the American Council on Education, which theoretically represents the best minds in this country—they say, "We want to be convinced," plus, "We raise these questions that have to do with paperwork for us," and the rather minuscule additional administrative expense which there will be, that this bill will cost the taxpayers, as opposed to the alternative.

Perhaps you do not feel concern about our world as intensely as I do, but it looks like to me that if we think about it just a bit, we must realize that the central concept of any age is change. Now, whether or not that is true, it is certainly true of our age. This is an age of change. And I think you could just center on three major questions that are not largely understood by the general public, though I would expect they would surely be understood by our best thinkers in our universities.

One is the tremendous problem of urbanization, the problem of the rural-to-urban shift of population, which exists in every country in the world that I have visited, and I have visited a good many. For example, just within the last few months, I have traveled in Central America, in Europe, and in Asia. Underdeveloped or developed. Fantastic new problems and new pressures put upon people and upon governments by the great influx of populations into mass centers, and the problems that go hand in hand with that and result from it, having to do with education, with housing, transportation, crime, air, water pollution, and so forth.

Second is the fantastic explosion in technology and in knowledge. Where, for example, in this country alone, 85 percent of the Ph. D. degrees granted in our history have been granted since the end of World War II. And that also is bound up with urbanization, as both of those problems are bound up with a third, which is the problem of youth. And again, all of these are problems which face every country of the world.

I just came from Seoul, Korea, last week, where they were having student demonstrations, some of which were quelled with tear gas and police action. The same was true in most of the other countries I visited. And as you are quite aware, it is true here in our own country. It is partly a reflection, I think, of the tremendous population explosion, all of which is tied up with these other things, and as a part of that, the result is that more than half of the population of the United States is under 25 now, and that age is less in a good many countries of the world. And related to that fact is that there is a longer and longer period now between the time a person becomes an adult and until he can become an active member of society and have some part in making the decisions which affect his own life.

Now, these are things that are new and different about our age, and so much of the general public doesn't understand these new and different problems.

Now, you put that together with some resulting problems and some that go along with them, problems of racial tensions, national and international, the great failures of modern education, and I do not mean failures that are not excusable or understandable, because I would say that much of it or most of it is understandable, and perhaps excusable if we take into account our relative ignorance.

But we are not going to be able to educate people like we always have. And I think there is really a crisis, the urgency with which we need to face up to these new and pressing problems of the world and of our own country.

The whole subject of human resource development, fantastically difficult, and fantastically important subject, is just commencing to open up.

If we are going to get at these questions at all, we are going to have to have a quantum leap—not just a little bit more, or some more, or just add on a little bit to what we are doing—we are going to need a quantum leap in our interest in these questions, and in our support for those who are looking for solutions. And not only that. If the leadership does not come out of the universities of this country, it is not going to come.

Universities, it seems to me, are going to have to give up their narrow concepts of their jurisdiction and responsibilities and go out into the real world. The university is going to have to serve a much larger community than the one it now serves. It is going to have to be involved, and so are its students, and so are its people, in every facet of American life, and push against, in an active way, the frontiers of our knowledge in all these fields.

Now, therefore, I find it rather surprising that the American Council on Education, representing those who should be in the vanguard of new thinking, syaing "We will just sort of sit by here and see; we do not take a stand either way. You convince us, the burden is on you if you think this ought to be done, and do not forget this is going to cost us more paperwork, and do not forget the taxpayers may spend a little extra money in the administration."

Now, do you have any reaction to that?

Dr. BAUMOL. Yes; I have a very strong reaction.

With the bulk of what you said I not only agree, but I agree passionately. I spend many hours and days and indeed weeks working on many of the issues which you have raised. I hope that others of my colleagues will do so. I know that many of them do do so, and I hope that they will continue and increase their doing so.

But surely our feelings on that matter—I know that the members of the council with whom I have spoken agree with you on these issues—surely our agreement on this basic point does not require that we never raise questions on detail. I would think the American Council on Education is certainly in favor of a major change in the Government's and the university's and society's interests in the social sciences. Certainly, if your proposal goes through, there will be no doubts, there will be no questions, no one will say that it was a silly thing to do, that it is going to cost us more paper clips. That is not the issue.

Senator HARRIS. Well, why raise it?

Dr. BAUMOL. Because when one makes decisions on details as well as on the broad issues. One must decide not only on the basic policy, but on its implementation. One does it through this agency or that agency, one appoints four people or five people, one fills out form A or form B. Surely, when one is asked to comment, one says, "I think the whole idea is a good one, but as between these two forms which you ask us to fill out, I have no strong view." And I think this is the position that the Council takes. On the basic points which you are raising they support you strongly and enthusiastically. No one else is asked to bear the burden of proof on the importance of the issues or the radical steps that have to be taken.

Senator HARRIS. But that reminds me a bit of a story I have cited once before. Down at the University of Oklahoma, when Bud Wilkinson was the coach there, they had two teams. They didn't call them the first team and the alternate team. They called them two alternate teams. But it was noted by the football players, as well as by the fans, that one of those alternate teams always was the one that started the ball games. One fellow on the alternate team that did not start the ball games asked the coach if he could be on the first team. He was told very carefully there was no first team, there were two alternate teams. He said "Could I be on the other alternate team?"

So it seems to me while you say there are two alternatives here, you only raise questions as to one of them. Why don't you raise questions as to the other?

Dr. BAUMOL. We certainly are prepared to raise questions. If someone comes to us and advocates the other alternative, and asks us our view, we are just as ready to raise questions in relation to it.

Senator HARRIS. Of course, you have recognized in your own statement, however, that we have to consider in this committee, in making our decision on S. 836, the other alternative as well. It seems to me if you are going to raise little administrative questions, they would also be raised as to the other.

Dr. BAUMOL. We are prepared to do that. And it may be so put in the record.

Senator HARRIS. Do you have anything further you want to add?

Dr. BAUMOL. No, sir.

Senator HARRIS. Thank you very much.

Dr. BAUMOL. Thank you, sir.

Senator HARRIS. And I hope perhaps you will take back to the American Council on Education some of the discussion that you and I have had, together with my fervent hope that they may continue to study this matter and find that the weight of the evidence is on the side of S. 836.

Dr. BAUMOL. Thank you very much for the opportunity.

Senator HARRIS. Thank you.

(The prepared statement of Dr. Baumol follows:)

STATEMENT OF DR. WILLIAM J. BAUMOL, PROFESSOR OF ECONOMICS, PRINCETON UNIVERSITY, REPRESENTING THE AMERICAN COUNCIL ON EDUCATION

Mr. Chairman and members of the subcommittee, I am William J. Baumol, Professor of Economics at Princeton University, and the views I wish to present represent those of the American Council on Education. I am appearing before you today to discuss S. 836, which would establish a National Foundation for the Social Sciences.

The American Council now has a membership of 1,261 colleges and universities and 238 educational organizations. Our testimony, therefore, will perhaps take a point of view broader and less specialized than that of some of the distinguished witnessess—many of them practicing social scientists—who have appeared before your Committee in recent weeks. We hope, nonetheless, that our testimony will be equally pertinent and that our perspective will complement theirs and the perspectives of the government witnesses whom you heard last year, in the comprehensive and impressive record of evidence and opinion you are building as you investigate the remedy for a serious problem: the failure of the Federal Government to provide adequate support for research in the social and behavioral sciences.

In the course of our testimony, Mr. Chairman, we shall attempt at least to touch on all the questions which you have suggested, and we shall concentrate on some of them.

To begin with, the American Council on Education agrees with and endorses the first six of the seven points contained in the Declaration of Purpose (Section 2) of S. 836. As a practical matter and as a philosophical conviction, we believe that "the encouragement and support of research in the social sciences is an appropriate matter of concern to the Federal Government," and that "it is necessary and appropriate" for the Government to support both that kind of research which has direct and immediate relevance to the programs of operating agencies and that which is—for lack of a more apt expression—basic. Certainly we agree that our nation's leadership "cannot rest solely on superior power, wealth or technology" but must extend as well to "the realm of knowledge and ideas"; and because we agree that this is true, we share your sense of urgency about establishing stronger, more visible and more viable means by which the Federal Government might encourage the development and application of knowledge about man, the social animal, the patterns of his attitudes and habits, his institutions, and his inherent capacities—for stable relation with his fellows, for adjusting to new environmental conditions, for coping with technological innovations whether felicitous or hostile. In short we support the Committee's goal of providing increased support for research in the social sciences.

We confess that we do not see that Point 7 of the Bill's Declaration of Purpose is the one inevitable conclusion to which the first six must lead. Whether, given the need, "it is desirable to establish . . . an independent agency of the Government for the purpose of promoting research and scholarship in the social sciences," is a matter which merits further consideration. We note that although you (and other members of the Committee) propose a National Foundation for the Social Sciences as an appropriate answer to the problem, you have recognized that "Congress should consider all possible alternatives . . . before action is taken." We agree that the principal alternatives are the two specified by you, Mr. Chairman, in summing up the first part of your hearings in February of this year: "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."

Before weighing those alternatives, perhaps a closer look at particular aspects of the general need is in order.

It seems clear that operating agencies of the Federal Government will continue to require—indeed they may increasingly require—research in areas of the social sciences directly relating to their missions. Further, although there is often no clear delineation between basic and applied research, but only a continuum, there is no reason why agencies should not support research that is conceded to be towards the "basic" end of the spectrum if only because of the possibility of ultimate relevant value.

Yet it is research into the fundamentals of social phenomena, along lines and according to leads developed by scholars in the pursuit of their own concerns and interests—research which is conceptually unrelated to particular programs of government but which may in the end be of greatest value to society and to government—that often goes begging for support. Certainly one of the particular needs is for increased support and more visible channels of support for basic research projects conceived by individual scholars or groups of scholars studying the social sciences.

A second particular need for increased support for social science research relates to interdisciplinary efforts to meet common agency goals. Agencies, as we

have said, will continue to support research directly and possibly indirectly relating to their missions. But where, at present, is the machinery to encourage or permit a coordinated research attack on serious problems the boundaries of which do not coincide neatly with assigned jurisdictions of particular agencies? What is needed, in addition to support for imaginative research from the mission-oriented agencies concerned is (1) some machinery to insure general coordination of, or at the very least communication between, such research activities, and (2) a source of support for research which bridges, balances, complements or reinforces the research efforts of the several operating agencies.

Another important need is one which you have mentioned specially on several occasions in public remarks; indeed like the others we are discussing, it is a need recognized implicitly in the bill itself. We lack a source of support for research in foreign countries in the social sciences (including the behavioral sciences) whose sponsorship is not suspect and which therefore causes no suspicion about the scientific impartiality of the research which it supports. As one of the witnesses who appeared before you in February put it:

> 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 knowledge and insights that social science can provide.

No doubt agencies with special needs may choose to conduct their own research; circumstances may in fact require it. But would a defense agency's interest in detailed knowledge about differences and similarities—and their origins—in tribal tongues of the Middle East be adversely affected if a relevant research project were carried out under the auspices of a non-defense agency whose charter was known to prohibit classified research? The point is that, unfortunately, even such basic, unclassified research projects as area language studies are sometimes viewed skeptically these days if the sponsoring agency is a part of the military or para-military establishment. And the likely skepticism of required participants or subjects inevitably colors the attitudes of potential research institutions. It is not, after all, only the individual scholars or their agency sponsors whose reputations are damaged when ulterior research motives are dramatically "revealed" and when the relevations' "sinister" implications are "confirmed" by the evidence of American military sponsorship—when, in short, fiascos such as Camelot occur. The reputation of the institution whose faculty or staff has been conducting the research may also be hurt. Indeed, the very worlds of science and scholarship are damaged in such situations.

Yet the need for social science research in and about foreign lands, their peoples, their culture and their institutions, persists, even grows. Perhaps research directly involving human beings, no matter where or for what purpose it is carried out, will always be vulnerable to hostile reactions; but if its vulnerability can be decreased by removing or sharply reducing doubts about the sponsor's motives, certainly any organizational arrangement which can help to remove it should be carefully considered.

To sum up, the general need for greater attention to social science research by the government is composed at least partially of several particular requirements:

1. The need for increased support for basic research unrelated to current programs of operating agencies;

2. The need for a continuing mechanism to insure that mission-oriented research projects of the various agencies are operating in concert:

3. The need for a mechanism of support for large, possibly multi-disciplinary research efforts which relate to goals and/or programs of more than one agency;

4. The need for a source of support for applied research that complements and balances the aggregate applied research activities of the various operating agencies;

5. The need for a new concept and organizational means of support for social science research overseas.

It seems to us, Mr. Chairman, that these objectives could largely be met either by the establishment of a National Foundation for the Social Sciences or by a specific Congressional charge to the National Science Foundation. As you know, the National Science Foundation is steadily increasing its support for the social sciences, though perhaps not at the pace that might be considered optimal. As others among your witnesses have pointed out, the NSF lumps together its support for the various disciplines that comprise the social sciences while it treats each of the physical sciences separately; yet the total NSF support for research

in all the social sciences—economics, political science, sociology, anthropology, social psychology, etc.—is less than that awarded, separately, for mathematics, physics, or chemistry. However, the House of Representatives has, as you know, already passed legislation which in a sense assigns a more specific responsibility to NSF for the development of the social sciences; we assume that by the adoption of similar or additional legislative mandates, Congress could be assured that needs such as those that have just been described can be met by the NSF.

If this assumption is correct, Mr. Chairman, there are several matters on which we must satisfy ourselves before we can declare our support for a separate foundation. First we must assure ourselves that there is clear evidence that a new agency, operating under a fresh Congressional charter, can do a better job of accomplishing specific tasks or meeting specific needs than can an established agency, operating under an amended charter directing it to undertake the accomplishment of such tasks. We wonder, for example, whether the Committee, in the course of its own research into the matter, has heard testimony from or consulted studies by any of those social scientists in the field of public administration whose expertise revolves around the Federal bureaucracy. Do new agencies out-perform old ones? Can agencies successfully adapt to new goals? And does that depend on whether goals are forced upon them or are decided by themselves or evolve naturally?

We also wonder about the economics involved in setting up a new government agency. How much of the $20 million proposed by S. 836 would it take to get the machine assembled, oiled, cranked up, and moving? How much would remain for the actual support of research?

While we agree wholeheartedly with you that an essential requirement for social science research today is innovation, we would like to be persuaded, before endorsing the creation of a separate foundation, that the fresh organizational start which a N.S.S.F. would obviously represent would necessarily stimulate innovative research. Perhaps new structures offer an advantage to new modes of operation, new approaches, even new vistas. But we are convinced, in any case, that innovation in social science research, as in other scholarly endeavors, depends more on the man than on the organizational structure that houses or supports him.

To put it another way, if adequate support is made available for social science research of all varieties, including inter-disciplinary research efforts, the burden of innovation then falls on social science and its practitioners. We think this is probably true regardless of the source or means of research support.

A final caveat: while we do not oppose the creation of a National Foundation for the Social Sciences, or any other proposed new Federal agency whose external relations would largely be those with higher education, simply because such a new agency is inevitably a source of administrative headaches (including additional administrative costs) to colleges and universities, it is true that one of the clearest and most consistent messages we get from our member institutions is that the plethora of differing procedures and requirements of the many existing research-supporting agencies of the Federal government is one of the greatest administrative burdens they bear. And some, though not all, new Federal agencies which depend on research in the universities by university scholars seem to insist on fashioning their requirements and procedures without regard to tested, workable arrangements and pragmatically-evolved precedents of older agencies. If desired goals can be accomplished either through existing machinery, or by setting up some new mechanism, we are inclined to feel that the burden of proof falls upon those who favor the new device.

To sum up, we share the Committee's concern about the present situation, we laud your efforts to illuminate the problem and find the best solution, and we endorse what seems to be the chief objective of S. 836—to insure the Government's adequate support, and its full and proper employment, of research in the social sciences. Social science research is one of the most timely, most promising fields of endeavor of our times.

Whatever decision the Congress ultimately makes about the means, we are grateful for the Committee's efforts to identify and achieve the pertinent goals, and we appreciate especialy the opportunity to share our thoughts on the subject and thus to play at least a small part in your deliberations.

Senator HARRIS. Our last witness for today is Dr. James A. Robinson. I express to you also our appreciation for your patience this afternoon that we have had to delay our meeting.

Without objection, we will place in the record at this point a biographical sketch concerning Dr. Robinson.

Biographical Sketch: Dr. James A. Robinson

Director of the Mershon Center for Education in National Security and Mershon Professor of Political Science at The Ohio State University. He has been a Professor at Ohio State since 1964. From 1958–64 he was member of International Relations Program, Northwestern University, and rose from Instructor to Associate Professor of Political Science. Dr. Robinson was a Congressional Fellow of the American Political Science Association in 1957–58. He received his Ph.D. from Northwestern University in 1957.

Dr. Robinson is a member of the Political Science Advisory Panel of the National Science Foundation.

Books—*Congress and Foreign Policy-Making* (Dorsey, revised, 1967) and *The House Rules Committee* (Bobbs-Merrill 1963). He is co-author of "The Politics of Welfare" in *Politics in the American States* (Little, Brown 1965).

Senator HARRIS. I believe you have a prepared statement, Dr. Robinson?

Dr. ROBINSON. Yes, sir.

TESTIMONY OF DR. JAMES A. ROBINSON, DIRECTOR OF THE MERSHON CENTER FOR EDUCATION IN NATIONAL SECURITY AND MERSHON PROFESSOR OF POLITICAL SCIENCE AT THE OHIO STATE UNIVERSITY, COLUMBUS, OHIO

Dr. ROBINSON. From experience before committees like this, I have discovered I do not read a statement very well. And given the informality of this session, I will not repeat what you have an opportunity to examine.

Senator HARRIS. Without objection, we will place the entire statement in the record, at the conclusion of your remarks.

Dr. ROBINSON. What I would like to do, with your permission, is to try to pick from the statement and add to it some things I did not include, that bear on some points that I do think have not been discussed in the hearings as fully as some others.

You do not need my endorsement for your bill, though I am glad to express my sympathy with it.

I would like to emphasize first a point about your objective of civilianizing social science research in the universities. In fact, I would like to make two points.

One is that I do not think discussing social science research as civilian or military is quite addressed to the issue that arose over Camelot. In fact, it seems to me that the controversy about engaging in research on foreign sites is more a matter of whether it is political or nonpolitical, American, or non-American. It seems to me that any social scientist working in a foreign site will be easily confused with the objectives of the American Government. I do not believe that foreigners are going to distinguish between NSF and NSSF, and the other alphabetical agencies engaged in research.

I would like to go further and say I doubt that they are able to distinguish with any degree of clarity between the private support from the Ford and Rockefeller or the Carnegie Foundations, and the

American Government. And what with the interlocking relations between the large foundations and high-level posts in the American Government, going back and forth from presidents of foundations to President's Cabinets, this confusion is going to be increased rather than diminished. And in those societies in which elites adhere to the policy that the political and economic systems are just the opposite sides of the same coin, this further confirms the Marxist allegation.

So I do not really see how an American social scientist working abroad can help being confused or identified with the broad objectives of this Government.

Now, second, surely full disclosure of the source of one's support will help—that is minimal and to be expected, and I think your bill calling for the clearance of the Department of State helps in that respect.

But I hope that this committee and the Congress, if it reports this bill and passes it on the floor, will charge the new Foundation with the expectation of carrying out research that will be controversial. If any of the debate indicates that the research that the NSSF supports is not expected to be controversial, then you will find the administrators timid, as, if you please, I think the administrators of the National Science Foundation, with due respect to them, have been timid about supporting the social sciences. And, if it is to mean anything at all, it will have to be controversial. Because the purpose of increasing social science support by quantum leaps is not to fatten the salaries of the academic professors—it is to increase the society's competence to appraise itself, so that it can take steps that will improve society according to whatever value society adheres to. And any research that inquires into the way we do things, if it counts for anything, is inevitably going to face controversy, because it is going to ask questions about established ways of doing things, it is going to challenge taboos, myths, and folklore.

So I make these two points now: That the best indication that Americans working abroad are not being dictated to by the policies of the American Government will be that these scholars are engaged in controversial work. And that in turn, then, is related to my point that I very much hope that the committee in making the legislative history and writing its report will indicate to the administrators of the new foundation that you expect them not to be hesitant and not to be timid, not to be afraid of controversy.

Well, that is what I have to say about the objective of civilianizing research.

Now, I would like to make a few comments about increasing support for the social sciences. You have documented rather well the need for that. You do not need me to—in fact, it would be gratuitous if I merely said we want more support in the universities for our research.

I want to emphasize that more support should mean not only increased amounts, but increased support for different kinds, for diverse kinds of research. This will lead me in a minute to one of the reasons why I think it is important to give serious consideration to a new foundation rather than merely to enlarge the present one.

I want to call your attention to what I think is not often recognized, and that is that the social sciences have suffered by comparison,

not just with the national and the physical sciences, but by comparison with the humanities. The social sciences—of these three broad classifications of knowledge—are the least well supported—not second best, as is usually thought.

No one would quarrel with the proposition that the hard sciences are better supported. The point I want to make is that the humanities have been advantaged over the social sciences, because historically many of the social sciences are offshoots of the humanities. Political science and sociology come from history and philosophy; economics, from mathematics. And the older humanistic disciplines—for 300 years in some cases—have been endowed with collections of documents, historical papers, rare books, great libraries. These older disciplines have been historically well supported.

And these disciplines rely pretty much on the extant record except for the creative arts, and they need studios and canvases and theaters.

Now, society knows how to support these fields, by and large. Foundations are accustomed to small grants to give a man a year's leave of absence to finish a piece of fiction, or to go to Italy to consult certain historical documents.

But what the foundations and the universities are not yet accustomed to is the proposition that a social scientist with a year's leave of absence isn't given any favor whatsoever. Most of us have to create data. We do not go to the library, or we do not merely go to the library. Many of us go out into the field and do a survey, or many of us simulate in a laboratory large-scale processes on a small-scale basis. In other words, we require a great deal more than annual leave or some money for foreign travel. We need tens of thousands of dollars for equipment, laboratories, for the invention and creation of data, for teams of researchers—not just the personal time of the individual researcher.

So, given this historical neglect of the social sciences, and given the fact that the social sciences need larger amounts of money than the individual humanist or individual scholar needs, the foundations, the private foundations and the universities just are not accustomed to providing this kind of support.

Now, I don't see any other alternative than massive injections of Federal funds to meet the large-scale objectives that you have set for yourself. In fact, as I indicate at one point, given all the promise that people have been claiming for the social sciences in the last generation, if we do not have some massive injection to provide a real opportunity to live up to these promises, I can foresee the generation not so far ahead that may say, "That was all false promise." And public approbation for the social sciences may be less rather than greater, unless we can fill a potential "credibility gap," if you please.

Now, why should one think seriously of creating a new foundation instead of expanding the old one?

The point I make in the statement, the first of three points I want to make this afternoon, is that the academic world, for good or ill, is founded on departments or disciplines. Now, they are changing more rapidly than they once did. Interdisciplinary activity is a popular phrase now. Nevertheless, the power centers in universities are in the departments, and they are as immune to change as the committee system in Congress. And you may be as critical of the way we do business as some of our colleagues are of the way Congress spends its time.

But the fact of life that we have to live with is the departmental system.

Now, what I say is true of political science, and I think it is more or less true of some of the other social sciences. And that is that not all of our colleagues in political science and the other social sciences really carry the banner of science in the narrow sense in which the National Science Foundation rightly and according to its charter conceives it.

Many of our people aspire to objectivity, but not to science. Many of them aspire to logic, but not to science, in the sense that they are concerned with developing a body of knowledge that other observers also agree to, according to the famous criterion of intersubjective agreement.

These people, sometimes called political theorists, or political philosophers, are concerned with questions such as "What is a good society?" "What is a just state?" "What is the good life?" These are not questions that are readily transformed into empirical propositions for which one can gather some evidence to confirm or disconfirm them.

These are colleagues in the same department of the universities, of people who like myself are more empirically inclined or policy inclined.

But under the present state of affairs, these people are disadvantaged vis-a-vis people like myself. There are not readily available sources of governmental support for them to engage in summer contracts to do their research. They may teach in the summer, but their teaching contracts in the summer frequently—these are the bare mundane facts of what a university accounting system looks like—their teaching contracts are not likely to be as remunerative as research contracts. And we all take for granted that most deans raise salaries and promote in the ranks more according to research productivity than to teaching.

So the scholars whose disciplines are only partially or not at all supported according to current definitions of the mission of the National Science Foundation are disadvantaged vis-a-vis the empirically inclined people.

Now, the empiricists in political science and the other social sciences now are more subject to support in an increasing amount by the NSF. But there is still a third kind of research——

Senator HARRIS. Would you name the others again?

Dr. ROBINSON. Research on norms, on science, and on policy. And I have said of research on norms, it is not by and large supportable by NSF.

Humanities Foundation would help in that respect. Research on science, or social scientific research, is in the jurisdiction of NSF. But research on policy is not subject to suport.

The first is what I call research on norms—what is the good society like, what is the just state?

Senator HARRIS. I see.

Dr. ROBINSON. Now, the NSF can support the second kind, some of the second kind—and this I neglected to say, and I want to say this—only some kinds of empirical social scientists. I think it is fair to say that NSF would not—and I have been a member of their advisory panel on political science, and I have some appreciation of the standards we use to recommend projects for their support—I do not think we would have the courage, if you please, to support a study, an empiri-

cal study of the Congress of the United States. We would feel—I am not speaking for NSF, I am speaking of the kind of advice I give NSF—that under the present charter you are inviting trouble for yourself if you appropriate a hundred thousand dollars to a team of researchers to engage in a study of Congress, or of the Presidency, or of how well the State Department performs its foreign missions.

Now, this can be done empirically. It is not just a matter of values or policy research.

So there are only some kinds of scientific—social scientific—research to be supported by NSF. And then the policy research certainly does not fall within its jurisdiction.

Now, the so-called mission-oriented agencies are supporting this all the time. But, you see, I need not tell you that various missions support only parts of the problem. DOD supports that aspect that affects defense. State doesn't support very much social science research. The other agencies support that part of the research that affects them. But, of course, what the policy oriented or policy science research can contribute is not the narrow, highly specialized research, but the sort of thing Professor Lasswell emphasized in his testimony before this committee, the contextual, or the wholistic approach to the problem, so the problem can be seen not in its separate categories, but in all its dimensions put together.

So it is important that there is a Federal agency that will support study on urban development, not because we are concerned with the impact of transportation on some other factor of the problem, but because of concern for the whole problem.

If I could summarize my first reason for supporting the proposition of founding a new agency, a new foundation, rather than just doing it through NSF, it is that under its present charter—and I would suppose under what it is likely to continue to live with—under its definition of science, NSF would not be supporting research divided according to the way the universities divide themselves—that is, by departments. Some people in the departments are going to be disadvantaged vis-a-vis other people, not because the scholar in his independence thinks one kind of research is more valuable at this time than another, but because the market values one kind of research more highly than another. And if we create these inequalities now—that is, if we push scientific research, but neglect policy, the day will come when your successors on this committee, or this subcommittee, will be saying, "Yes, here is a terrible imbalance in research support, now we have to rectify it."

I urge, then, taking a contextual or wholistic view toward this now, and seeing to it that these kinds of unanticipated imbalances do not occur.

Now, my second reason, one that is not in the statement, and I want to add, for establishing a new foundation is in order to raise and equalize the visibility of social science versus science, versus the humanities.

The President and the Congress and others have at hand various people to turn to when they need scientific advice.

The President has a science adviser. There is a National Academy of Science. There is the Board of Directors and Trustees of the National Science Foundation.

Now, thanks to the founding of the Humanities Foundation on matters affecting the arts, historical collections, preserving of important documents, whatever the policy matter may be, the President and Congress have some place to turn.

But where is there a visible and identifiable body, except the individuals such as you brought in before this committee, which Congress or the President or a Cabinet official can readily turn to for advice or counsel on the social sciences?

By institutionalizing the social science community in a foundation, one will rather soon increase the visibility of the social sciences and create a body of consultants who are available to the Federal Establishment.

Now, one way of driving home why this cannot be done under the National Science Foundation is to speculate about the probabilities of the number of social scientists who can ever be trustees of NSF, given its heavy orientation to the national and physical sciences. Or another way of asking it just in sheer power terms of the academic community: what is the probability that a social scientist would ever be Director of NSF?

So that is my second reason for urging the creation of a separate foundation.

The third point I want to make—and again this is not meant to be critical of NSF—is that even if the Social Science Division of NSF were enlarged by the terms of its budget, even if it would put more money into the support of indivdual research projects, those of us in the universities are aware that there are other kinds of activities to be supported by NSF than individual research projects. NSF is not only in the business of supporting individual research activities—it is also concerned with building buildings, providing special projects funds, establishing institutes. It is engaged in many activities other than just supporting individual research projects. But a social scientist concerned with building a new laboratory does not go to the Social Science Division of NSF, as I understand it. He goes to a separate division concerned with facilities. And my colleagues tell me that the people they talk to there are not social scientists accustomed to building social science labs—they talk to natural and physical scientists who are accustomed to building and working in physical science laboratories. And in terms of understanding the needs of the social sciences, when you move away from individual research projects, it seems to me that a new foundation clearly chartered for the mission of enhancing the social sciences is more likely to be able to serve these needs effectively and understandingly than the present system.

I would just like to make one other comment before concluding. This pertains to section 9 of your bill. I assume this section on limitation of grants is still in the committee print. It reads 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."

Senator HARRIS. Yes; I previously stated in these hearings my judgment that while we were well intentioned by including that section of the bill, it probably will have to be changed.

Dr. ROBINSON. Not being a lawyer, I am not acquainted with the conflict-of-interest laws. But I should think that that would—as the

Department of Defense testified—that might limit the Federal Government's capacity to draw someone from the social sciences as a consultant or as an employee or special assistant for a year or two.

Senator HARRIS. Yes; I agree with you. I think probably the disadvantages of having it in there as it stands outweigh the advantages that we had in mind.

Dr. ROBINSON. If I had to make up an argument, it would be that contracts are not with the individuals, but with the institutions that employ them. And while this does not clearly eliminate the possibility of preference for an individual who formerly worked for the Federal Government, it certainly does care for the accounting for the expenditures.

Well, I think I have said what I have to say and made the points that I wanted to emphasize. I am prepared to discuss any of these that you care to.

Senator HARRIS. Well, let me say that partly because of time problems, that impending vote in the Senate is still imminent—but mostly because your testimony is very complete and well organized, I do not really have any additional questions to ask, other than those I have asked during the course of your testimony.

And so I do not have anything further unless you do—except to say that I do appreciate very much your statement and the thought that you have given to the bill.

What is the Mershon Center for Education in national security?

Dr. ROBINSON. Well, the founder was an alumnus of the university who left his estate with the understanding that half of the annual return should be devoted to studies of civilian-military relations. Later that was expanded to mean the application of principally the social sciences, but not exclusively, to problems of national security—not necessarily narrowed to defense policy. Presently we are concerned with several large clusters of problems. We are about to launch several studies of policymaking in the Federal Government bearing on foreign and defense policy—the kind of research that the Government itself would not now be prepared to support. And we are also engaged in studies of what we call "Ocean Law, Science, and Policy"—namely the social and legal implications of current developments in oceanography.

Senator HARRIS. Thank you very much.

(The prepared statement of Dr. Robinson follows:)

STATEMENT BY DR. JAMES A. ROBINSON, DIRECTOR, MERSHON CENTER FOR EDUCATION IN NATIONAL SECURITY AND MERSHON PROFESSOR OF POLITICAL SCIENCE, THE OHIO STATE UNIVERSITY

Mr. Chairman, I welcome the invitation to add my recommendations to your consideration of 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."

My perspectives on problems of support for social research have been formed from experience as a political scientist on two different university faculties, one a moderate sized, private, reasonably well-endowed university, and the other an extremely large, mostly publicly supported, state university, or "multiversity." During the last decade my research has been supported by at least three government agencies and, indirectly or directly, by two of the large private foundations and one or two of the smaller. I have served for a year on the Political Science Advisory Panel established by the Social Science Division of the National Sci-

ence Foundation. Occasionally, I have reviewed research proposals for other federal agencies. And my responsibilities to my University are to administer a research and education Center in national security policy founded by a generous bequest of an alumnus and to seek additional support for this Center from public and private sources. I have been a part of "big research" and "small-scale research;" I have been on research "teams" and worked alone.

I enumerate these autobiographical notes only to declare some of the most important sources of my personal preferences about social science. Naturally, they color my hopes and expectations about the future of the sciences of man.

As I understand the questions before the Committee during this series of hearings they are (1) what provisions are suitable for "civilian" as distinguished from "military" support for American social scientists who specialize in the study of other societies? and (2) what would constitute adequate current and prospective support by the federal government of all social science research and scholarship? I hope that the Committee will appreciate that "adequate support" is not to be defined only by the amounts of money appropriated for research but also by the range of topics eligible for support.

The first of these problems—civilian support—as Senator Harris has said several times should not and can not be considered apart from the second and larger problem.

I think the second problem—the extent and character of the federal government's participation in social science research—should not be considered apart from the still larger context of our society's total resources and commitments to social science. This includes public and private universities foundations, and non-profit research institutes. As I shall try to make clear the importance of the federal government's role in providing money for social research is affected by the relatively meager research funds allocated by universities and supported by foundations.

Let me refer first to the objective of "civilianizing" research. I believe that categorizing research support either as civilian or military, or as non-governmental or governmental, is not very helpful for avoiding Camelot-like affairs. What is at issue in research in foreign areas by American scholars is whether research is political or nonpolitical, American or non-American. Most citizens of other countries are unlikely to appreciate distinctions between NSF, IDA, DOD, ISA, AID, or CIA. For that matter, most are unlikely to recognize differences between the Ford Foundation and the American government. Indeed certain foreign nationals are likely to regard the Ford and Rockefeller Foundations as more politically threatening than some governmental agencies. I hope it is not inappropriate to say that such impressions are reinforced rather than refuted by lateral movements of certain prominent Americans between high governmental policy making positions and executive offices of the big foundations. Former presidents of both Rockefeller and Carnegie are in the Cabinet. Three of the reported candidates for the presidency of Ford were close associates of the President of the United States, and Mr. Bundy took leave of absence in the recent Middle East crisis to assist the President, including accompanying him to the conference with Mr. Kosygin at Holly Bush. The Marxist contention that economic and political institutions are synonymous is probably reinforced by the interlocking relations among foundation officials and trustees and governmental associates. Consequently a foundation grant may not spare a field worker close identification with American politics.

While I recommend that field workers in foreign areas disclose rather than conceal the source of their support, I doubt that this or any other practice will save any American scholar from all risk of having his research confused with political objectives of the American government.

Confidence in the integrity of American social science is most likely to be established by the quality of its scholarship *plus* dramatic cases of government support of competent scholars who are known for their opposition to particular American policies. For example, the publicity given the American mathematician, supported by NSF, who criticized American policy in Viet Nam while visiting Moscow, helps to assure that in research there is no place for the philosophy that he who pays the piper calls the tune. One of the aims of this Committee in establishing the "legislative history" of S. 836 should be to emphasize that the National Social Science Foundation is expected to support controversial studies. When an NSSF has been founded, this Committee, acting in its oversight capacity, should appraise the Foundation not according to its controversial or non-

controversial character but according to the quality of the research it supports, as judged by competent scholars.

The main reason that the government ought to support social science is to make available to society better intelligence about and appraisals of itself and of the environment of which it is a part. The justification for more social science funds is not higher salaries and bigger budgets for more professors. The objective is rather that society may know itself better and adopt policies that will serve the society's interests as it defines them. But the interests of society are controversial. Even knowing more about society causes controversy, especially when verities, taboos, norms, and accepted values are questioned by researchers rather than propagated. Unless this Committee and Congress make clear during hearings and floor debate their determination that the Foundation tolerate controversial inquiry, then the NSSF will be timid and will avoid attention to delicate social issues.

No one denies that the NSF (and other government agencies) have often been conservative in choosing topics on which they will support inquiry. Anyone who reads the Congressional debate on NSF in the late 1940's will appreciate the caution with which the Foundation has supported social and behavioral science. Some Members of Congress confused social science with socialism. Some doubtless agreed with the late Lucius Beebe's definition of political scientists: "self-contradictory. . . . ex-post-facto entrail watchers . . . after-the-event soothsayers . . ." Some certainly feared social science. These attitudes no doubt are still held by some in Congress, but my estimate is by only a few. I believe the time is propitious for Congress to recognize the social sciences as useful instruments of society and to tolerate, even encourage, scholarly appraisal and criticism of social processes.

If Congress is not prepared to found a new organization on that premise, the NSSF will be as reluctant to enter political thickets as NSF has been. NSF was more than 15 years in creating a political science panel, and while I would acknowledge that in its early years the number of political science proposals was so small that they could easily be handled by other social science panels, still the lack of visibility for political science in NSF no doubt reduced the number of political science proposals filed.

From time to time, I understand that NSF has been concerned about supporting research on such sensitive topics as civil rights, sex, religion, federal-state relations, and other agencies and branches of the federal government. This is understandable. Any administrator would do well to enter such fields warily, unless, as I suggest Congress make clear, he is expected to.

At present the "NSF model" is basic research, not particular institutions or policy processes or policy outcome. I doubt that NSF could approve projects for studies of Congress, the Presidency, national security, the Federal Reserve System, decision making in the Defense Department, political psychology, the performance of the civil service and foreign service, governmental effectiveness in particular crises. However well-designed such studies might be, however esteemed the scholars might be. I believe these topics would have to be disguised as "organizational behavior," "decision making" or not be approved.

I hope that this Committee will endorse a less restrictive conception of basic research and encourage qualified studies that are now excluded from NSF and other federal sources of support.

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I join others who have appeared before this Committee in urging greater support for social sciences. At present the promises or and faith in the social sciences are greater than their accomplishments. The gap between promise and delivery cannot be closed without an extraordinary expansion of research. The body of basic social science upon which policy makers confidently draw for application to social problems is small. As my colleague Hans Zetterberg has pointed out, when we talk of bringing social science to bear on social problems, we almost always mean doing more original research rather than applying existing basic research to practical problems.[1] We lack a rich and systematic body of fundamental knowledge comparable to the "laws" of physics. And unless we can increase our store of basic research, we will grow less useful, rather than more, in applied research. Society will not wait for social science; social planning and

[1] Hans L. Zetterberg, *Social Theory and Social Practice,* New York: Bedminster Press, 1962, pp. 16–18.

experimentation will be undertaken regardless of the state of social science. One can even imagine that prolonged failure of social science to meet some of the needs of society will cause thoughtful policy makers to grow impatient at grand promises and unrealized hopes, with the result that social science may enjoy less rather than more public approbation.

The current gap between promise and fulfillment obviously stems from the historic neglect of the social sciences compared with favoritism for the sciences and the humanities. That the natural and physical sciences have enjoyed a special status in the family of knowledge is well-documented and widely accepted. What is not so well recognized is that the social sciences have been even less generously treated than the humanities.

Most social sciences have been founded as offshoots of other disciplines. Psychology, for example, descended from mental and moral philosophy. Political science and sociology branched out from law and history. And the roots of economics lie in mathematics. While social science departments were not created in American universities until the late 19th century, history, literature, philosophy, and art have enjoyed eminence throughout the whole course of university growth, from their medieval origins in Paris and Bologna down to the present day's respect for the liberal arts college.

The humanities—history, literature, philosophy, and art—are essentially library or studio subjects. Humanists need books, pencil, and paper for their research; creative artists need canvasses, clay, and theatres. Universities have well-established budgets to provide libraries for scholarly research and facilities for artistic creativity and expression. Foundations are accustomed to furnishing funds for a year's leave so that the humanist may travel from his home to foreign libraries or find refuge from routine campus activities while completing a work of art or literature.

But the needs of social science are not always served by the same forms of support provided by libraries, leaves of absence, and travel. Many social scientists find their data not in libraries but in the world of experience—in foreign cultures, in sample surveys of communities, in interviews with public officials, in direct observation of market places, religious rituals, political conventions, legislatures. Sometimes, as in the case of "disaster research" or the study of "unexpected events," the social scientist cannot plan far in advance for a leave of absence; like a journalist, he must be ready to go at a moment's notice to investigate the social consequences of tornadoes or floods, to interview a population's reaction to an assassination, to observe a government's response to a crisis.

And sometimes the social scientist *creates* data rather than finds it—that is, he experiments in a behavioral science laboratory or simulates social process with the aid of an electronic computer.

And whether they travel, take leave, or experiment, social scientists, like natural and physical scientists, often require teams of assistants and colleagues. Their time and expenses must be paid for. To these expenditures must be added the costs of equipment—tape recorders, laboratories, computers, etc.

I believe that you will find that universities do not ordinarily contribute much of their own funds for research expenses of these kinds. They encourage their faculty to apply to foundations and government agencies, but their internal research budgets are modest in the extreme. Moreover, when alumni endow chairs for professors, they rarely provide for more than salaries. Every campus has its lecture series, its prizes for grades and essays, named for a friend of the university who left a generous bequest. But few colleges have endowments for research.

Beyond this, it is important to recognize that most universities are more interested in disseminating knowledge than in creating it. Universities, in spite of their expressions of interest in teaching *and* research, put most of their money into teaching. State legislatures apparently do not adequately appreciate that some knowledge still remains to be discovered or created; and the trustees of private institutions often pride themselves that their college emphasizes good teaching more than research.

These limitations on research support are especially acute for the social sciences. I do not foresee dramatic changes in this situation. The basic costs of education grow more rapidly than universities' public income or tuition; many state governments apparently lack the will or the capacity to tax income to meet state needs; private foundations are more interested in solving problems now than in enlarging the storehouse of basic social science; and foundation grants are typically "seed money" rather than long term, sustained support.

Faced with current trends and with little prospect for relatively greater state and private support for social research, I believe larger, more diverse federal expenditures constitute the only satisfactory and practicable alternative.

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Needless to say, there are alternative ways to increase federal support for social science. Perhaps the most obvious is through the existing programs of the National Science Foundation. We may, I think, expect NSF to continue expanding its social science programs. Dr. Haworth's February 7 statement listed several constructive new developments that I personally welcome.

With all due respect to NSF, however, I think there are important reasons for establishing a separate NSSF. These reasons apply for several social sciences, but they have special pertinence to the field I know best—political science—so I shall illustrate them with that subject. Political science may be divided roughly into three parts: non-science, science, and policy. Some of our colleagues do not aspire to science in the narrow meaning of the word and in the usage associated with NSF. I refer to those political scientists whose scholarly interest is political theory, political ethics and norms. They are concerned with non-empirical or trans-empirical conceptions of the good life, the just state, the best polity. They aspire to objectivity and to logics, to careful definition and systematic expoistion, but they do not aspire to science. That is, their grounds for knowing are not scientific; they do not propose to deduce hypotheses from a theory, design experiments to test predictions, make observations of data, and confirm or disconfirm their theories. They are scholars and philosophers, but they are not scientists. To be more specific, the signs of their trade are not those that we, rightly or wrongly, associate with science—research designs; quantification; field work, simulation, or surveys; computer processing of data, etc. That is one part of the field of political science, a part presently excluded from NSF project-support.

Another part consists of the scientists—theoretically oriented, empirically trained, in search of a body of verifiable theory and hypotheses. Their work falls squarely within NSF's jurisdiction, and some of them are being supported by NSF and were supported even before the establishment of a Political Science Advisory Panel in 1966.

The third part of political science is policy oriented. It often combines the normative concern for goals or values with scientific analysis of alternative means to attain given values. It is not necessarily "mission oriented" in the sense in which that phrase refers to contract research commissioned by DOD or other government agencies. But it is problem oriented rather than theoretically oriented. Sometimes policy scientists identify problems before particular agencies are interested in them. At their best, policy scientists undertake comprehensive and inclusive analysis of social processes that overlap the constrained interests of individual agencies. Hence, no bureau may be quite appropriate for supporting the whole research.

Although these three aspects of political science are clearly identifiable—let us label them *norms*, *science*, and *policies*—they typically coexist in the same university departments and participate in the same academic and professional associations. They join in offering curricula for undergraduate majors and for master's and doctoral candidates. Their specializations offer not only a division of labor but provide a certain amount of creative tension for each other.

I think it especially valuable that these diverse interests share a common intellectual home. In any event, the fact of life is that the academic world consists of departments, and political science departments consist of men whose interests are in *norms*, *science*, and *policy*. I know that "outsiders" criticize and marvel at the power of academic departments; I assure you, Senator, academic departments are as entrenched as the committee and seniority systems of Congress. Whatever one thinks of departmental organization, we will have to make education and research policy on the expectation that departments will continue to exist.

The implication of this for political science is that research on *norms*, *science*, and *policy* ought to be integrated rather than separated. Colleagues ought to share in public support for their work on the basis of competence, not on the basis of what is available. Hence, it is regrettable that those concerned with norms are served by one foundation (Humanities), those concerned with science another (NSF), and those concerned with policy none at all.

I recommend that an NSSF organize itself along academic departmental or disciplinary lines, which is implicit in S. 836 and is done by NSF, but that it not discriminate against any respectable kind of social science (as is presently done by NSF and the Humanities Foundation).

One of the consequences of the current uneven support of different kinds of social sciences is that the skewed distribution of research money means differences in the annual income of professors, differences determined not according to scholarly qualifications. It is rare that a professor's salary is affected by the amount of research money he can raise. But it is common practice that men on research grants can supplement their 9-month teaching contract with a summer salary equal to 2/9 or 3/9 of their 9-month salary. This is more than many universities pay for teaching summer school, so the financial motivation is toward research. Moreover, salary raises and promotions usually depend heavily on one's research productivity, so the professor who can devote full-time to writing during summers is advantaged over the one who teaches. And there is still another financial advantage to the researcher with plenty of funds—he can buy "released time" from teaching during the regular academic year with his research grant or contract. Thus, his productivity and his advancement are likely to be enhanced further.

What makes this relevant to your consideration is that at present research opportunities are not equally distributed throughout the social sciences, especially political science. Political historians or political theorists do not have the chances for research grants, released time, and summer salary supplements that are available to specialists in political behavior, international relations, or quantitative analysis. As long as the present organization of research finances continues, these inequalities will persist—inequalities not based on scholarly merit but on what the market will bear.

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By way of summary, my principal personal recommendations are these:

(1) If Congress establishes a National Foundation for the Social Sciences, I hope it authorizes the new organization to support qualified scholars regardless of the sensitivity or controversial character of their research. Such a policy is the best assurance that federal financing of civilian research will be depoliticized. If Congress does not approve the creation of a new foundation, I hope it will endorse an expansion of the scope of NSF research regardless of the sensitivity of the subject.

(2) If social science is to fulfill its commitments to society, it needs more money for more kinds of studies than is presently or prospectively available. Universities, foundations, and other private sources are inadequate to the task and cannot be relied upon to counter-balance the historic and contemporaneous advantages enjoyed by the natural and physical sciences and by the humanities. Larger federal participation appears to me to be the only practicable source of necessary assistance.

(3) A new foundation to support the social sciences is appropriate because current federal agencies do not serve whole disciplines. As a result of the asymmetry in present federal programs, some aspects of individual social sciences are given preferred treatment to the neglect of others. This inequality is undesirable for the stable development of disciplines as wholes. To perpetuate these inequalities will create new problems.

Unquestionably, the problem before the Committee has other ramifications and complications, many of which have been discussed by other witnesses. I have stressed these three recommendations from my personal experience because I believe that so far they have not been as widely considered by the Committee as they deserve.

NATIONAL FOUNDATION FOR SOCIAL SCIENCES

THURSDAY, JULY 13, 1967

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

The subcommittee met, pursuant to recess, at 1:30 p.m., in room 3110, New Senate Office Building, Senator Fred R. Harris (chairman of the subcommittee) presiding.

Present: Senator Harris.

Also present: Dr. Steven Ebbin, staff director.

Senator HARRIS. The subcommittee will be in order.

We are continuing this afternoon hearings on S. 836, "A bill to create a National Foundation for the Social Sciences."

But first, may I offer my abject apoligies to those of you who have come here to testify today for the real inconvenience we have caused you in asking you to stay over until the afternoon. The exigencies of a Senator's life are such that there was no way to avoid it, and so I do apoligize and I am certainly grateful for your willingness to stay over.

Dr. Rensis Likert is our first witness.

Dr. Likert is director of the Institute for Social Research and a professor of psychology and sociology at the University of Michigan.

Without objection, we will place in the record at this point a biographical sketch prepared by the staff which details his distinguished career.

Biographical Sketch: Dr. Rensis Likert

Director of the Institute for Social Research and Professor of Psychology and Sociology, The University of Michigan. A.B., Michigan, 26; Ph.D. (psychology), Columbia, 32.

Assistant Psychologist, Columbia, 1928–30; Instructor, New York University, 1930–33; Assistant Professor, 1933–36; Director, Research Life Insurance Agency Management Association, Connecticut, 1936–39; Head, Division Programs Surveys, Bureau of Agricultural Economics, U.S. Department of Agriculture, 1939–45, 46; Director, Morale Division, U.S. Strategic Bombing Survey, 1945–46.

Member—AAAS; American Psychological Association; American Sociological Association, American Statistical Association (V. President, 1953–55, President, 1959); American Marketing Association; American Industrial Relations Research Association; Institute for Management Science. Sample interview survey research; attitude and motivation measurement; leadership and organizational performance. "The Human Organization: Its Management and Value"; "New Patterns of Management"; co-auth. "Public Opinion and the Individual"; co-ed, "Some Applications of Behavioral Research."

Senator HARRIS. Dr. Likert, we are proud and honored that you are here. I know that you have a special problem about staying over. I appreciate your willingness to do so, and we would be very pleased to hear from you at this time.

Dr. LIKERT. Thank you, Senator Harris.

I would like to make a few comments, rather than trying to cover the complete statement.

Senator HARRIS. All right. We would like to have the whole statement and so, without objection, we will insert it in the record at the conclusion of your remarks, and you may make comments on it or excerpt from it.

TESTIMONY OF DR. RENSIS LIKERT, DIRECTOR, INSTITUTE FOR SOCIAL RESEARCH; PROFESSOR, PSYCHOLOGY AND SOCIOLOGY DEPARTMENTS, UNIVERSITY OF MICHIGAN, ANN ARBOR, MICH.

Dr. LIKERT. The first thing I want to emphasize is that I greatly appreciate this opportunity. I think it is an exciting opportunity for us in the social sciences to have the Senate and to have people like you, Senator Harris, display this interest in social science. This is an exciting and important development. We appreciate it greatly and appreciate the opportunity to appear to discuss the need for the support of the social sciences.

I want very much to emphasize that I strongly agree with the views of others who have been here, including your own, Senator Harris, about the need for a substantial increase in funds to support research in the social sciences. And I also would like to emphasize that we need plans and programs for training students and for attracting able students.

These points have been covered by others. I will not take time to elaborate. What I want to amplify, however, and really amplify more than summarize, is the need for the support and development of one aspect of social science research that I think has received relatively little attention thus far in the hearings that you have had to date.

The part that I would like to emphasize is this, that if we are going to have adequate research resources to deal with the serious kinds of problems that our society faces and for which social science research is urgently needed, and to deal with the kinds of problems that progress in the biological and physical and engineering sciences are creating, we must have far more adequate resources in the form of organized research capability in the social sciences.

In other words, if our Nation is going to deal successfully with the problems of poverty, the causes and cures of poverty, antisocial behavior in the form of riots, delinquency, drug addiction, and so on; if we are to cope with the causes and cures of conflicts in the field of civil rights, international relations, labor-management, and even in university communities; if we are to handle well the problems of social organization and the administration of business and government, and the best use of human resources, there is a need for a substantial increase in large-scale, organized research. This was pointed to, I think, quite well in the news release put out by the Reuss committee based on their four volume report prepared by Mr. Orlans. It stated that there is an "excessive emphasis on undirected, small-scale research" and "not enough on large-scale, coordinated programs directed at specified objectives." I think this is the most serious gap in social science research resources today.

Let me cite an example. The Institute for Social Research was asked not quite a year ago by one of the larger foundations to bring together a group of social scientists to develop plans for establishing a national resource center for civil rights to deal with the problems of race relations and civil rights. The foundation wanted the center to be a national information center where all the major findings of studies on all aspects of civil rights and race relations would be readily available along with a consulting staff to aid any city, State, or governmental unit to make the best use of available knowledge in dealing with problems they faced. The planning for such a center revealed that it must engage in both basic and applied research in these fields to attract and hold the caliber staff needed for integrating available knowledge and providing sound advice in applying this knowledge. We estimated that it would take a minimum of $15 million, and more likely $25 million over a 5-year period to establish such a center and to staff it at an adequate minimum level. This amount, moreover, did not include much of the programmatic research that ought to be undertaken by the center. Unfortunately, this badly needed center was not established largely, I believe, because of its sizable cost.

Let me be more specific, however, concerning the characteristics of the kind of research institution which is needed. These large-scale research institutes preferably ought to be in major universities. At the present time our institute, the Institute for Social Research, is, so far as I know, the only institute in the social sciences which meets the specifications which I will describe below. There are a few research institutes outside of universities, but they tend to focus on applied research.

The tragedy of having such research institutes outside of universities is that we need the resources of such research institutes to train doctoral candidates and postdoctoral fellows so that we increase more rapidly the number of people who are capable of doing social science research. The training of doctoral and postdoctoral researchers in the skills of conducting large-scale, organized research is an important reason why these research institutions ought to be located in universities.

The second major reason for having them in universities is that if we are going to accelerate the dissemination of new knowledge created by such research centers, a university location is distinctly advantageous, both with regard to methodological innovation and new substantive knowledge.

It is important, also, I believe, for our universities to be centers of intellectual leadership. If they are to perform this function, it is necessary for these large-scale research centers to be located within them rather than outside. If substantial amounts of important research, especially basic research, are done outside of universities, it will weaken materially their role as centers of intellectual leadership in American life.

My first point, then, is that the research institutes ought to be university based. The second is that they should be interdisciplinary. There are a number of research institutes and centers in universities which are focused on a particular problem or a particular discipline. These centers are doing good work, but a broader approach is also necessary. The serious problems requiring research, such as those you have men-

tioned, Senator Harris, and many of the important problems on the frontiers of science on which basic research is needed rarely fall neatly within the boundaries of a particular discipline. These problems must be tackled by interdisciplinary teams using appropriate methodologies and theories drawn from the relevant disciplines and using them in an integrated and coordinated way research on these problems is usually not as productive if it is conducted by a number of individual investigators each independently working on that particular portion of the problem of interest to him or to his discipline. To enable the proposed research institutes to engage in interdisciplinary research, these institutes should be organized on a universitywide basis. They should not be attached to a particular discipline-based department or school.

The third characteristic of these large-scale organized research institutes is that they should have several different programs of research focused on different kinds of problems. They should be multiprogram in character as well as multidiscipline. Crossfertilization from one field and one problem to another is facilitated by having work done in different areas and this contributes to creativity in research.

The studies which we have done of the administration of research in all fields of science and engineering show that if you have diversity present among the research personnel as, for example, different points of view, different fields of specialization, or different kinds of previous experience, you are more likely to increase the probability of innovative, creative research. Since diversity facilitates creative, innovative work on the part of a research staff, the presence of a research institute with many widely different programs of research can contribute in a valuable way to the productivity and innovativeness of the research staff.

A fourth point: It is essential that these research institutes have their own permanent, full-time staffs and not consist solely or largely of persons on a released, part-time basis from different discipline-based departments for a particular project. To derive the full benefit of a coordinated, interdisciplinary attack, programmatic research requires each new project to be built on the findings from previous work. In addition, to obtain the knowledge sought, it is often necessary to design and conduct several interrelated projects, some of them simultaneously. To do all this research efficiently and well calls for a stable, permanent staff which shifts from project to project as the research proceeds. It takes time to build an interdisciplinary research staff which works together smoothly and productively with mutual understanding. The staffing requirements for productive, interdisciplinary, programmatic research preclude, consequently, assigning individual scientists from discipline-based departments on a project-by-project basis.

The fifth characteristic follows directly from the fourth; namely, the operating and personnel decisions of these research institutes should be made by their own staffs under the general review and policy guidance of a universi'vwide committee. This committee should be charged to act in terms of what is best for the university as a whole and what will best serve science and mankind rather than acting as instructed delegates from particular departments. The committee's performance should be reviewed periodically to assure that this broader, less parochial point of view is maintained. This form of organization

and operation means that such functions as research planning and pay and promotion policies will be done by each research institute's own staff with appropriate review by the universitywide committee. This form of organization seems important since experience shows that when discipline-based departments or committees control the operating and personnel decisions of a research institute, it tends to undertake little interdisciplinary research and may not do well that which is undertaken.

The sixth characteristic of these research institutes is that their work should be focused on important, crucial problems. Lloyd Berkner's definition of basic research is relevant: That research is most basic which draws most on other research and in turn exercises the greatest amount of influence on subsequent research. Berkner cites Einstein's work as an example of research which is basic in terms of his definition. Berkner's definition, I believe, can be useful to research institutes as they select the problems upon which they propose to undertake long-range, programmatic research. The more central a problem is and the more it irradiates and influences other problems, the greater is the probability that research on it will be basic and of widespread value.

I can illustrate this point by research on the problems of leadership, management, and organizational performance. Such research draws upon substantial amounts of work done in business administration, public administration, small group research, social psychology, sociology, economics, political science, industrial engineering, and many other fields. In turn, we are finding that research on leadership, management, and organizational performance is yielding newer, more powerful theories of organization which have important implications for all of the fields which I have mentioned and suggest useful applications in dealing with the problems of concern to these fields. Take for example the management of conflict. The application of modern organizational theory to such problems as the race riots in our cities and the various international conflicts, such as the Arab-Israeli situation, calls frequently for quite different strategies, principles, and steps from those now being pursued.

There is another way to describe the kinds of research which these university-based institutes should tackle. The research should be focused on the underlying causes of problems and not on their symptoms. Moreover, the research should deal, insofar as possible, with the key causal variables cutting across and affecting many problem areas. If this is done, the research is likely to be basic in terms of Berkner's definition and the results of the research are likely to make major contributions to applied research dealing with these problems.

Another characteristic which university-based research institutes should possess is that they should have adequate physical facilities and supporting services. Adequate space and equipment are obviously necessary and so is the assistance of specialized supporting technical staffs such as those which conduct interviews, coding, content analysis, and data processing. There should be also such resources as data banks, specialized libraries, and efficient administrative and housekeeping services.

It is obvious from what I have said about these large-scale, interdisciplinary, multiprogram research institutes that they will be fairly

large. In my judgment, the minimum annual budget for such an institute would be at least $500,000 with most of them having budgets in excess of $1 or $2 million. Our own budget for the past fiscal year was just under $5 million.

Another essential characteristic is that the research institute be decentralized in its organization and operation. In our institute, for example, our program directors in our three centers run their research programs. They receive advice and intellectual stimulation from their center director and other persons but they manage their own programs of research within broad policy guidelines which they, themselves, have helped establish.

It is equally important in my judgment that the universities within which these research institutes are established be decentralized in their organization and operation. A research institute cannot conduct first-rate research when it is subject to centralized control and direction by university officers or board of trustees. The fund-granting agencies within the Federal Government should, therefore, avoid awarding funds for the support of research institutes or of large-scale research programs to universities with tight, centralized, administrative controls. Studies of research administration show that where research is so organized it is appreciably more costly and less creative than when the research staff itself exercises significant influence upon decisions related to its work. At the University of Michigan we have been extremely fortunate in having an excellent decentralized administration of research.

I should like to turn now to some of the conditions which are required if we are going to have these large-scale, university-based research institutes. I need not dwell on the great need for much more adequate support of social science research. You, Senator Harris, have already stated well the magnitude and urgency of this need. I should like, however, to stress the crucial necessity for stable, long-range financial support for such research institutes. The major source for this kind of financing, at least at present, will have to be the Federal Government.

One of the most serious handicaps to research institutes, and especially to first-rate research, is the difficulty which all large-scale, programmatic research efforts have encountered in obtaining stable financial support. All fields of science are adversely affected by short-range rather than long-range financing. The social sciences, however, have been most seriously handicapped by this situation because of the very meager support they now receive as you, Senator Harris, have so clearly pointed out. Short-range financing hurts all research but its negative effects are much more serious for long-range, programmatic research than for project research since many of the latter can be completed within the period of the firm financing even when it is short-range in character. The senior scientists in the institute for social research have had to spend sizable proportions of their time securing piecemeal support to continue their research programs and to maintain stable research staffs. This is a waste of a scarce and valuable national asset, the time of our most able researchers.

I should like, therefore, to urge strongly that appropriations for the support of research should be such as to permit the granting agencies, such as the proposed National Social Science Foundation,

to make and implement commitments for stable long-range financing of research programs and of research institutes.

There are many ways in which the Congress could do this. One would be to appropriate to these granting agencies a reserve equal to about five times their average or intended annual appropriations. The granting agency could then make firm commitments for a period of several years, even though there were at times sizable fluctuations in its own annual appropriations. Since only a portion of each granting agency's funds would be used to support long-range programmatic research or research institutes, the making of firm commitments for periods of several years would involve only a part of each agency's resources.

Such a plan would overcome the disastrous effects now experienced by important programmatic research when intentions expressed by a granting agency cannot be fulfilled because of unexpected fluctuations in appropriations. We have experienced this kind of costly disaster many times over the years. The sizable fluctuation from 1966 to 1967 in the research budgets of the Office of Education illustrates the change on budgetary support which usually has a drastic and costly impact upon long-range research programs supported by such budgets. Long-range research programs must be carried out in a planned, organized manner with a stable staff over several years time. This is necessary to complete the research and to obtain the findings.

There are many ways to demonstrate the inefficiency and waste of short-range financing of the kinds of research which must be conducted on a long-range basis with stable research staffs to obtain any useful results. One way is to look at the costs of hiring and training research staffs and building them into the well-coordinated, effective teams which are required for long-range, interdisciplinary, programmatic research. The magnitude of these costs are more easily seen if we look first at their counterpart in business enterprises.

The value of the productive capability of the human organization of most business firms is likely to equal or exceed the current value of their inventories, equipment, and buildings. An indication of the value of a firm's human organization can be obtained by asking its president, officers, and managers the following question:

> Assume that tomorrow morning your firm has all of its buildings, equipment, offices, and physical assets but no people except for the president and he had to start the process of hiring, training, and rebuilding the organization to its present level of operating efficiency, how much would it cost in terms of the amount of your annual payroll? Would it cost one-half year's payroll, one year's, two year's, five year's, ten year's or more?

This same question can be asked, of course, of the heads and administrators of governmental agencies. It could also be asked of the President of the United States with regard to the great executive branch of the U.S. Government including all parts of the Department of Defense.

The first response of a president of a firm or head of an agency or university to this question is an expression of dismay. He finds it hard to contemplate such an eventuality. The usual remark is, "We never could do it. We never could rebuild this organization in today's highly competitive market." The president, or head of an agency, will

then give his estimate of the cost. For most firms or governmental agencies, the amount, as estimated, will range from to 10 times the annual payroll. Three to five times the payroll are typical estimates. The more highly educated and trained the personnel of the organization is, the larger is the amount which is felt will be required to rebuild it. For universities, the estimates I have been getting range from 10 to 20 times their annual payroll.

Now let me apply this to our own institute, to demonstrate the importance of stable financing. In my judgment, it would require at least 10 times our annual payroll to rebuild our present staff if we had to start from scratch. But let me be conservative and use one-half that estimate. Five times our present payroll is approximately $15 million. That amount represents the value of the human organization of our institute to the University of Michigan, to the State and to the Nation.

When our Institute is compelled to curtail research projects by, for example, 10 percent because of the unstable financing of our research, the impact is felt on our staff and usually results in some curtailment in one form or another. If a 10 percent cut in project funds results in a 5 percent decrement in the value of our human organization, this unstable financing would represent a loss of $150,000. Actually, the negative impact is apt to be greater than this figure indicates. Unstable financing, which causes insecure jobs and uncertain pay, often motivates able researchers, for family and similar reasons, to take other jobs or even go into a different career. Sometimes these jobs are teaching positions or jobs in industry.

Long-range stable financing is, consequently, very important for research institutes as this analysis based on human resource accounting reveals. Unstable financing causes losses in the human organization of research institutes and centers which exceed substantially any short-run financial saving in the grants or appropriations. From the standpoint of national well-being and national resources, unstable financing of research is tragically wasteful.

There are few research institutes of the kind which I have described in American universities, but they are badly needed to carry out major research programs focused on the serious problems our Nation faces. The Federal Government can readily encourage and facilitate the establishment of such research institutes. This can be done by grants to universities specifically to launch and to maintain social science research institutes. This could be an important activity of the National Social Science Foundation.

There is an underlying cause for the lack of institutes like the Institute for Social Research in American universities. The limited research funds available for social science research causes great pressure on granting agencies to use whatever financing is available to support the projects of individual investigators. A sizable increase in funds for social science research will increase the likelihood over the long run that the kind of research institutes which I have described will be established in American universities.

I feel, however, that it is highly desirable not to wait for those long-run developments, but to use Federal research funds to encourage the top administration of at least a few of our leading universities

to establish the kind of social science research institutes which I have described. This can be done by making some Federal funds available specifically for this purpose.

These sums should not be project money. Project financing should be continued and substantially expanded. It is an important and essential form for the financing of research but it is not the way to provide core support for research institutes. Nor should these funds for financing research institutes be given to universities as undesignated block or institutional grants. When Federal or private foundation grants go as undesignated funds to a university, the grant almost always becomes another form of project money for individual investigators. Committees within the university become the granting agency rather than the Federal agency or foundation. Undesignated block grants to universities are not likely to be used to create the kind of research institutes we have been discussing.

From what I have said, I am sure that it is obvious that adequate support for university-based research institutes will require substantial funds. They are urgently needed, however, for graduate and post-doctoral training and for the kinds of research on the serious problems that our society faces. I would like to urge strongly, therefore, that those who are taking the leadership in establishing the National Social Science Foundation have a perspective over the next 5 to 10 years of very substantial increases in funds to support the growth in social science research which is so badly needed.

There is one other activity of research institutes which I would like briefly to discuss. One of the valuable roles of large research institutes of the kind I have been talking about is to collect important social and economic data on a regular periodic basis. The prepared statement I submitted is not clear in this regard. It talks about the importance of urging Federal agencies to expand the kind of data that is being collected and it gives the impression that all of this work ought to be done entirely by Federal agencies. I think it is undesirable to have all the data collection done solely by Federal agencies. It is important to have survey research centers in universities do some of this data collection as well as having the Bureau of Labor Statistics, the Statistical Reporting Service of the Department of Agriculture, Census Bureau, and similar Federal agencies do it.

There are two important reasons for having some of this data collection done in university-based research institutes including survey research centers. In the first place, they have done and are doing important methodological research which has been of great value to the Federal data collection agencies. These university-based centers have been sources also of much knowledge of what data should be collected regularly and how to interpret and apply the information obtained. This knowledge of what to measure and how to interpret the results comes from the extensive, substantive research and theory development occurring in university-based research centers. To conduct this essential methodological and substantive research, the university-based research institutes need funds. An essential source of these funds is financing by Federal agencies of these survey research centers for collecting on a regular, periodic basis some of the social and economic data that are needed. These centers might well be asked to collect those

kinds of data which are most difficult for Federal agencies to obtain, or which are particularly complex in character, or which are most appropriately kept available for researchers in university-based data banks.

One final point I would like to emphasize, I do not wish to give the impression that I am critical of the individual investigator. I am not. Individual investigators have made and are making great contributions. They have had and they will have a very important role in research. I am very eager to have adequate project and other support for them, as well as having both core and programmatic support for the research institutes. I am eager also to have research institutes aid the research of individual investigators by providing them with unique resources. This is occurring now and will become much more widespread as research institutes grow in number. They will collect substantial bodies of data which will serve as data banks for individual investigators. This is illustrated by the work of our own institute. Our nationwide studies, conducted since 1947, of consumer savings, indebtedness, liquid asset holdings, motivation and behavior are a gold mine of data for analysis by individual investigators. This is also true of the data we have collected in our studies of political motivation and behavior. These data are being studied by many individual investigators in a large number of universities. Data banks created by research institutes can greatly facilitate the work of individual investigators.

I would like to make one brief suggestion with regard to encouraging mission-supported social science research on the part of Federal agencies, and I hope that the plan will spread from Federal to State and municipal governmental units. When M. L. Wilson was Director of Agricultural Extension Service of the Department of Agriculture, he proposed the idea that the State extension services would accomplish more per total dollar expended if they spent 5 percent of their budget on quantitative research to evaluate and to guide their activities. Based on many studies we have done, I am convinced that there is great merit in Mr. Wilson's idea. If his proposal were tested in a number of Federal agencies and departments, I am reasonably confident that his formula would achieve greater results per dollar expended than is now the case. I do not know whether 5, 3, or 1 percent is the optimum amount to use for studies for program guidance and evaluation but this optimum percentage can be determined through research.

If the Congress would encourage the administrators of Federal programs or agencies to test——

Senator HARRIS. That is a rollcall. This is the only other thing we need today, right now, to mess up our schedule. It calls to mind the fact that legislators are called upon to legislate every now and then.

Dr. LIKERT. It is very important.

Senator HARRIS. I think we have time perhaps for you to finish your statement.

Dr. LIKERT. All right, let me do so very briefly. If administrators were encouraged to test the soundness of Mr. Wilson's proposal, it would increase substantially the amount of mission-oriented research which is conducted or supported by the Federal Government. It would result, moreover, in an improvement in governmental services or a reduction in costs or both.

Finally, with regard to S. 836, if the Congress wishes to increase substantially the amount of social science research—and I strongly believe this highly desirable—then there is need to establish the National Social Sciences Foundation. It is very important in my judgment to have multiple channels through which Federal funds flow to support social science research. Moreover, it is important that no one channel handle an unduly large proportion of the total amount available. Compared to the proportion of funds in other fields of science going through a single channel, the funds for basic social science research now going through the National Science Foundation is large—it was 31 percent in 1966. If there is a substantial increase in Federal funds for basic social science research and it all goes through the National Science Foundation, there will be too large a proportion, in my judgment, going through one channel. By this I do not mean to sound critical of the National Science Foundation. I have a very high regard for the NSF and feel that it is doing an excellent job. My concern is that I feel it highly desirable to have many different persons serving as gatekeepers of the channels through which funds flow for the support of basic research.

Multiple channels, each controlled by a different group of administrators, seems to me to be the best plan yet developed to increase the likelihood that really creative and innovative research will find support. Any really new, innovative research idea is by its very nature, likely to be seen by established scientists as radical, unrealistic, or crackpot and is likely to be turned down. The proposal for the bubble chamber, for example, was turned down when first submitted to Federal research fund sources for support. After a small grant from the University of Michigan's memorial Phoenix project launched the bubble chamber research and demonstrated its soundness, ample funds from Federal sources were readily available. The subsequent research on the bubble chamber resulted, as you will recall, in Donald Glaser's being awarded a Nobel Prize. The likelihood that a far-out project which later pays off handsomely will find support is increased substantially, I believe, when there are multiple channels of financing. Moreover, some of these channels should be encouraged to use a portion of their funds for high-risk projects.

It is significant that in the physical and biological sciences these multiple channels exist for the flow of funds to support basic research. I believe this is equally essential in the social sciences. The National Social Science Foundation is needed for this purpose.

The National Social Science Foundation is needed also to increase the visibility and status of social science research and the role of social scientists in helping to cope with serious problems. I would like, therefore, to support the statements made by those who have testified previously concerning the importance of increasing the visibility and the role of social scientists so that they can more readily make the valuable contributions to national affairs and the solution of national problems of which they are capable.

Senator HARRIS. A very, very good statement, Dr. Likert. I appreciate it very much. The fact I do not have time to go into some discussion with you about it, I want to assure you, does not indicate any derogation of what you have just said. Particularly, I think what you

have had to say about larger scale social science research, both in terms of the length of time involved and also in the scale of the problem to be studied, is a really very important factor in this discussion.

Dr. Gardner Murphy of the Menninger Foundation testified along the same line.

I also like the last page of your statement concerning why you have decided to support S. 836, your reasons for it, and also the cautions which you expressed, which I think are very real factors that this subcommittee must take into consideration. And I might say they are exactly what we have in mind. We expressed exactly the same feelings that you do, that this would be an additional and not an exclusive source of funding.

Dr. LIKERT. I am assuming that the other funds would continue, and would continue to grow as they have in the past.

Senator HARRIS. Yes. I think we could go into a lot of details why we believe that is so, but I think it is a proper assumption which is otherwise previously documented in this record.

I like what you have to say about the role of the proposed Social Science Foundation and your detailing what your own institute does. And so I think you have been very helpful to us and I am only sorry that I do not have the time to go into some lengthier discussion.

Thank you very much.

Dr. LIKERT. Thank you very much.

(The statement previously referred to follows:)

STATEMENT BY DR. RENSIS LIKERT, DIRECTOR OF THE INSTITUTE FOR SOCIAL RESEARCH OF THE UNIVERSITY OF MICHIGAN

Senator Harris and Members of the Committee, this committee is to be commended for its inquiry into social science research and the role of government in such research. The social sciences—and I include all of the allied sciences of social organization and human behavior—have greatly changed their character in recent years. Their capabilities have very greatly increased with respect to accumulated basic knowledge, with respect to the number of qualified scientists, and with respect to proven procedures and technologies for application to matters of public concern. The Federal Government has been a major force in this maturing of the social sciences. The social sciences are today a prime resource for understanding many of our most pressing problems, and the further development of the social sciences is essential. It is therefore timely and important that there be a search, such as you are conducting, toward a sound public policy concerning the support, the conduct, and the use of social science research. I am pleased to have this opportunity to offer my views on these matters.

It may be helpful to the committee to have a brief preliminary statement on the background for my views. As director of one of the larger social research institutions in the United States, I represent an aspect of the social sciences that is, to many people, not well known and not well understood. The Institute for Social Research is in its twenty-first year. Although a part of The University of Michigan, it is virtually self-supporting through grants and contracts with research sponsors. About 60 percent of our annual operating revenue comes from Federal agencies and about 30 percent, equally, from private foundations and private business. The research of the Institute covers a variety of social and scientific issues from the perspective provided by the disciplines of economics, mathematics, statistics, psychology, sociology, social psychology, political science, epidemiology, and others. Most of this research is concerned with basic disciplinary science, while the rest is directed toward the understanding of contemporary social issues through programmatic, problem-oriented, interdisciplinary investigations and studies of research method. Our studies aim to deal in depth, and over an extended time period, with problems that require both a concern for basic scientific discovery and also for the interpretation and use of the findings. We

hold that both the basic sciences and also the public interest is well served by this problem-oriented approach. There are presently about 75 full-time senior scientists directing the work of this Institute and I have consulted with them in preparing this statement. There is available a brochure describing the research programs of the Institute, and I can provide copies for your use.

The earlier testimony and records of this committee include the essential facts concerning Federal support for the social sciences and include some strong, and, in my opinion, sound views concerning the need for enlarging substantially the resources of social science and the need for better integration of the social sciences into the planning and program activities of Federal agencies. While I support these general views, I do not consider it useful at this time to repeat them nor to offer further supporting arguments and illustrations. Instead, I wish to use this opportunity to deal in some detail with one aspect of the current state of the social sciences which appears, from the perspective of my own experiences, to be particularly deserving of your attention.

My remarks will be organized according to the specific questions stated by Senator Harris in his invitation to these hearings. In each case, however, rather than attempting an inclusive response, I shall remark particularly with reference to the need at this time to provide for the encouragement of certain changes in the way in which social science research is organized and funded. For this reason, I shall preface my specific responses to Senator Harris' questions with a general statement of the main theme of my remarks.

THE ORGANIZATION OF SOCIAL SCIENCE RESEARCH

My main theme is that we have come to a stage in the development and use of the social sciences when it is imperative that there be a more purposeful and more coordinated program for creating institutions capable of dealing with newly emerging research problems and opportunities. I trust you will allow a brief historical diversion to explain my point.

The early history of the social sciences, like that of the older sciences, is largely one of discoveries by investigators working alone or with a few colleagues. Such investigators, largely in universities, made their contributions on the basis of limited, tentative, exploratory, short-term work. The time perspective was rarely longer than a year or two. The resources for getting basic research information were restricted, and most investigators worked only with such information as they could get by personal time and effort. The scale of the work required concentration on theoretical issues, or on limited methodological problems, or on application efforts, but rarely permitted an integrated approach across these three aspects of a total research effort. These conditions were unavoidable, and even appropriate for the early stages of the development of the social science disciplines. It is, furthermore, in my opinion, one of the modes of social science research that is of great value, that extracts the best contributions from many social scientists, and that is appropriate for disciplinary development and for many research problems.

More recently we have seen the beginning of the development of organizations and institutions designed to extend social science capabilities to new kinds of problems and to begin to deal on a scale of realistic scope with problems previously treated on a fragmentary basis. Some examples will illustrate this point.

The first pressures in this direction came in connection with economic problems and in connection with the collection of basic economic information. Some permanent agencies were begun many years ago out of these pressures, and we now have the Bureau of the Census, the Bureau of Labor Statistics, and others including some outside of the Federal government, that provide for all interested social scientists an information resources for research that tremendously enhances the efficiency of research and that allows the treatment of economic problems on a realistic national scale. Another example of what I have in mind is the emergence, much more recently, of a few private or university-based social research organizations that have attempted to introduce conditions for social research that are compatible with the modern needs and opportunities. The Brookings Institution is one example. It seeks to provide resources and staff, as well as coordination, so that programmatic research may be conducted over a relatively long span of time and on a relatively large scale on fundamental problems of public policy. The results, in my opinion, far exceed those that could have been obtained by the same people working as individuals.

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Another example is the Bureau of Applied Social Research at Columbia University, which has made notable contributions to the understanding of social change through the provision of a research facility, and a continuing staff, for a concerted effort spanning the theoretical, the methodological and the applied aspects of important social problems. Our own institution, the Institute for Social Research at The University of Michigan, is another example. This organization arose initially because some colleagues and I saw the need for an academic facility for the conduct of large-scale and continuing sample surveys oriented toward problems of an interdisciplinary nature and toward both theoretical and applied ends. We wanted also to provide a training facility for advanced research personnel. This conception was clearly a timely experiment in the organization of social research, as shown by the growth of this institution, by its expansion into related fields of research, and by its survival even without specific fiscal provisions for its institutional support. There are some other examples that could be cited, but they are few in number and, although highly effective in their respective spheres, all together they are pitifully inadequate to deal effectively with the full range of social research problems that face this nation.

It will be my theme, in the remarks that follow, that the social sciences are now at a stage of development in which it is essential that there be encouraged the formation of organizations and institutions capable of conducting social science research in ways that supplement but do not replace the existing resources for research. Such institutions must be capable of pursuing certain problems over a span of many years until they are resolved; they must be capable of getting basic information on a scale appropriate to the problems they are asked to comprehend; they must be capable of dealing with social issues in their natural complexity without necessary restriction to disciplinary boundaries; they must be capable of dealing in a whole way with the full spectrum of research from methodological innovation, to basic theory development, to experiments and demonstrations in application of the results; they must be provided with facilities for research—buildings, computers, data libraries, laboratory equipment and the like—for social science can no longer effectively be conducted without such resources; they must be provided funds to enable them to train a new generation of social scientists who are competent to work within such organizations and are engaged by problem-oriented interdisciplinary ventures of public concern.

I remind you that it is not my view that such institutional developments should diminish social scientific endeavors of other kinds, for we will in the future as in the past rely on the researchers who are less institutionally constrained to provide a share of new ideas and to provide innovative interpretations of the accumulating body of knowledge about society.

I now address myself to the specific questions raised by Senator Harris.

PROBLEMS CONCERNING FEDERAL SUPPORT OF SOCIAL AND BEHAVIORAL SCIENCE RESEARCH

The increase in Federal support for the social sciences in the last few years has undoubtedly had a crucial and beneficial effect upon the development of social science research. Aside from the increasing amount of research aided by this support, I wish to commend those Federal agencies that have taken the responsibility, largely out of their own wisdom and concern, to see that this support serves also the aim of achieving a healthy balance among various research problems that claim attention, and the aim of developing social science manpower and institutions for the future. They have attempted, within the severe restrictions of their missions and budgets, to mobilize and coordinate the diverse elements that make up social science as a whole and have responded as best they can to the views of our most able social scientists regarding the long-term development of the social sciences and the training of competent scientists.

While I acknowledge these efforts toward balance and long-range development, the achievement of these goals is uncertain and is impeded by the existing methods of policy formation, administration and financing. Since the Federal Government is now and will continue to be the dominant source of support for social science research, it is essential that there be specific and continuing attention to these matters of balance and longer-term development. I will mention four problems in this context.

1. There is a continuing dilemma as to the balance between applied, mission-oriented research on the one hand, and basic scientific advances on the other.

In recent years, Federal support has been divided about equally between the two, and I regard this as appropriate. However, this equal balance, in my view, has occurred not so much by deliberate policy and intention as by the default of those agencies that should be making extensive use of mission-supporting social science but thus far have failed to do so. In the discipline of psychology, for example, which is relatively advanced in some applications, there is an imbalance, with much too little basic research on personnel selection and personnel training in relation to applied research. It is virtually certain that there will be in the next years a very great increase in the demands for short-term applied research, and this is to be encouraged. There is a serious risk, however, that such developments will unduly divert our limited scientific manpower resources toward applied research at the expense of continuing basic studies. I believe, therefore, that steps must be taken now if we are to sustain a reasonable emphasis upon basic scientific investigations. Both applied and basic work need to be enlarged, but the basic research is the more vulnerable and needs legislative provision for explicit support and encouragement. One means for maintaining a balance is to have some institutions with research missions that include *both* the basic and the applied work.

2. Some of the Federal support in the social sciences has been allocated for "in-house" work, some for external work through contracts and grants. High quality work can be done in both of these ways. In general, the Federal agencies themselves have emphasized social science research on matters closely tied to agency mission and they have mounted certain large-scale information activities, such as those of the Census Bureau and the Bureau of Labor Statistics, which are essential for both research and Federal administrative and policy purposes. In general, also, the external contract and grant support has emphasized basic research and smaller-scale, shorter-term research activities, primarily in universities. In my opinion, this trend toward a division of Federal resources between internal and external research units has not presented a serious problem during the recent years, but it threatens to present a problem in the near future. There is a risk in locating all of the major social science data resources within the Federal Government, and there is a risk of misuse of manpower and institutional resources if the universities and the various private institutions are restricted to smaller-scale, short-term basic research work. To forestall a serious problem, it will be necessary, in my opinion, to moderate the sharp division of work that appears to be emerging. Some balance must be sought in this matter so that Federal agencies will undertake some basic studies on matters of pressing public interest and so that there may be external research programs that are of substantial scope and of pertinence to current public interests. The tasks of data collection, methodological development, theory development, and application should be shared between governmental and other agencies. An internal-external difference in emphasis is one thing, but an overly sharp separation of activities and purposes would be harmful.

It has been possible, in only a few instances, to apply Federal funds to the development of non-Federal data acquisition programs of significant scope. As an example to illustrate the feasibility as well as the need, I mention the work of the Institute for Social Research in the area of basic information concerning the participation of citizens in political activity. The Institute has helped to create an international consortium of over 80 universities that contribute modest funds and staff aid toward the creation of joint computerized data library. This joint facility allows low-cost access by all political scientists to a large volume of information about voter behavior and elections, and has multiplied, in the space of a few years, the volume of first-class research in this critical aspect of societal functioning. The financing of this effort is extremely hazardous and painful, in spite of its proven value. We acknowledge the help particularly of the National Science Foundation and of the Ford Foundation in finding means for the pioneering work, but we note also that the future support of this, and of other social information facilities, is problematic under present Federal practices and appropriations.

3. The present arrangements for the allocation of Federal funds for social research result in a serious neglect of certain kinds of research. Examples would be the following: (a) Problems that lie at the boundaries of disciplines, particularly between the social science disciplines on the one hand and the physical and life sciences on the other, are often the frontier problems of science, yet they tend to be neglected by discipline-oriented fund-granting agencies; (b) The Federal

policies regarding the duration of fund commitments have required small-scale, piecemeal approaches where, in many instances, a longer period of assured support would be much more efficient and more productive; (c) There is too little support for continuing, large-scale collection of basic social information of kinds that are needed both by social scientists for basic research and by government agencies for their policy and administrative purposes. As a consequence of the last two points (concerning short-term support and basic data collection programs) we still lack comprehensive and generally useful statistics on vital matters relating, for example, to transportation, mass communication, housing, crime, recreation and race relations.

4. The neglect of the kinds of research I have mentioned can be ameliorated in some degree by the further development of interdisciplinary, problem-oriented research institutions. Such institutions can encourage effective work on problems that involve the maintenance of a multi-disciplinary research staff; they can encourage longer time perspectives by the provision of continuity of work over periods longer than the span of short-term projects; they can manage the staff and physical facilities needed for large-scale data collection and data library administration. Federal policies and practices, however, need to be altered so as to be compatible with such developments.

The Federal agencies supporting external social science research have been unnecessarily handicapped in their efforts to aid the development and maintenance of permanent social research organizations having broad capability and adequate staff resources. They have been required unduly to support specific projects or studies, usually of short duration. Continuity in research has been difficult to achieve and much of the benefit from such studies is lost through the dispersal of staff and records following the conclusion of a study. To an increasing extent, social research requires physical facilities and staff support of kinds not ordinarily available to an individual researcher. The necessary research facilities in the social sciences, as in the physical sciences, are becoming rather costly so that permanent organizations are needed to allow efficient use and sharing of costs. The Federal fund-granting programs thus tend to perpetuate individualistic approach to research at a time when emphasis is needed toward the building or research institutions.

It may not be clear to you what kinds of physical and staff facilities I have in mind. Let me draw examples from my own institution, which attempts to engage, among other things, in a program of periodic national population surveys. This research work requires that we maintain at all times, in operating condition, a field organization of some 250 professional interviewers: it requires that we conduct continuous surveillance over the quality of the field interviewing and do research on interviewing methods; it requires that we maintain a computer facility capable of converting mass interview data into usable summarized form; it requires that we maintain a staff of mathematical statisticians capable of building efficient samples of our national population. These facility costs are high and necessary. They are presently funded on a haphazard, piecemeal manner from many sources, and this adds to the cost as well as diminishes the quality of the work. The difficulty of funding such institutionalized research facilities explains why there is presently a serious shortage of such facilities and we are unable to meet the many requests from other institutions for the use of our facility. The necessity of enlarging and maintaining such facilities has not been adequately recognized by present Federal funding policies and practices.

I turn now to the second of Senator Harris' questions.

THE ADEQUACY OF EXISTING PROCEDURES FOR GOVERNMENT GRANTS AND CONTRACTS FOR RESEARCH IN THE SOCIAL SCIENCES

The procedures of many of the fund-granting and contracting agencies, with respect to the social sciences, are on the whole remarkably sound. In this respect I would particularly mention as examples the National Science Foundation, the National Institutes of Health, the Office of Naval Research, and the Air Force Office of Scientific Research, for they have created models of excellence in combining prudent administration with an awareness of the needs of science and of scientists. Some other Federal agencies with large opportunities and resources have not done as well.

Certain procedural matters often and seriously interfere with the effective conduct of social research. Those few agencies that overcome these procedural

and administrative handicaps, at least in part, have taken steps such as the following:

1. Undertaking studies that technically conform with annual budgeting, with restrictions on the commitment of funds for extended periods, but which allow somewhat more realistic time perspectives in research.

2. Introducing some degree of flexibility, in negotiation, review and authorization procedures for grants or contracts, with some regard for their varying character and the cost of delay.

3. In the case of contracting agencies, engaging competent social science consultation or staff work in the specification of the research to be contracted, with the result that competent social scientists are then willing to undertake the work as specified.

4. Obtaining qualified agency staff or qualified consultants to assure for the agency a coherence in overall research plans and to assure high standards in the quality of research.

I am aware that weaknesses of procedure and administration in some Federal agencies do not apply to all agencies and are not unique to the social science programs of the agencies. Nevertheless, they are serious handicaps to the effective use of limited resources and they are subject to improvement, as is shown in those cases where an agency has taken seriously its obligation to create an effective social science research program.

THE ADEQUACY OF THE PRESENT LEVEL OF FEDERAL SUPPORT AVAILABLE FOR RESEARCH IN THE SOCIAL SCIENCES

The amount of Federal support for research in the social sciences has increased annually. The current annual amount of support is quite large in comparison with past years. It is useful to note, however, that relative to our national resources, we allocate *less* to the social sciences than do several other nations.

It is my opinion that a substantial increase in Federal expenditures is needed, and that this increase should go both to agencies for their own mission-oriented research programs and also to those agencies that sustain external basic and applied research. The reasons for advising a large increase in support are simple: many agencies make little or no use of the present capabilities of the social sciences in the planning, administration and evaluation of their programs and as a result have higher costs and lower effectiveness; the social sciences are prepared to make effective use of additional resources; we must speed up the development of scientific manpower against future needs and opportunities, and this is accomplished largely through university-based research programs linked with advanced and post-doctoral training programs; there are urgent problems of public concern that require research support and are not getting it.

I am aware that some social scientists have the view that the amount of Federal support is now in balance with the capabilities of social science to make good use of support. In my opinion such a view might arise in certain limited fields of research that have been favored, and among certain persons whose own competence and status give them ready access to personal support; however, such a view is unrealistic in terms of the work that lies ahead and in terms of the rapidly increasing number of younger, well-trained social scientists who are prepared to accomplish much or little, depending upon the resources we provide for their use.

The deficit in support is particularly critical in connection with the funding of existing and proposed new social research institutions.

To support my contention that the present funds are grossly inadequate, let me mention a few examples of things that are badly needed, that are well within the competence of available social scientists, and that are being neglected at great risk:

1. Major Federal programs, involving very large expenditures, are still being launched with little or no provision for preliminary feasibility studies, for concurrent assessment of the progress of the programs, and with no provisions for systematic study of program effectiveness. As a simple measure of economy and fiscal prudence, every major program must include provision for social science contributions to planning to administrative surveillance, and for assessment of achievement of goals. The neglect of this in many Federal agencies is highly regrettable and wasteful.

2. We still lack the facilities and some of the methods needed to provide periodic assessments of trends in the "social health" of the nation (e.g. with refer-

ence to crime, education, personal values and goals, community conflict, etc.) on a scale comparable to the periodic census reviews of the population, of physical health employment, and wealth. Such a program is feasible and, in my opinion, it is essential if we are to have the basic information for legislation and for administrative policy on these vital matters. We cannot seek out causes and cures without having basic information about the conditions and trends.

3. There is a great need for coordinated programs for obtaining and making available certain kinds of information needed for basic research as well as for the several responsible Government agencies. These voids tend to occur because no one agency alone has the need and the resources for the task yet the joint need is sufficient to demand that the information be obtained. I have mentioned some examples. Other voids occur in relation to the problems of public transportation housing, recreation, race relations.

4. Finally I mention an example that is a technical matter presently of concern mainly to social scientists. We are, in my opinion, at a stage in certain fields of social science in which the next major advances may come from time series studies of persons, communities, organizations and institutions. The power of time series study methods has been amply demonstrated in the field of economics which is relatively well supplied with basic data for such investigations. We need particularly at this time to allocate substantial sums to studies in other fields, extending over several years, that will allow discovery of the vital processes of change and accommodation in our society. Such ventures are now virtually prohibited for lack of sustained support and appropriate institutional bases for their conduct.

These four points are only illustrations of the need and the opportunities. Others could have been mentioned, such ast he need to explore the critical problems of the diffusion and use of technical knowledge, the wider application of the results of research on organizations, and the further understanding of means for conflict resolution.

Again I wish to make concrete the implications of these remarks. I can do so by mentioning the efforts in our institute to provide in one specific context (a) periodic assessments of social and economic trends, (b) information needed by many public and private agencies but not supportable by any one, and (c) major theoretical advances derived from time-series investigations extending over many years. I choose as this example our program of quarterly surveys of consumer finances. This program began about twenty years ago with a series of annual studies of family income, indebtedness, and expenditures for consumer durables; this work was supported by the Federal Reserve Board to provide information needed for its policy decisions. In subsequent years it became evident that the information was wanted by other Federal agencies and by many private firms as well as by other researchers than those on our own staff. It became evident also that the efficiency and power of the research would be multiplied by planning for several years, by uniformity of research procedures across the years, by enlarging the investigations to learn much more about the motivational aspects of consumer behavior and by providing more frequent assessments of consumer motivation to buy durables or to save. We have managed to accomplish these things, but only through costly and inefficient efforts, through the diversion of scientific staff time to fund-raising. No Federal agency was in a position to finance the activity on a sustaining basis; no private source had enough interest or resources to undertake continuing support. Over the years, over 100 different sources have contributed to the maintenance of this work. We have minimal support for the present year's program; we do not know whether we will be successful in sustaining it next year. Meanwhile the research product has become an important source of information for many people in basic research as well as those in policy-making positions who have come to depend upon this information. Books have been produced which have significantly changed our conception of the conditions that determine consumer response to economic changes and in turn their impact on the stability of our economy. Other ventures by us and by others have failed to survive or to produce their expected useful results because of the inadequate and haphazard financing available at this time.

In summary, it is my view that total amount of Federal support for social science research should be much greater than it is at present, that such supplemental support would be well used and would repay its cost, and that the social sciences have been unduly neglected in relation to our total resources available for science.

WHAT CAN CONGRESS DO TO BRING ABOUT PROPER RELATIONSHIPS BETWEEN SOCIAL SCIENTISTS AND THE GOVERNMENT?

There are several actions that can be taken now or soon by the Congress to insure a mutual supportive relationship between social scientists and the government. I will mention six specific things that might be done.

1. Substantial funds should be expressly allocated to appropriate agencies to be used in forming now institutions for social research and for use in further developing the capabilities of those few institutions that now exist.

2. There should be a review and some change in the Federal policies regarding the terms for funding external research programs. The restriction of funding, in a majority of situations, to a single year—or a few years at most—is presently a great handicap to the proper growth of the social sciences and a handicap to the use of social sciences by the Federal agencies.

3. There should be early legislation enabling and directing Federal agencies to initiate certain programs for the provision of basic social statistics that are needed by social scientists and by public agencies across the country. Such programs might be modeled after the highly successful programs of the Census Bureau, the Agricultural Statistics Division, and the Bureau of Labor Statistics, but should deal with information of other kinds.

These three recommendations relate to my main theme concerning the need for adapting the scale and the organization of social science research to better fit our present public needs and opportunities. I should like to mention also, however, three additional points that bear on your question but which have more general backgrounds and justification which I will not here elaborate.

4. Legislation that creates new public programs of any scope, or alters the mission definition of existing public programs, should include specific funding and directives for the administrative use of social science resources in program planning, program surveillance and program assessment. The program planning and auditing should be conducted with the same care that is now given to the fiscal budgeting and auditing for such programs.

5. The National Science Foundation has gradually broadened its support to include some types of social science research that were initially excluded. In my opinion, this broadening should be carried further, and amply funded, to include any social research in any discipline provided that the proposed research rests upon scientific methods. Such a broadening would encompass some aspects of research, for example, in law, economic psychology, and history.

6. Congress should, in creating and defining the operating conditions for Federal agencies, include provisions that encourage representation from the social sciences in the staffing of such agencies.

RECOMMENDATIONS REGARDING S–836

In our opinion, the weight of the arguments is in favor of the establishment of the proposed NSSF. The chief arguments, to our minds, are (a) the need for an independent agency to encourage research in certain areas not provided for in existing agencies, (b) the need for substantial enlargement of the total amount of social research without overburdening existing agencies, (c) the need to remove some social research in part from the constraints of agencies that have an interest in the research but are not primarily responsible for long-term progress in the field, (d) the need to provide an additional funding source for those research efforts that fall between the humanities and the older sciences, and (e) the need to have an agency for the social sciences that, by its scope and autonomy, will attract to its service exceptionally able scientists-administrators.

The contrary arguments arise from the risks of creating such an agency. In our opinion, if NSSF is established, care should be taken that: (a) the total amount of support for social research is substantially enlarged, not diminished, (b) the number and diversity of sources for support of social science research should not be diminished, (c) NSSF should not be obligated to meet the immediate practical needs of operating agencies of the government, and (d) there should be a recognition that the social science support by the National Science Foundation, the National Institutes of Health, the Department of Defense, the Department of Labor, the Social Security Administration, and others, should be continued at a level not less than at present.

Senator HARRIS. Now, let me say that I have to run over to the Senate and vote. It will only take 5 and not more than 10 minutes to go and come back.

What I will do is this. I will say to you, Mr. Gayle and to Dr. Blanksten, Dr. Stagner, and Dr. Bower, that I have read each of your statements, and without objection they will be placed in the record in that order as if they had been orally presented.

Now, I will be back and I will be able to stay. If any of you are able to stay and would like to in that order—or if for some reason you would like to vary the order, we can—we could have brief discussions. You know what is in your paper. Normally I like to hear it orally, as well because I get more out of it by hearing it. But if you would like to do that, I would as well. I will be back in not more than 10 minutes, and we will just start as if your papers had been presented and discuss them, if you can. If you cannot, I will certainly understand. And I again apologize to you for the trouble we have had this day.

Thank you all very much.

(Short recess.)

Senator HARRIS. It looks like there are going to be several more roll-calls this afternoon so I think the procedure we agreed to a while ago is going to be even more necessary.

Dr. George I. Blanksten.

Dr. Blanksten is chairman of the Department of Political Science, Northwestern University. The biographical sketch prepared by the staff will be inserted in the record at this point.

Biographical Sketch: Dr. George I. Blanksten

Chairman of the Department of Political Science, Northwestern University, Evanston, Illinois. B.A., University of Chicago, 1939; M.A., University of Chicago, 1940; Ph.D., University of California at Los Angeles (UCLA), 1949.

Department of Political Science, Northwestern University, since 1947 (instructor, 1949–50; Assistant Professor, 1950–52; Associate Professor, 1952–57; Professor since 1957; Departmental Chariman, 1956–57; 1963–64 and since 1965). Visiting Professor at: UCLA, 1951 University of Chicago, 1953–55, 1958; Ohio State University, 1957; and Universidad Nacional Autonma de Mexico (on Smith-Mundt program) 1959. Political Analyst, U.S. Department of State, 1945–46; Political Analyst, U. S. Coordinator of Inter-American Affairs, 1943–45; Instructor in Political Science and History, Chicago Public Junior Colleges, 1940–42. Vast study and field experience in Latin America.

Publications—Ecuador: Constitutions and Caudillos; Peron's Argentina; The U.S. Role In Latin America: A Culture Area in Perspective; Social Change in Developing Areas: A Reinterpretation of Evolution Theory; and others. Has contributed articles to professional journals and encyclopedias.

STATEMENT OF DR. GEORGE I. BLANKSTEN, CHAIRMAN OF DEPARTMENT OF POLITICAL SCIENCE, NORTHWESTERN UNIVERSITY, EVANSTON, ILL.

Dr. BLANKSTEN. In many ways it is presumptuous of me to offer my views here on the pending bill to provide for the establishment of a National Foundation for the Social Sciences. Not only has this subcommittee already taken testimony from many qualified and distinguished people on the general question of the relationship between the Government of the United States and social science research, but also—

since the demise 2 years ago of Project Camelot—many professional associations of social scientists have debated a number of the issues involved. Such bodies as the Social Science Research Council, the American Political Science Association, the American Sociological Association, the American Anthropological Association, and the American Academy for the Advancement of Science have struggled with the problems involved in governmental support of research in the social sciences, especially when that research is conducted in other cultures and countries than our own. I can only express my hope that in the observations I offer to you today I might be able to offer a little fresh insight into what I believe to be a question of persistent importance.

Let me make it clear at the outset that I welcome the proposal that a National Foundation for the Social Sciences be established, and I hope very much that such an entity will come into existence in the very near future. I think it clear that in the coming years the Federal Government will play an increasing role in the support of social science research. Views of the future, whether loose predictions or systematic projections, point, I believe, to the Government of the United States as an expanding source of research funds. It would appear, further, that we stand today at a crucially formative stage in that expansion process. Some of the factors endowing this stage with that significance are not difficult to identify. There are a number of indications that private foundations are in the process of diminishing and otherwise changing their roles in the support of social science research. The strange life and death of Project Camelot sharply focused the attention of social scientists on many of the issues involved in the relationship between government and the academician. The very bill under consideration before us today suggests that we stand at the threshold of institutional changes in these relationships. If it is true that our present situation is as crucial as I believe it to be it would follow that the steps that we take, the decisions we make, in the immediate future are likely to determine the nature of much of the world with which we will have to live for a considerable period of time.

While the proposal that there be established a publicly supported National Foundation for the Social Sciences has my general and enthusiastic support, I nevertheless think it important to make a number of observations regarding the nature of the relationship between Government and the research it would assist should such a Foundation be established. This subject was discussed at great length in meetings of a number of professional associations of social scientists in the months immediately following the termination of Project Camelot. During those deliberations I was increasingly fascinated by the thesis, presented by some social scientists, that some basic and perhaps irreconcilable difference existed between the interests of Government on the one hand and, on the other the interests of scholarship in the social sciences. I recall, for example, attending a meeting of the International Studies Association and hearing a speech, made by a very distinguished economist, in which it was argued that the basic function of social science was to seek and speak the truth whereas the basic function of Government was to lie. That distinguished speaker concluded that therefore no social scientist could honorably conduct research supported financially by Government. I do not know if this will come as a surprise to this

group, but that speech was greeted by applause sufficiently vigorous to be regarded as an ovation. Further, you may be familiar with the writing of about a year or so ago of Hans J. Morgenthau, the distinguished political scientist, who also sought to identify a basic difference between the interests of Government and those of the research scholar. In Professsor Morgenthau's view, the social scientist, again the hero in the comparison, was centrally concerned with the pursuit of knowledge and truth whereas that which Government sought was neither knowledge nor truth but rather power.

Let me say that I do not myself subscribe to either of those views. I do believe, however, that there probably is some difference between Government and the academic world. The distinction, in my judgment, is not be found in anything so simplistic as truth versus falsehood or power, but rather in the proposition that academic working conditions differ from those to be found in Government. I should like to urge upon you strongly the argument that should a National Foundation for the Social Sciences be established, it be structured so as to resolve the differences between governmental and academic working conditions in favor of the latter wherever possible. I think this indispensable if social science research of a high quality is to emerge from such a foundation.

Let me give you an illustration of the sort of thing I mean. One of the longstanding characteristics of the academicians' working conditions is that traditionally we have not punched timeclocks. Yet, it has happened to us that some of our colleagues at various universities have had to do this when they undertook to carry out Government-supported research. At my institution these timeclocks are euphemistically referred to as "effort reports." Some of my academic associates have contracts or grants from Government agencies of providing for "organized research." A requirement, perhaps normal in Government but alien to academic working conditions, has it that the scholars involved in "organized" projects must keep records of the percentage distribution of their time between these projects and other activities in which the investigators are engaged. It could be said that that would be a serious enough incursion of bureaucratic working conditions upon our academic campuses if only the scholars with Government contracts were required to execute these "effort reports." However, the administrations of some academic institutions, including my own, have determined that not only the holders of contracts but also all of the academic personnel at the university must file these time reports to assist our budgetary bureaucrats in transferring funds back and forth between private and "organized" public sources. All academic departments at some institutions, including my own, are therefore now called upon to file these "effort reports" covering the time distribution of all members of our faculty, with or without Government research contracts. I think it by now abundantly clear that such an imposition of governmental working conditions upon scholarly enterprise benefits no one. I cannot urge too strongly that a National Foundation for the Social Sciences, should it be established, will permit the people who carry out research under its aegis to function as responsible and creative scholars rather than as punchers of timeclocks. This is but one illustration of the sort of thing I mean when I urge upon you the preservation of academic rather than bureaucratic working conditions in those situations in which they might come into conflict.

Having said that much about differences between academic and governmental orientations, let me move on to a related question; namely, the relationship between research and intelligence. I find this question intriguing in some ways, and I would like to divide the issue into two parts, one intrinsic and the other perceptual.

Intrinsically, it may be difficult to distinguish between research and intelligence. Those who have attempted to establish such a distinction have, in general, sought to base it on any one or more of three notions. The first is the proposition that research seeks to expand the frontiers of general knowledge, with findings grounded in scientific theory and method; whereas intelligence seeks specific data, with emphasis on "facts" rather than on what they mean or other theoretical considerations. A second tack has sought the distinction in the purpose of the gatherer of the information, arguing that if the purpose is knowledge for the sake of knowledge the enterprise can be called research, whereas it is intelligence if the purpose is policy or action oriented, especially if the project is conducted by an action agency of Government. Finally, some have sought the distinction in secrecy versus openness, saying simply that an information-gathering activity, especially if conducted by Government, is intelligence if it or its findings are secret, or research if they are made public.

Considered against such criteria, the late Project Camelot appears to have been a research rather than an intelligence activity:

> What was contemplated for Project Camelot was something . . . probing . . . and . . . with a . . . comprehensive perspective. The methodological details of the study were to be in the hands of the social scientists. There were absolutely no demands for policy recommendation. And, of major significance, all findings were to be unclassified.
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> This policy of making all research findings available to social scientists anywhere and everywhere has to be emphasized. It meant that (the Department of) Defense had no sinister aims for Project Camelot. If it had expected Project Camelot to tell it how to suppress revolutions or how to foment them, it would certainly not have permitted, even insisted on, the principle that findings be unclassified . . .
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> When first approached for contributions to Project Camelot, some social scientists expressed concern lest they be contributing to know-how in suppressing revolutions. They were reassured when they learned that there was no such objective for the Project. If outsiders wonder why Defense would wish to sponsor such a project, they should know that agencies in effect count coups in the research area. Glory is reflected on any agency that produces outstanding research that elicits praise from professionals.[1]

Yet a curious problem remains regarding intrinsic relationships between research and intelligence. Perhaps the best articulation of that problem was formulated by U.S. Senator J. William Fulbright, Democrat, of Arkansas, in the following statement read into the Congressional Record on August 25, 1965:

> I am personally concerned with such projects as Camelot because I believe there lies beneath the jargon of "science" in which these studies abound a reactionary, backward-looking policy opposed to change. Implicit in Camelot, as in the concept of "counterinsurgency," is an assumption that revolutionary movements are dangerous to the interests of the United States and that the United States must be prepared to assist, if not actually to participate in, measures to repress them. It may be that I am mistaken in this interpretation; if so, I would be greatly reassured to have convincing evidence to that effect.[2]

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[1] Project Camelot Staff, "The Camelot Case." (Unpublished manuscript, Washington, 1965), pp. 5–6.

[2] "Social Sciences: Cancellation of Camelot After Row in Chile Brings Research Under Scrutiny," Science, Sept. 10, 1965 (vol. 149, No. 3689), pp. 1211–1213.

Even if we should be able to agree on a formulation of the intrinsic relationship between research and intelligence, the question of the perceptual relationship between them remains. The U.S. social scientist who goes abroad to conduct research financed, wholly or partially, by a Washington agency such as the Department of Defense, the Central Intelligence Agency, or the State Department, must be prepared to cope with questions arising from perceptions which are widespread in other countries. No doubt these questions and perceptions often reflect charmingly unrealistic naivete about the ins and outs of administrative, bureaucratic, and budgetary life as it is lived in Washington. Nevertheless, the social scientist who is abroad on a Government-supported project needs viable answers to a variety of questions raised by even sympathetically inclined foreigners. These include questions such as: "Why is the CIA doing this, if it is not intelligence?" "Why is the Department of Defense doing this, if not for a military purpose?" "If the State Department is doing this, which policy is it for?"

It thus seems clear that both the intrinsic and the perceptual aspects of the question are significant. Both must be resolved, and I hope that we will be taking a fundamental step in that direction if the pending measure establishing a National Foundation for the Social Sciences should be adopted.

Let me now comment on section 10 of the bill before us. This contains two parts. The first provides that the results of research supported in whole or in part by the proposed foundation shall be made freely available to the public. The second part of section 10 stipulates that the proposed National Foundation for the Social Sciences will not use any security classification or otherwise cast a veil of secrecy or restriction over the research to be supported by the Foundation. I think this section an extremely important part of the bill. I cannot welcome too strongly these provisions for the freedom of information and research. In my view the authors of the bill should be congratulated for what they have said in section 10. If this section is to undergo any amendment or alteration, I think it of the utmost importance that such changes be designed to strengthen and expand rather than to restrict the freedom from secrecy envisaged in this part of the bill.

Nevertheless a potential threat to that freedom may be found in section 8 of the bill as it is now written. This section, relating to the coordination of research supported by the National Foundation for the Social Sciences with the foreign policy of the United States, should be given careful thought. The restrictions imposed on social science research because such inquiry may appear at one time or another to be uncoordinated with our foreign policy may very well turn out in the long run to be more costly than the apparent value of such coordination. I should therefore like to point a warning finger at section 8 and to express the strong hope that it not be construed to impose undue restrictions upon the freedom of inquiry which is of central and basic value to research in the social sciences.

Indeed, the entire question of academic freedom is worth our consideration. I have, from time to time, had occasion to reflect that academic freedom has some of the characteristics Mark Twain once associated with the weather—everybody talks about it but nobody does

anything about it. Translated into workaday terms, this may well mean that everybody supports academic freedom as an abstract idea, but few come to its rescue in the specific cases in which it might be involved.

In this context it is worth reflecting upon other restrictions that might be associated with the coordination of social science research with a specific foreign policy or with other policies of the Government of the United States. Do we do research on the great questions our scientific disciplines lead us to, on the one hand, or, on the other, the topics Government is willing to pay for? In a discipline like political science, for example, is a question like whether an academic department should be organized as an integrated discipline or as an omnibus collection of foreign area specialties to be resolved on the basis of what the Government will pay for? Many of us have been taught from infancy to observe the precept that "he who pays the pipe calls the tune." Applied to the issue before us today, this might mean that Government gets what Government pays for. When Government supports social science research, it may be that Government buys information and that the seller of research must provide his customer with a commodity satisfactory to him. In my view, much of the difficulty in which we found ourselves in the wake of the Camelot fiasco and the recent revelations of the support by the Central Intelligency Agency of various academic enterprises has flowed from this problem. It should be clear today that the scholar who sells his services to Government and therefore abandons the basic working conditions essential to academic life and work in order to take on the working conditions and regulations of his employer performs a disservice to both science and Government.

I have visited the Pentagon near Washington, D.C., and the one in Cambridge, Mass. In both a guard stands at the door to examine my credentials. Both demand permissions and passes. Both subject professional and secretarial personnel to security tests of one kind or another, all of them perhap relevant governmental questions of credentials, permissions, and passes, but none of them relevant to scholars' criteria of training and ability.

On the one hand I wish to avoid polemic, but on the other I believe there is a basic problem which must be faced. Let me illustrate with a concrete instance arising from my own experience in my institution. For some years my department has had the policy of having at least one visiting foreign scholar per year on our faculty on a visiting basis. I share the view—held, I think, by a majority of my colleagues—that this has been a useful and a wholesome practice. We have had with us visiting professors from Poland, Japan, Czechoslovakia, Mexico, Yugoslavia, and India. We hope next year to have a Soviet scholar on our staff. Some time ago, one of the programs in my department, financed by research funds from the Department of Defense, invited a U.S. Army officer to lecture to that program on my campus on a Defense Department project. Shortly before giving his lecture that Army officer came in some alarm to see me. He had learned that a Czech, probably a Communist, was on our staff that term and feared that the foreign visitor might attend the Defense Department lecture, which would produce trouble in Washington.

Perhaps that trouble is real. I am convinced that much of it stems from the imposition of the regulations and the working conditions of

Government upon the academic world when it is the reverse which should be the case where research is involved, even if paid for by the Government.

No doubt much of what I have said thus far is permeated with caveats and warnings. Obviously I think it important that we be alerted to the potential danger which lurks in pitfalls such as those which I have mentioned. Nevertheless, I do wish to make it clear that I believe that these dangers can be warded off and that fundamentally I welcome the bill under consideration. I am convinced that we need a new Government agency to administer Federal support of social science research, especially that part of it which is conducted abroad. I am cheered by much of what this bill provides for and I earnestly hope that a National Foundation for the Social Sciences will be established. If such an entity were to be created—and if it were to look and act more like a private foundation than like an operating Government agency—we might well be on the workable road at last. The administrative separation of scholarly work from other Government-financed activities is long overdue. When it comes I think it urgently necessary that the research agency be guided by academic rather than by governmental or bureaucratic norms. U.S. Government agencies associated with intelligence, policy orientation, and action should not be the devices through which public support of social science research abroad is administered. I think it by now clear and obvious that this is not a proper role for such Federal agencies as the Department of Defense, the Central Intelligence Agency, or even the Department of State. Insofar as a National Foundation for the Social Sciences could, among other things, provide us with the structure for the administrative separation of research from intelligence and policy action, I am convinced that a long-needed constructive step will have been taken.

Let me mention two further points. In the first place, you are much more familiar than I—indeed, I admire your remarkable stamina in listening to as much of the testimony as you have taken—with many of the arguments which have been raised against the establishment of a National Foundation for the Social Sciences. One of the negative lines of reasoning which I have heard runs to the effect that it would be damaging to organize the social sciences in their own separate foundation, thus cutting them off from the other sciences, especially the so-called hard sciences. I am not persuaded that this is a serious problem. In every university with which I am familiar the various disciplines are organized in separate departments and divisions, and such administrative organization is rarely harmful. Practitioners of some disciplines which lie at the border between the social sciences and other sciences—as for example, anthropology and geography—have voiced concern lest they, like the proverbial lady at the circus, be sawed in half, with parts of their bodies assigned to a National Foundation for the Social Sciences and the rest of their torsos located elsewhere. I would not be surprised if it were to turn out in actual practice that such borderline disciplines might well benefit from the support to be found on both sides of the frontier. In any case I do not believe this to be a serious problem at this time, especially not in the form in which it is usually raised. I believe that reasonably sensible administrative organization should permit whatever interaction is proper and desir-

able across whatever administrative lines might have to be drawn. So long as the administrative arrangement serves the substantive task at hand, instead of vice versa, I believe that there is little to worry about on this score at this time.

Finally, let me enter a word on what is simultaneously and paradoxically a simple and a difficult subject to discuss. I refer to the matter of the quality of the personnel chosen to carry out the work of a National Foundation for the Social Sciences should it be established. On the one hand this is an easy subject to address because it is a relatively simple truism to announce the proposition that the right people should be chosen for the right jobs and the wrong people should be kept out of them. On the other hand, this is sometimes a difficult and a delicate subject to discuss, because it frequently occurs that this principle is not carried out in practice, and much embarrassment becomes associated with discussion of specific instances of faulty personnel practice.

I should like to mention a few specific cases, drawn from my own experience, illustrative of this problem. I hope that you will permit me to discuss these without moving to the delicate and embarrasing situation of having to name actual names. Some years ago I was a member of a research team which had as its task the evaluation of various technical assistance projects in which the United States participated in Latin America. It was easy for us to come to the conclusion that it would be wise to put the right men in the right jobs in those projects, and we said so in our report. However, from time to time we found in the field people who obviously were the wrong choices for the assignments given them. We did not find it easy to report this, naming the names involved, in our final document. If I might mention a second case, I should confess to you that for a time I was associated with Project Camelot. For a few months I was a member of the ad hoc advisory committee to the Army Research Office for that project. Whatever else may be said in retrosect about Project Camelot, I do not think it can be said in fairness that its key people were not properly chosen for their assignments. I heard one man referred to as an unfortunate choice for his assignment in Camelot, but so far as I know this was only hearsay and I myself had no direct contact with or knowledge of that situation. If I may mention a third case, I have had direct personal contact with some of the personnel problems involved in the selection of officers to make decisions on the allocation of funds for the support of social science research by an agency within the Department of Defense. I found, when I was asked to provide references for one of the officers involved that this was one of the few times in my career that I was constrained to respond negatively to the question of whether or not the man involved could be entrusted with money. After he embarked upon his Federal asignment, his work, and that of his agency, was constantly plagued by problems in ethics and integrity arising from the circumstance of the wrong man having been placed in that position. These problems resulted in scandals in the academic community and in the eventual terminal departure of the man in question from the university from which he had taken a leave of absence in order to administer research funds for an agency of the Government of the United States.

As I say, this problem is at once easy and difficult to discuss. It is easy to mouth the general platitude about being in favor of mother-

hood. There are difficult sensitivities in the examination of the specific cases in which motherhood is undermined and attacked. Perhaps motherhood then comes to resemble academic freedom in that everybody is for them but little is done about them. It is not enough to vote for the general principle; it must be strengthened and implemented in specific practice.

In conclusion I wish to repeat in the clearest possible terms my general support for the bill before us. I earnestly hope that a National Foundation for the Social Sciences will be established and that it will provide for an effective administrative separation of the support of social science research from the other activities, especially intelligence and policy action, in which Government is involved. Dangers and pitfalls are numerous; I have tried to point to some of them here. If we are able to avoid a reasonable precentage of them, I think the outlook should be good. In any case, let me voice my confidence in the proposition that the establishment of a properly conceived National Foundation for the Social Sciences should go a long way in pointing the direction in which we must move to resolve many of the current curious problems in the relationship between the Government of the United States and the conduct of research in the social sciences, especially when that research is done in other countries and cultures than our own.

Senator HARRIS. I wonder if you have any additional or summarizing remarks to make.

Dr. BLANKSTEN. I have nothing to add, Senator, to what I have written in my prepared statement, other than I simply want to stress the point that to me one of the main advantages that I would look for in the establishment of the National Foundation for the Social Sciences would be the administrative separation of the support by the Federal Government of social science research from other kinds of activities which the Government engages in. To me, this is quite important, and it is one of the main reasons why I welcome this bill, and I hope that it becomes law.

Senator HARRIS. Well, I certainly appreciate that. You know, this bill, as it was introduced, allows mission-oriented or operating agencies to transfer funds for wholly unclassified—section 7(b)—research to be administered by the National Social Science Foundation. Our idea, I think, was a good one. And that is, until the National Social Sciences Foundation itself could be funded as such a level directly—we do a lot of research which is not really tied to the mission of the operating agency, as for example, the Department of Defense and the AID, and others—we thought it might be good to have some kind of halfway house. I have become convinced in the course of these hearings that we ought to strike that section, or else severely restrict it in some way, and my inclination is to strike it altogether, in fear of creating an obstacle to acceptance of the——

Dr. BLANKSTEN. Yes, sir.

Senator HARRIS (continuing). Foundation, as it starts off, and I think that would be very unfortuate.

Do you have any additional comments you would want to make in response to that?

Dr. BLANKSTEN. Yes, sir. I think that, insofar as there is a difference between the orientations and interests of governmental institutions and

academic institutions, and as you know, there is a section in my testimony on that, I think that wherever it is possible, wherever these differences could be resolved in favor of what I have called academic working conditions, that that would be all to the good, and I think that would very much support and advance the work of this proposed Foundation.

Senator HARRIS. Yes, it is what you said in your prepared statement——

Dr. BLANKSTEN. Yes.

Senator HARRIS (continuing). That caused me to point that out.

Dr. BLANKSTEN. Yes, sir.

Senator HARRIS. Well, I do not have anything further, Dr. Blanksten, except to say how grateful I am for the thought that you have given to what I think is a very serious matter, support for the social sciences by the Federal Government, and the particular bill before us, and I am grateful for your testimony.

Dr. BLANKSTEN. Thank you very much, sir.

Senator HARRIS. Thank you.

Mr. Gibson Gayle, Jr.,

Without objection, we will place in the record at this point a biographical sketch concerning Mr. Gayle, Secretary of the American Bar Association, and insert thereafter, as if read, the prepared statement which he has furnished to the subcommittee.

Biographical Sketch: Gibson Gayle, Jr.

Secretary, American Bar Association and Chairman, ABA Board of Governors' Subcommittee on S–836; Houston, Texas.

A.B., L.B., Baylor University, 1950; Fellow, American Bar Foundation; admitted to Texas Bar, 1950; since practiced in Houston; member, Fulbright, Crooker, Freeman Bates & Jaworski; instructor at University of Houston Law School, 1951–55. Secretary-Treasurer of Baylor Law School Foundation.

Chairman, ABA Junior Bar Conference, 1959–60; House of Delegates since 1960; Secretary since 1963; Houston Bar Association; State Bar of Texas (President, Junior Bar Section, 1954–55; Director since 1966); International Association of Insurance Counsel.

STATEMENT OF GIBSON GAYLE, JR., SECRETARY, AMERICAN BAR ASSOCIATION

Mr. GAYLE. Mr. Chairman and members of the subcommittee, my name is Gibson Gayle, Jr. I am a lawyer practicing in Houston, Tex., and presently serve as secretary of the American Bar Association and chairman of an ad hoc committee of its board of governors that studied and reported favorably on S. 836 to the board. I appear on behalf of the association under authority of a board resolution that approves S. 836 in principle.

We are, of course, as earlier speakers have stated, gratified that the law is specifically included among the disciplines that would share in the activities of the National Foundation for the Social Sciences. This approach makes sense in every respect.

The distinguished legal scholars who have preceded me have described in detail the manner in which the law meshes with the social sciences in a state of continuous and complex interdependence. They have told you how poorly the law has fared in the distribution of

both public and private funds for research. And, they have eloquently stated the critical need for a vast expansion of research in legal fields.

These may appear to be concerns only of law professors, but I know them to be matters of increasing concern to practicing lawyers and leaders of the organized bar. This is particularly true if we think of the growing problems of the profession itself and its concern for maintaining its vital role in American life. Few lawyers are unaware of the new strains on their profession and the legal system in which it plays a special role. They know, in the words of Prof. Harry W. Jones, that we "are now confronted by the mid-century law explosion" reflecting not only the population explosion but "a society that is vastly more complex and vastly more demanding on law and legal institutions."

This fact is nowhere better illustrated than in the types of programs that have received the most emphasis in recent years within the American Bar Association. I refer to:

1. The new emphasis on continuing legal education to keep lawyers abreast of the rapid changes in the law and legal processes.

2. The work of a special committee which is making the first complete reevaluation of the canons of professional ethics in an effort to make them more serviceable under modern conditions of law practice. The canons originally were adopted more than a half-century ago.

The work of a special committee studying the difficult problem of making full legal services more readily available to all segments of the population, including the lower middle-class wage earner. Among major problems involved here are:

(a) Should group legal services be legitimized by relaxing rules requiring a direct lawyer-client relationship to permit salaried lawyers to serve the legal needs of individual members in such groups as labor unions?

(b) Should there be formal recognition and certification of lawyer specialists in given fields as is now the practice in medicine?

(c) Should laymen be trained to provide certain legal services short of those requiring full legal training? Such legal personnel would be comparable to nurses and lab technicians in medicine.

While these projects deal directly with problems of the profession itself, the decisions made will have ramifications broadly affecting the entire legal process and both the quality and quantity of legal services available to the public. As such, they are also matters of broad public interest. But, the full scope of the profession's current efforts at self-analysis and renewal, and its recognition of related social science disciplines, are best reflected by plans for the forthcoming American Assembly on Law and the Social Order to be cosponsored next spring by the American Bar Association and the American Assembly of Columbia University.

This conference will bring many of the Nation's leading scholars, in nonlegal as well as legal fields, together with practicing lawyers, businessmen and Government officials. The conference will be financed by grants from the Rockefeller Bros. Fund, New York; the Danforth Foundation, St. Louis; the West Publishing Co., St. Paul, Minn.,

and the American Bar Association endowment. It is designed, in the words of the conference outline, "to be responsive to the concern widely expressed today that the legal profession lacks a comprehensive program for future action cast in the perspective of the changing needs of society over the next two decades. This concern is addressed also to the question of whether the present structures of the organized bar are or will be adequate to meet the future demands upon the profession."

"The legal profession," the outline continues, "occupies a very special role in American society and has from its inception. The rule of law and the values it represents are fundamental to maintenance of a social order that is at the same time politically stable and functionally flexible. If the rule of law is to continue to serve these purposes, the professional custodians of our society's legal institutions must be attuned to emerging social needs and demands."

As the first stage in a three-stage program, the conference will chart the emerging structural changes in American society and the demands these changes will make on the law and the legal profession. It also will set forth guidelines and chart programs through which the legal profession can effectively respond.

In sum, the conference will start a process expected to bring about a redirection of formal legal education, revitalization of the continuing legal education program for practicing lawyers, a strengthening of our legal institutions and processes, and modification of the organizational structures and functions of the bar.

The conference subtopics illustrate further the direction it will take. Among them are: "Policymaking Processes in a Technologically Expanding Economy"; Dependent Individuals in an Interdependent Society"; Social Fact and Legal Premise in Legal Regulation"; Responsible Lawmaking in a Technically Specialized Society"; "Balances and Controls in Private Policy and Decisionmaking"; and "Representation of Individual Interests in a Society of Organizations."

Clearly, the conference will raise far more questions than it will solve and will make vast new demands on the profession and the law schools.

While the legal profession has been involved in serious self-appraisal, it has not failed to carry on its traditional functions in the public service field. There has been, if anything, a marked increase in both the scope and effectiveness of such activities. But again, there is so much more that could and should be done. Still, we are particularly proud of a recent contribution, through the work of our Commission on Presidential Inability and Vice-Presidential Vacancy, to the drafting and adoption of the 25th amendment to the Constitution of the United States.

More recently, the association has been instrumental in reviving interest in reform of the electoral college and is now supporting an amendment calling for direct election of the President and Vice President, a course recommended by our scholarly Commission on Electoral College Reform and subsequently approved by the house of delegates. Proposed amendments embodying our recommendations currently are the subject of congressional hearings and have strong bipartisan support.

The association has also taken the lead in giving professional support to the legal services program of the Office of Economic Opportunity

and has cooperated vigorously with the OEO in developing policy and administrative guidelines.

In the developing war against crime, the association has been active on several fronts. At our annual meeting in August it is expected that a new program will be mapped out to marshal the resources of the legal profession in support of the recommendations of President Johnson's National Crime Commission.

In the field of criminal law, the association's Special Committee on the Administration of Criminal Justice is now completing the most ambitious projects ever undertaken in the field. The 3-year study, at a cost of $750,000, represents an effort to strengthen the full process of criminal justice administration in both State and Federal courts. Eighty of the Nation's leading judges and lawyers are enlisted in the task. The effort is the first ever undertaken in the United States to establish comprehensive, uniform, and recognized law enforcement standards. The report of the President's Crime Commission commends the project as a necessary step in upgrading police capabilities and practices, clarifying police authority and strengthening the courts, all major goals of the Commission's recommendations.

Another of the Nation's most threatening problems, national strikes in the transportation industries, is under study by a distinguished special committee of the association.

In another new move toward meeting its public responsibilities, the association created the section of individual rights and responsibilities to provide a vehicle for discussing and acting on the great social issues of our day. The section will hold its first annual meeting program in Honolulu and discuss such subjects as the impact of electronic surveillance on individual rights and responsibilities, the urban crisis in housing and education, and civil protest and disobedience.

A concern for problems of the present and future in substantive fields of law also is indicated by the vastly expanded programs of our 22 professional sections.

In this all too long, but still hasty summary, I have tried to illustrate, by what already is going on within the organized bar, that the practicing bar, as well as the legal scholars in the universities and the bar foundations, is concerned about and is deeply involved in the kinds of problems with which the proposed National Foundation for the Social Sciences could so effectively deal. Most of the ABA activities I have discussed are carried on largely by the voluntary effort of dedicated lawyers, judges, and law professors, with minimal staff assistance. Their experience, talent, and energy could accomplish much more if only sufficient funds were available.

I shall comment only briefly on the specifics of the bill, which in general seems excellently drafted. First, I should like to join Prof. Wex Malone in applauding section 6(3)(d) and agree with his suggestion that it might be further strengthened to avoid undue concentration of grants in a limited group of institutions. I would also like to commend section 4(b) which would seem to assure representation of the legal profession on the board of trustees.

In conclusion, I would only state that while we in the law recognize our close relationship with the social scientists, we are more acutely aware of our special role as the professional custodians of our society's

legal institutions and processes. It is for this reason that the board of governors of the American Bar Association, while approving in principle of S. 836, has expressed the need for a separate law foundation that could deal with the entire legal field. Dean Louis H. Pollack expressed this thought well when he told the subcommittee that:

> Without rejecting the characterization of law as a social science, we think that, on a higher level of generalization, we are entitled to regard law as on a parity with the social sciences taken collectively, or the natural sciences, or the health sciences, or the humanities.

But, while a separate law foundation may be our ultimate hope, we mean this in no way to downgrade the excellent prospects for both the law and the social sciences under S. 836. The need is obvious; the bill is good, and it is long overdue.

I am grateful, Mr. Chairman, for this opportunity to appear, and thank you and members of the subcommittee for your courtesy and attention.

Senator HARRIS. I have not realized until I read your statement, Mr. Gayle, that the board of governors of the American Bar Association has taken an official position in support of S. 836.

Mr. GAYLE. Yes, we have, Mr. Chairman. That position was taken at the May meeting of the board here in Washington, pursuant to a report made by the subcommittee of the board of which I served as chairman, and we definitely did adopt a resolution in support of S. 836.

Senator HARRIS. I did not know either until this week—I guess it just escaped my attention—that you had a special ad hoc committee of which you are chairman and had been working on this. When was that appointment made?

Mr. GAYLE. Only in May, Mr. Chairman. It is a very recent development, and we have met in conjunction with representatives of the Association of American Law Schools and the American Association of Law Librarians.

Senator HARRIS. Yes. We have heard, as you know, from the executive secretary of the American Bar Foundation and also from several representatives of the Association of American Law Schools——

Mr. GAYLE. Yes, sir.

Senator HARRIS (continuing). Whose general position you are representing.

I think, as I have said two or three times during these hearings, one of the most interesting things that I have learned is how much we need to do in the field of legal research and how important it is that we commence to realize that law really is a social science, and as one of our witnesses testified before us, that the job of the law schools is to train policymakers because that is what lawyers are, in essence. I think we have not really realized that. I think that what we could do in this field, that is, recognizing that the law impinges upon every other social science discipline, and the converse is also true, would almost alone justify the creation of a National Social Science Foundation.

Mr. GAYLE. Well, we think so, too, Mr. Chairman. As has been pointed out by Dean McKay and others, one of the failings, I think, of the legal profession is that our research has historically been directed

toward what the rules of law are. And, of course, you have to know these to advise your client, but we are now venturing more and more into whether the rules are affecting our people the way they should, and what the overall relationship is between the rules of law and our society. And I think it is certainly a fine thing that we have become aware of this. And I think that is probably the most important area that your foundation can serve insofar as the law is concerned. And I am very hopeful——

Senator HARRIS. Dr. Edward Wenk, who was formerly with the Library of Congress and who now is directing the staff of the President's Oceanographic Council, was with me in Korea last week. We were traveling with the Vice President on a special mission for the President. We got into a conversation about law as a social science and the need for more support for research in the law which was not doctrinal in nature. As you know, most of our research in the law is doctrinal, and he was talking about all the questions involved in comparative law and international law related to oceanography: who owns the seas, and how far offshore do they own them, and what sort of treaties and agreements might be entered into, and how difficult it was for him to find people who could do work in that field, because what they were involved in was not looking up the law, because in most instances there are no laws, but doing creative studies to determine what the law ought to be and to recommend to the Council what eventually should be developed with other governments of the world, in what is going to be an increasingly important area of the law.

Of course, to the extent we have been doing that kind of research, it has largely been in international and comparative law, and so I am rather surprised that even in that field he felt that our level of support has been much too short. I suppose you would have the same general feeling about it.

Mr. GAYLE. Yes, we do, Mr. Chairman.

Senator HARRIS. Well, I appreciate your coming, and I want to say the fact you cared enough to come personally and endure a long wait certainly impressed me. It certainly will make the record much more impressive to the members of this subcommittee and to those who read this record.

Mr. GAYLE. Let me just make two points, if I may, Mr. Chairman.

First of all, I am sure you noted in our report here that we have this American Assembly program scheduled for next spring whereby we hope to probe into what the future holds for the legal profession in the latter third of the 20th century.

Let me also point out that even though you may have noted in our report that we, as well as representatives of the Association of American Law Schools and the American Association of Law Librarians favor the creation, perhaps, of a separate foundation devoted exclusively to the law, we mean in no way to detract from your bill. We are in favor of it, and we hope that it will pass. We even hope that it gets into operation, proves us wrong, and demonstrates that the law will derive full benefit from inclusion in your program. We are most appreciative of the work you have done in this field.

Senator HARRIS. In our oversight function, which this committee performs for the Senate, by law, we would certainly hope to further that purpose ourselves, once this bill is enacted.

Thank you very much.

Mr. GAYLE. Thank you, Mr. Chairman.

Senator HARRIS. Next is Dr. Ross Stagner, who is professor and chairman of the Department of Psychology at Wayne State University in Detroit.

Dr. Stagner is also a member of the National Research Council.

Without objection, we will place in the record at this point a biographical sketch concerning him, and the statement as if read.

Biographical Sketch: Dr. Ross Stagner

Professor and Chairman, Department of Psychology, Wayne State University. Member, Executive Board, Institute of Labor and Industrial Relations, Wayne State University. B. A., Washington University, St. Louis, Mo., 1929; M. A., University of Wisconsin, 30; Ph.D., University of Wisconsin, 32.

Professor, University of Illinois, Psychology and Labor Relations; Professor of Psychology, Dartmouth College; Assistant Personnel Manager, Koppers Company, Pittsburgh, Pennsylvania.

Member—American Psychological Association; Midwestern Psychological Association; Industrial Relations Research Association; Illinois Psychological Association; National Research Council and others. Fulbright Award, Univ. of Rome, 1955–56; Fulbright Award, London School of Economics, 1965–66; Ford Foundation Fellow, 1963–64. Publications—*Psychology of Industrial Conflict; Psychology of Personality;* and others.

STATEMENT OF DR. ROSS STAGNER, PROFESSOR AND CHAIRMAN, DEPARTMENT OF PSYCHOLOGY, WAYNE STATE UNIVERSITY, DETROIT, MICH.

1. PROBLEMS CONCERNING FEDERAL SUPPORT OF SOCIAL SCIENCE RESEARCH

Mr. STAGNER. Federal support of research in the behavioral and social sciences has suffered from two chief limitations: (a) it has been inadequate in quantity; and (b) it has been excessively restrictive of freedom of investigation.

The quantitative limitation needs little documentation. Of the present budget of about $500 million allotted to the National Science Foundation, the social and behavioral sciences receive perhaps $20 to $30 million annually. This is not entirely due to policies of NSF; many Members of Congress have opposed extensive support for social science. Within the executive branch, research on hardware (physics, chemistry, and engineering) is financed at a rate at least 20 times that channeled into human behavior, leadership, organizational functioning, training, decisionmaking, and similar problems. Whether the research on costly, complex weapons systems should be supported by extensive research on the people and groups needed to operate these weapons, is a question I see no need to discuss. As stated, the question will always receive an affirmative answer.

I must, however, confess that there has been some resistance to effective cooperation on the part of the social scientists, as well as on the part of the Federal administrators. Some academicians have seemed to feel that they will lose caste by investigating applied problems, or even by studying basic issues under Federal auspices. I believe that this attitude is rapidly disappearing. In 1936 I helped in the forma-

tion of the Society for the Psychological Study of Social Issues, a group dedicated to fostering basic research on social psychology and to proposing applications of established knowledge in government and community life. Over the past 30 years many other such groups have been formed, and most of the younger generation of social sicentists seem to accept the notion that a research project is not bad just because it has Federal sponsorship.

Another source of resistance is the frequent pressure by Federal agencies for classified research. Social scientists find this objectionable because the process of developing knowledge requires interaction, discussion, criticism, and debate with colleagues. We do not know how much defective research gets accepted by policymakers because it is protected from professional inspection by a security classification; the amount, we suspect, is substantial. On this point I am pleased to note a change in attitude among Federal administrators; insistence on classification seems on the decline, and this, if continued, will facilitate cooperation by scientists.

A few social scientists, on the other hand, have been only too willing to leap into governmental posts and make policy recommendations based on rather limited research data. They have then felt aggrieved because policymakers have declined their suggestions. These cases are complex, and I, for one, would not argue that the social scientists were always right. Two points are important: (a) we need more research in every area of public policy; and (b) policy decisions often involve legitimate considerations which were not involved in the scientist's research. Again, it is my impression that a consensus is developing among social scientists which will relieve this tension: this consensus takes the form of a stance in favor of submitting research data as necessary but not sufficient conditions for wise policy decisions. Further, it seems to be recognized that if the social scientist himself moves from the research role to the policymaking role, he loses some of the objectivity which is important to effective, penetrating research.

To anticipate a later point, let me note that the creation of a National Social Science Foundation might help to remove some of this potential for friction. If social scientists worked on important problems with Federal financial support, they would soon come to be less suspicious of Government administrators, and also of Govenment sponsorship. We might also recruit for the Government some social scientists who had a flair for the application of research findings to everyday problems.

The foregoing problems which I see as having hampered effective cooperation of social scientists with the Federal Government are relatively trivial. They can be resolved if only modest effort is applied. The problems which I now wish to identify are more serious. I want to comment first of the problem of privacy as it relates to behavioral research, and second on the problem of sensitive and emotionally charged topics which must somehow be studied if social science is to make a significant contribution to the welfare of our society.

THE QUESTION OF PRIVACY

No one has every reported that an atom protested invasion of its privacy when bombarded by a particle accelerator. This type of research handicap is unique to investigations focused on the behavior of human beings. A man may plausibly object to questions about the violence of his temper, his impulses to attack and destroy others, his

hostility toward minority groups, and so on. Yet the real hazard to society, and indeed to our civilization, rests not in the atom bombs but in the violence and aggression within human beings who can trigger these bombs.

Social scientists, of course, have a genuine obligation to devise protections for the right of privacy, and to avoid mere phychic voyeurism At the same time they have a compelling obligation to accumulate data—and meaningful generalizations—about the powerful impulses of loyalty, hostility, fear, and ambition which shape human history. It seems to me that, on the whole, the record of the social scientists in this area of protecting privacy has been quite good. Ethical standards have been codified and students in these fields have been trained, as in medical and legal training, to observe these standards. Psychologists, have, I think, done a very good job in this regard. Renewed attention to this matter in recent years guarantees, according to most scholars, that researchers will exercise extreme caution in this respect.

My reason for bringing up this point is that the creation of a National Social Science Foundation will indeed be an exercise in futility if the Congress and executive branch do not recognize, in advance, that much crucial behavioral research must probe into areas commonly considered private.

There is an obvious conflict between the need of society to know and the right of the individual to dignity and privacy. The familiar analogy is that of medicine. For a thousand years or more, religious taboos forbade dissection of a dead body. This prohibition was based on an appeal to the dignity of the individual, and the right of his relatives to know that his body was not violated. The consequence was that medical research and medical practice were blocked. It was only when a few brave souls defied the taboo and began such research that modern medicine began its remarkable advances. Clearly the scientists are under heavy obligation to avoid research techniques which endanger the health of their subjects; but there is also some need to consider the potential lifesaving and health-bringing developments in this equation. The medical profession has only recently been compelled to take a new look at this question. The social sciences must also consider it carefully.

My point in raising the medical analogy is that great social dangers cry for investigations which may be blocked by excessive emphasis on the right of privacy. Consider the case of the rapist, the violent criminal. As a youth he may certainly object to "prying questions" which might reveal his explosive, destructive, antisocial tendencies. Yet society is clearly entitled to look for measures to protect women from his hostile sexuality. A loaded way to phrase this question is to ask how we balance the right of the young man to privacy against the right of the young woman to walk safely in the streets. A more defensible question is: How can social scientists gather the data which we so desperately need, the basic information for the prevention and correction of violent behavior, with proper consideration for the right to privacy?

The creation of a National Social Science Foundation does not automatically offer an answer to such tough questions. It may, however, facilitate the development of the kind of professional ethic which has, on the whole, solved the problem in medicine. When large numbers of able, humanitarian, thoughtful investigators share their ideas

and experiences, they are likely to develop research methods which are less invasive of privacy, and standards of procedure which give the maximum protection to individuals being studied. As progress is made in this respect, advanced students in the fields involved will learn early in their careers how to utilize these methods and to obtain the facts so important to our society while maintaining our proper concern for the value of individual integrity.

My purpose in elaborating on this point about privacy is also to suggest that people in general, and the Congress in particular, must become aware of the possible conflicts between values, all of which are respected in our society: the value of knowledge and the value of privacy, the value of the individual and the value of society as a whole. When belief in an earth-centered universe was enforced by religious and civil punishment, no progress was made in astronomy. When similar taboos forbade anatomical dissection, no progress was made in medicine. The Congress should, in my opinion, recognize that no one of these is absolute; that the welfare of large numbers of individuals needs to be weighed against the privacy of a few. Obviously I am not suggesting that the proposed National Social Science Foundation should be authorized to underwrite unrestrained and frivolous prying into people's private lives. What must be said is that it will be futile to appropriate large sums of money for social science research if the investigators are forbidden to use psychological procedures which penetrate deeply into the thoughts and emotions of the person studied.

There has been, for example, some concern expressed on the floor of Congress in recent years about the use of personality tests. I hear that they have actually been banned for certain purposes within the Federal Government. This is probably a minor matter, because the validity of most such tests for employment purposes has not been adequately demonstrated. On the other hand, if agencies supporting basic social research should ban such tests, much important work will simply be impossible. Let me mention again the problem of rape and other violent assaults on persons. Our only rational hope is to try to identify the potential criminal and reeducate him before he begins these kinds of activities. Now I do not know how you put a dollar value on the trauma to a young woman who is raped, nor do I know how to put a dollar value on the invasion of privacy of the young men who might be studied in such a research program. But I do believe that, if the Congress is sincere in its desire that advances be made in the prevention of crime, legislation must be drafted in such a way that the research use of personality tests is permissible within the code of ethics of the American Psychological Association.

"SENSITIVE" RESEARCH AREAS

Aside from problems of personal privacy, there are many research areas, of the greatest importance for the welfare of our society, which have traditionally been "off limits" to social science investigators because they are considered too sensitive. The nature of the power structure in Washington, for example, is widely considered to be a topic only for journalistic reporting, not for deeply-probing research. Leaders in many large cities have frankly told young social scientists that

studies of power relationships among political, business, and labor union officials would not be welcomed; and efforts to conduct such studies have not infrequently been blocked.

Now the problem of power—how it is distributed, who achieves a power role, in whose interests power is exercised—is absolutely central to our society. The great concern over the slogan of "black power" illustrates how sensitive this area is. Many Americans are disturbed over what they consider to be an undue concentration of power in large corporations. Yet, to the best of my knowledge, no one has devised a satisfactory yardstick for measuring concentration of power, let alone for ascertaining the beneficent or deleterious consequences of such power.

We often quote Lord Acton to the effect that "Power corrupts, and absolute power corrupts absolutely." But just how does the process of corrupting operate? Does it affect all personality types equally? Isn't it possible to train young executives so that they are less likely to be corrupted? We know distressingly little about the psychology of power.

A second example might be drawn from the field of family planning and the population explosion. Almost everyone now concedes that maybe it is unfortunate if babies are born in such large numbers that inadequate care is given to many of them, and they die, or live crippled and deformed, physically or mentally. But social and behavioral scientists still encounter strong political pressures when they seek to develop basic knowledge on attitudes and practices involving contraception and abortion. I hold no brief for any particular approach to the population problem, but I am confident that no wise decision will be made until we have far more knowledge of these sensitive and taboo subjects than is now permitted.

A third example might be taken from the field of top-level decisionmaking. The Federal Government, which could profit mightily from improved decisionmaking procedures, generally does not permit social scientists to have access to groups making important decisions, and indeed basic documents are often locked away for many years. Evidence now published suggests that even the President of the United States may be led to make unwise decisions by subordinates who exclude important information from reports submitted to him (I refer specifically to the "Bay of Pigs" affair as reported by Arthur Schlesinger, Jr.) But this is only one of a dozen kinds of problems which need investigation and research to develop procedures more likely to guard against unwise policy decisions.

I have designated these as "sensitive" areas with intention of suggesting that there will be resistance to investigating them. Let me add that the national welfare cannot be served by social science research if sensitive topics are declared "off limits" to the investigator. This, I think, is a decision that the Congress must make.

SOCIAL ENGINEERING

Concern has also been expressed over the possibility that social research will lead to social engineering, that is, that it will become possible for some men to manipulate the behavior of other men. It may

be that we shall prefer to leave this to private enterprise: Advertising men have already developed considerable expertise in manipulating people for profit. My own feeling is that Government must also accept this responsibility, and impose proper precautions. After all, the system of public education is a vast process of behavior manipulation, and indeed, one urgent research need is for knowledge which will speed up the learning process while minimizing the number of failures —dropouts and children who become hostile to school. I have mentioned the need to manipulate the behavior of the criminal and that of the potential criminal. For several thousand years man has been trying to manipulate the behavior of his fellow man; social engineering is probably older than mechanical engineering and some social engineering is indispensable to an organized society. Hence I consider the problem a pseudoproblem. The question really to be faced is: How do we get the knowledge needed for socially important behavior controls? And its counterpart is: How do we protect society against abuse of such techniques? The problem is not unlike that of the automobile: Mechanical engineers developed it for desirable social uses, but now we need protection from those who misuse it. Most experts agree that a sizable part of the problem of automobile safety falls in the area of social engineering, although mechanical engineering can be helpful.

BASIC VERSUS APPLIED RESEARCH

It seems to me that the unique contribution of an NSSF can be in fostering basic research on social phenomena, and I therefore approve of a limitation (as in sec. 7(b)) on the amount of mission-oriented research to be done under the auspices of the Foundation. It is almost inevitable that a move from basic to applied research means a move from purely human, group, or institutional interactions to involve technological, financial and other variables. There is thus a strong argument for "purifying" basic research by eliminating the confusing variables to get at underlying principles, and then moving into applied studies in which the more complex situation is allowed to operate.

I would suggest, for example, that basic research on the relation of the individual or the nuclear family to a community or neighborhood, with its system of supporting or frustrating roles, can best be conducted in the absence of concerns about housing conditions, school systems, or transportation facilities; but when one tries to apply these findings to problems of urban renewal, or the design of new towns, we immediately see the necessity of involving experts on taxation and finance, housing construction or rehabilitation, and so on.

Basic knowledge is best pursued in highly purified artificial situations. Consider the law of gravity, which holds without correction only in a vacuum, a highly artificial situation (at least on the earth's surface). Few chemists would care to do research using naturally occurring substances; they get results by using highly purified reagents which occur rarely or not at all in a natural environment. Thus, general laws are discovered in the laboratory; but they require extensive modification and correction for application in real life. This is true, I think, of the social and behavioral sciences no less than for the physical sciences.

Let me indicate how I think this broad generalization applies to social research. We need to know much more about such processes as bargaining, and negotiation (as these affect industrial operations, union-management disputes, international conflicts, and so forth.) But incisive insights into such phenomena are more likely to be attained by the judicious use of laboratory designs with systematic control of relevant variables, rather than by observation of the United Nations, the United Automobile Workers, or the New York Stock Exchange. In the long run we must test our generalizations outside the laboratory, but I think we must first go through the pure-science "microscopic" stage before tangling with the confusing complexities of everyday life.

The point of this argument is that the NSSF appears to me to be an instrument well-adopted to the fostering of basic research. The practical or mission-oriented investigations should, for the present, be left with the agencies which now regularly commission such projects. The limitation of NSSF research to 25 percent of budgeted amounts for agency research thus seems to me to be a wise one.

THE COSTS OF SOCIAL SCIENCE RESEARCH

I should like to point out further that, if social scientists are expected to provide the basic knowledge upon which major policy decisions can be more wisely developed, the research is going to be expensive. Our country has been willing so far to spend several billions of dollars a year jailing and otherwise punishing large numbers of juveniles and adults who have been found guilty of criminal behavior. Yet the present expenditures for social science research under Federal auspices seem to run about $300 million per year, and only a trivial part of this has relevance to the psychology, sociology, and economics of crime. The money spent on applied projects, such as rehabilitation, is larger, but our crucial area of ignorance is in the causation of crime. We must be prepared to spend much greater amounts of money than are presently contemplated if we really seek sound data to be used by policymakers.

The same remark can be made even more forcefully with respect to violence by groups: war between nations, rioting by frustrated minorities, and so on. Our appropriations for defense nowadays run well in excess of $50 billion per year, and few are so brash as to propose that we weaken our military posture by reducing this expenditure; yet we spend virtually nothing on social research to find what aspects of human nature, motivation and emotion, what aspects of group organization and interaction, make major contributions to the occurrence of war. Our large cities are plagued by riots and violence by or against racial minorities; yet we are doing only the most trival kinds of studies instead of seeking deeper and more valuable insights into these irrational explosions of group hostility. The great need for research is easily documented by the utter disagreement among the so-called experts as to the causes of these occurrences. We are at a stage in the study of group violence comparable to that of primitive peoples who believed than an eclipse of the sun was due to the magic of an enemy tribe. To prescribe for policies reducing the likelihood of war, or even for the prevention of riots within our Nation, without extensive research, is to blunder in the dark, perhaps even making matters worse.

Large sums of money cannot, of course, be wisely expended until a cadre of able researchers is available. I should hope, nonetheless, that a Congress sensitive to our social problems and receptive to the research findings of social scientists which can throw light on these problems, will envisage the appropriation of hundreds of millions of dollars for this purpose in the near future. Trivial appropriations will make for trivial research. The kind of far-reaching inquiry into the dynamics of crime, of group violence, of war and international conflict, which may lead to incisive insights into the causes and control of these phenomena, will be expensive. I think it is obvious that the potential social gains from such investigations are ample to justify the costs. But the Congress must have the courage to support this research.

USE OF DATA BY FEDERAL AGENCIES

Dr. Harold Orlans, in a staff report prepared for the House Committee on Government Operations, has underlined the fact that no task force of social scientists can compel Government agencies to make constructive use of research data. The same will hold for studies supported by a National Social Science Foundation; and, of course, it would not be desirable that administrators be required to act in accordance with the conclusions drawn by investigators from their findings. The data of research studies may be only a modest fraction of all the facts which must be considered in policy decisions.

This is, in fact, a strong argument for an NSSF as opposed to research sponsored by executive agencies. The latter, simply as sponsors, may feel that they have asked all the important questions and hence should use the conclusions as definitive guidelines. NSSF studies will be available to all administrators; it is hoped that facts will have a certain persuasive quality in modifying agency policies.

A strong argument can also be made for stockpiling information about the behavior of individuals and groups. Let me cite the example of penicillin, which was known as a laboratory curiosity for several years before World War II. The wartime emergency spurred the development of mass-production methods, which would have been impossible if the basic research had not been completed earlier.

More than any other kind of government, a democracy requires the maximum amount of information possible. The creation of an NSSF seems to me to be an important step strengthening our democracy.

2. ADEQUACY OF EXISTING PROCEDURES FOR SUPPORT OF THE SOCIAL AND BEHAVIORAL SCIENCES

If we separate the question of procedures from the question of amount of support and agency control over direction of research, then I would say that procedures at present seem to be satisfactory. My knowledge of agency-sponsored, mission-oriented research operations is quite limited; to the extent that I have been involved in such contracts, the procedures seemed to be reasonable. Some researchers state that they feel he contract for research limits flexibility in the investigation; this difficulty could probably be resolved if the agency would provide a liaison officer with authority to approve modifications when unexpected research opportunities develop.

My own experience has been chiefly with NSF and PHS grants, and the procedures here seem adequate. The use of expert screening panels would appear to be an excellent way for the Government to get the benefit of the best professional advice at low cost. And the administration of these grants seems to have struck a good balance between preventing misuse of funds and facilitating the work of the scientist.

If a National Social Science Foundation is approved, I would hope that it would imitate the grant procedure in support of basic research. In the case of competing demands for very large grants (I would anticipate that the NSSF might wish to underwrite an occasional project costing millions of dollars) there might be some merit in a kind of adversary procedure in which proponents of two major programs would present the scientific evidence in favor of their proposal to a high level panel of social scientists none of whom had any vested interest in either of the competing ideas. (This proposal is described for the physical sciences in "Proposal for an Institution for Scientific Judgment", by A. Kantrowitz, Science, May 12, 1967, p. 763.) The panel would report to NSSF on the scientific merits and potential benefits to social science generally, but would not make the final decision.

ADEQUACY OF THE PRESENT LEVEL OF FEDERAL SUPPORT

As I have already stated, the most deplorable feature of the present situation is the very low level of support now available for the behavioral and social sciences. The magnitude of the problems of urban life, crime, education, industrialization, the aged, and group conflicts needs no emphasis. It seems truly incredible that the expenditure of funds to obtain knowledge of prevention and correction of these problems is so microscopic.

We have been spending (justifiably) millions of dollars on urban renewal. But we have made little use of expertise of economists, sociologists, and psychologists with respect to planning for human welfare, not just for buildings. Again let me note that I do not suggest that social scientists should have final jurisdiction as to execution of such programs; I do, however, feel very strongly that the knowledge of social scientists ought to be given much higher consideration than it has. My main point, however, is that we simply have not investigated the problems of urban renewal from the viewpoint of neighborhood unity, of social supports for behavior codes, of communication networks, of leader-follower relations, and a mass of other important factors. There is still so much ignorance, and so much misinformation disguised as "commonsense," that one can hardly be surprised at the unsatisfactory consequences of these programs.

4. WHAT CONGRESS CAN DO

The Congress obviously has to take a national leadership role in these matters. If it is true (as I have argued) that social problems facing this Nation are of tremendous urgency, and if we lack much basic knowledge which is essential for the development of adequate solutions, then it follows that the Congress can contribute to the na-

tional welfare by providing additional support for research in the behavioral and social sciences.

Such increased support can best be provided in graduated steps, since we do not have trained manpower to handle large research projects at this time. Steadily increasing grants for research, with substantial percentages allocated to the training of research manpower, would seem to be indicated.

There are, however, other ways in which the Congress can help to bring about a proper relationship of social scientists to the Government. One is a little more patience with theory. Some legislators enjoy talking about practicalities and downgrading theoretical thinking. I suggest that Fulton's steamboat was denounced at the time as idle dreaming, that Morse's telegraph and the horseless carriage were all dismissed by so-called practical men as mere moonshine. To take a more recent example, when Albert Einstein went to President Franklin Roosevelt with his proposal for an atomic bomb, the only basis was pure theory. Sometimes thinking at the theoretical level is an essential first step on the road to a big practical advance. I would urge that our Congressmen tolerate some theorizing and research which looks rather impractical. It may prove to be highly practical in a longrun perspective.

The second major respect in which the Congress can contribute to progress in this area is by providing some degree of protection to researchers from pressure groups and self-appointed censors. (See Eric A. Walter, Science, Apr. 28, 1967.) It is quite probable that any serious investigation of problems of urban renewal will stir up resistance based on economic or political vested interests. Studies of group conflict may evoke opposition from minority groups which fear prejudicial findings, or from hostile members of the majority. Studies of population problems have the familiar religious obstacles plus some new ones now developing. Research on the psychodynamics of crime and deviant behavior will stir opposition based on the privacy question and others mentioned earlier in this statement. I would hope, therefore, that the procedures to be established would provide for the closest possible screening of the scientists who will do the work, and then supply protection against arbitrary interference until the study is completed.

5. COMMENTS REGARDING S. 836

The purposes of S. 836 seem to me to be important in terms of the national welfare, and I am pleased to support the bill as it has been introduced. I believe that the establishment of a National Social Science Foundation will strengthen this Nation by providing policymakers with added information and insights into the human, group, and institutional factors which often prevent us from attaining our national goals.

My suggestion for modification of S. 836 are, therefore, minor and should be seen as such. I do not, for example, find a clear statement in section 6(3) that one function of the Foundation is to increase the supply of trained manpower in the area of the behavioral and social sciences, although the idea is implicit in other stated purposes of the Foundation.

I note also that section 4(d), defining the post of Chairman of the Board of Trustees, and section 5(a), defining the post of Director

of the Foundation, do not clarify the relationship, in terms of authority and responsibility, of these two roles. It is my impression, based solely on gossip, that the National Science Foundation at one point had some internal difficulties because the relationship of the Director to the Board and its Chairman had not been clearly established. Perhaps it is well to leave some ambiguity so that trial and error will develop a working solution, but it would seem that some attention to the problem at this time might avoid difficulties later on.

If I interpret section 13(b) correctly, it provides a possibility for commitments by the Foundation covering a period of several years. If that is not correct, then I would hope that such authority could be incorporated in the act. One of the major problems of social and behavioral research is that some urgent questions require study over a period of several years. A principal investigator, therefore, who tries to recruit a skilled staff for a particular project needs assurance that support will be available for a period of 5, 10, or more years. Within the limits of Federal budgeting, I hope such provisions can be made part of the act.

In conclusion let me simply say again that the Nation urgently needs far more and better research on social problems using the methodology of the behavioral and social sciences. The creation of a National Social Science Foundation to foster such research is a highly important step in this direction.

Senator HARRIS. Dr. Stagner, do you have any additional comments or highlights you want to make from the statement itself?

Dr. STAGNER. Well, Senator Harris, I would like to say, first of all, that I appreciate the opportunity to appear and to lend what support I can to S. 836. I think it will represent a tremendously important contribution to our national welfare.

I think with respect to the topics in my statement, I would want to emphasize only the notion that we would like to see a diversity of approaches.

Dr. Likert a few minutes ago was speaking in favor of large-scale social science research, and I would certainly agree that this is tremendously needed.

On the other hand, many very creative contributions have come from individual investigators working alone, and so I would anticipate and hope that the National Foundation for Social Sciences would encourage both types of investigation.

I would like to say, also, that while I think we would all agree that $20 million would be a very small beginning in the attack on the enormous problems that this Foundation is going to help us solve, that we actually could not honestly argue for a much larger start because of the shortage of trained manpower.

And I would like to see—as I have suggested in my prepared statement—that the task of increasing the supply of trained manpower is one of the very first tasks to which the Foundation should address itself.

So, I would hope very much to see that kind of emphasis at least in the early stages, and then perhaps moving on to larger and more complex kinds of investigations as the supply of skilled people becomes more adequate.

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Senator HARRIS. Very good and particularly I appreciate your comments about the need to make clear, if not in the bill itself, which might be difficult, at least in the report on this bill, that the Congress intends to give a mandate for controversy to the National Social Science Foundation. I think if we do anything less than that the Foundation will not fully realize the potential we hope for it. I think they are going to have to go into the sensitive areas that you mentioned, and they are going to have to be concerned about some of the problems of privacy, and so forth, that you mentioned in that connection. But if the social sciences are going to be innovative and creative and original, as I think they must be in order to meet the problems of our day on the level of magnitude the problems demand, they are going to have to by definition, be controversial. And I think if the Foundation starts out with the kind of legislative history we have made during these hearings, there is a better chance that they may do the kind of things that you and I hope they can do.

I also noted your warning about section 7(b) of the bill and your belief that if there is to be mission-oriented agency support for the National Social Science Foundation it ought to be more limited.

I think you heard the comments I made earlier about that.

Dr. STAGNER. Yes. I think the 25-percent limitation that you proposed in the bill is desirable, but I guess I would be even happier with your more recent suggestion of minimizing it even below that point.

Senator HARRIS. Right.

Dr. STAGNER. I think there is a very real hazard that we may contaminate, so to speak, our research by getting associated with mission-oriented research.

Senator HARRIS. In the last part of your statement you raise a point that a good many witnesses have raised, and that is that we have not spelled out as clearly in this bill as we ought to that the Foundation would not just fund research, but also training and scholarship. And as I have said earlier in these hearings, that was our intent. I am convinced that you are right and that we have not spelled that out as clearly as we ought to. We will do that.

Then you make another point made by other witnesses, some just today, like Dr. Likert, about the need to support longer term social science research projects, and as you indicate in your statement, there are some budgetary problems about what can be put in the law about the allocation of funds not already on hand, and so forth. But I think we can spell out in the bill and in the report on this bill that that is our intent, and then within their budgetary limitations I think a foundation could do as we do in some other programs and make it clear that as long as the research is making satisfactory progress, the foundation can give pretty good assurance that continued support will be forthcoming until the project is concluded, 5, 10, or how many years it might take.

Dr. STAGNER. Right.

Senator HARRIS. Well, I really appreciate your coming, and I appreciate your support for the creation of a National Social Science Foundation. And as I said to Mr. Gayle, while without your actual presence we could have put your testimony in the record, I do not think it would have nearly the effect on those who examine this record—and

we find a good many have examined our previous record—as it will by reason of the record showing your actually being here to deliver it.

Thank you very much.

Dr. STAGNER. Thank you, Senator.

Senator HARRIS. Lastly, we will hear from Dr. Robert T. Bower.

Dr. Bower is director of the Bureau of Social Science Research, Inc., here in Washington, D.C.

Without objection, we will place in the record a biographical sketch concerning him, and thereafter his prepared statement as if presented.

Biographical Sketch: Dr. Robert T. Bower

Sociologist. Director, Bureau of Social Science Research since 1950. Formerly a Research Associate at the Bureau of Applied Social Research at Columbia University. Has directed research operations in India, Korea, West Africa and the Middle East. Adjunct Professor, The American University. Member, National Council on the Humanities. A.B., Yale University; Ph.D., Columbia University. Special fields include international attitudes and communications, cross-cultural education, psychological warfare, political behavior, mass communications and public opinion research.

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STATEMENT OF ROBERT T. BOWER, DIRECTOR, BUREAU OF SOCIAL SCIENCE RESEARCH, INC., WASHINGTON, D.C.

Dr. BOWER. I appreciate the opportunity to appear before this committee. It is of course very gratifying to see social science emerge into public view and to find a committee of the Senate concerned with its problems and its future. In addition to any legislative benefits that may accrue, these hearings have already stimulated a long overdue reexamination of professional goals within the social science fraternity, particularly in regard to its relationship to Government as sponsor and client.

Most of my professional life as a sociologist has been spent as head of the Bureau of Social Science Research. The bureau is a nonprofit organization conducting research under a variety of auspices, including a fair number of U.S. Government agencies. No doubt my remarks will reflect this experience.

My remarks will also be limited by my lack of knowledge about several of the social science fields—particularly political science and economics—and by my feeling, from glancing through previous testimony, that this committee has already heard just about everything there is to say. I will comment briefly on just a few points related to the questions posed in the letter of invitation.

One issue that has been raised concerning Government's role as research sponsor is that of the handling of applied research (sometimes called mission-oriented) as opposed to basic research.

The term "basic and applied" are useful in distinguishing research which is conducted primarily with the intent of contributing to the methodological and theoretical development of the science from that with the intent of contributing to a solution of someone's practical problem. But this terminology cannot easily be extended to disinguish between uses to which research results are put. Findings of research designed as basic have had many applications in the formation of policy; for instance, in the use of the findings of many years of race-relations research in Supreme Court deliberations in the school desegregation cases. On the other hand, applied research has made notable contributions to social science theory and method. The studies on troops during World War II sponsored by the War Department are landmark contributions to social science.

The well-trained social scientists who is oriented to professional considerations is very likely to contribute to methodological and theoretical development in his field in the course of conducting applied research. Some operating agencies of government which sponsor mainly applied research in furtherance of their missions have come to recognize the scientific bonuses that may accrue beyond the immediate operational needs of the agency. They have accordingly attempted to ease restrictions on the conduct of studies and reporting of their reresults.

The distinction persists, however, and both within Government and outside in the social science community "applied research" has had a dubious reputation. Operating agencies with small research programs too often have asked for answers which it is beyond the capacity of social science to provide at its current stage of development; have asked for results more quickly than sound research procedures would prescribe; and have attempted to impose restrictions that inhibit the interchange of knowledge.

It is not surprising that an NSF or NIH grant has much higher prestige attached to it than the applied research contract, and that there is a continued reluctance on the part of many of the better social scientists to engage in applied Government work. Some may remain aloof because of ideological rejection of the missions of certain agencies—this would apply particularly to the military. Many more are repelled by the nonprofessional demands and restrictions that may be placed on their work. Despite the evident contributions of applied

research to social science in the past, the increasing numbers of first-rate persons who have conducted applied Government research studies, and the increasing recognition on the part of agencies of the need for scientifically sound research, there lingers an anticipation of mediocrity in the Government-applied-research area.

There are a variety of difficulties that seem to plague governmental applied research programs. Sometimes funds are not made available at the time that programs are launched and the research component is added later, if at all, with money reluctantly drawn from program or administrative budgets. Frequently the agency staff contracting and monitoring the research is not professionally qualified to judge good and bad social science work. And sometimes research requirements are generated out of motives other than the pure search for truth, since there are positions and points of view to be maintained, and research can be threatening. It is generally true throughout Government that far greater control of the quality of research is exercised in basic (usually grant) programs than in applied research programs. This is the case even though the latter are apt to be larger and costlier and more immediately important to the welfare of the people when policy decisions stem from the results of the research. But the $40,000 NSF or NIH grant application typically receives a much more vigorous professional review from staff and outside panels than an application for a half million dollar study sent to an operating agency.

But perhaps more pertinent to the considerations of this Committee is the obverse effect of the applied research dilemma. Social scientists, either because they eschew the applied area or because funds are not available under the palatable conditions, are missing the greatest of opportunities for the advancement of their disciplines—substantively, methodologically, and theoretically—by not taking full advantage of the opportunities that lie in research closely related to ongoing governmental programs. Except in some far reaches of psychology, social science is not an isolated laboratory science in the sense that stimuli are introduced by the investigator and behavioral effects are observed and measured under strictly controlled conditions. But it is, to a large extent, a natural laboratory science in that the effects of the introduction of new elements, by whatever guiding hand, are measured with the concept of control of other variables, taken into account as best one can. Changing social conditions provide the laboratory for the sociologist.

I do not think there have ever existed as many opportunities for research in this natural laboratory setting as now exist in conjunction with Government programs, particularly in the new larger programs of social intervention—the Labor Department's experimental training programs, OEO's community action program, HUD's model cities, and OE's experiments in the use of new educational media, to mention just a few. Such programs are designed to change people and the environment in which they live. The circumstances under which people change is probably the basic question of social science.

I do not think enough effort is put into sound evaluation research on such programs, either to satisfy the needs of Government to know more about what works and what does not and why, or to satisfy the needs of social science to develop more knowledge about human be-

havior. Just as important in restricting good research as the amount of total effort are the strains that exist in the applied research area between Government and academic researchers, of the sort I mentioned above.

I would like to extend my arguments for "applied" research into one more area of concern to this committee. I see from prior testimony that a case has been stated against a new National Social Science Foundation on the grounds that it might widen interdisciplinary distinctions, contrary to the desirable ecumenical trends that might be found in the National Science Foundation where all the sciences work under the same roof. I do not think there is much to that thesis. NSF deals in "basic" research, conceived, as usual, as research intended to develop the science. Under this definition, the physicist thinks, in applying for a grant, about what is needed for physics and the social scientist thinks about what is needed in his area of social science. Not unnaturally, the divisional structure of NSF mirrors the departmental structure of the university. When academic researchers approach NSF, the physicist deals with a physicist and the social scientist with a social scientist, with no better chance of meeting one another in NSF than they had on the campus.

When the two may get together is not (generally) in the basic research area with is built-in orientation toward the academic disciplines, but in the applied area where research tasks are defined in reference to problems. Problems are not necessarily confined within disciplinary boundaries. For example, one might mention the problem of controlling drug use among young people. It is both social and medical in nature. The multifaceted problems of the model cities program involve both physical and social rehabilitation of slum areas. Research on such problems tends to become interdisciplinary without self-consciously striving to be so.

My remarks so far have dealt primarily with the first two questions in the chairman's letter of invitation: (1) problems concerning Federal support of research; and (2) procedures for Government grants and contracts. To my mind, the primary problems exist in the applied, program-related, research area. They are problems of both quantity and quality. Some innovative programs have gone unevaluated so that no one really knows what effect they had, if any; others have been studied too little or too late. The quality of the research has not always been of the highest.

It must be said that the situation has improved over the past several years, but some of the conditions still exist—unwarranted demands, unrealistic time restrictions, denial of scholarly dissemination of results—which repel the better researchers.

In partial reply to one of the questions in the letter of invitation—"What can Congress do?"—I would hope that Congress, when it launches massive social programs, would insist that they be evaluated as systematically as the state of social science will allow. Just as important, I would hope that Congress would see to it that procedures are established to assure in the applied area a quality of research just as high as has been established for that in the basic area.

Despite the emphasis I have put on "applied" research, I do not by any means feel that merely the proper handling of research related to

operating programs will fulfill all the needs of social science. May I mention briefly a few other areas where I think help is needed?

First, there are certain purposes for which much more substantial institutional support is needed than has yet been found. Social science, in its rather rapid growth since World War II, has been the victim of an information explosion, as have other academic fields, and the accessibility of data from completed research has become a problem for the researcher. A start has been made toward solving this problem through the establishment of some specialized data banks, such as the Roper Center at Williams College which collects the results of opinion and attitude surveys and makes them available to scholars. The Inter-University Consortium for Political Research at Michigan, and the data bank for international student studies at Berkeley are other examples. Such facilities involve expensive electronic equipment and are costly to start and to operate. Even so, the need for them is bound to increase.

Institutional support will undoubtedly be needed, too, for survey organizations capable of sampling the U.S. population in a variety of types of inquiry and whose services are available to social scientists from other institutions. It is extremely expensive and inefficient to set up from scratch a mechanism to carry out a large-scale survey, yet there are frequently no alternatives. One cannot count on either of the two existing nonprofit survey groups being available for nationwide studies, and at a reasonable cost, when the need arises.

Also, there are certain areas of social research that are unlikely to receive support from operating agencies but which are important to pursue in their own right. The political scientists point to the study of political systems, and indeed political studies generally, as relatively poorly nourished by the funding sources. Sociologists have had extreme difficulty in finding financial support for studies of people's responses to dramatic, unanticipated events—the assassination of a President, a power blackout, the discovery of life on Mars—so we do not know as much as we should about collective behavior in extraordinary circumstances. Another example lies in the study of national social values—familial, religious, cultural. These change over time and the reasons for the change are more a subject of speculation than of research, because no one knows where to go for financial support for systematic investigation of the question. Clearly the list could be extended; I mention these examples to illustrate the perhaps obvious point that despite the rich array of opportunities that operating agencies afford for significant research, there are bound to be areas that fall between the slats.

A third unmet need is for more trained manpower in social science. I think this point has been made more authoritatively by others who have testified, so let me merely say that it is the current common complaint of research directors that there are not enough good researchers to go around.

In conclusion, may I make a few remarks more closely related to S. 836.

Frankly, the most disturbing aspect of the proposal is the obvious and much debated relationship of the NSSF to the social science division of NSF. I think social science in a predominantly "hard"

science agency enjoys advantages and suffers disadvantages, all of which have been discussed in prior testimony before this committee. For me, the balance is tilted in the favorable direction by the large strides the NSF division has made in the past 7 or 8 years, after a very slow start. The total expenditure for social research has increased dramatically and the areas of coverage have broadened. I think this development should be encouraged. I would not favor S. 836, therefore, as the replacement for social science in NSF, nor, for that matter, as a replacement for social science in the Endowment for the Humanities.

If not a replacement, would the NSSF be a duplication of social science in NSF? I would assume it could not be if both arrangements were to survive for very long. My own preference would be for a new institution oriented toward the study of social problems, whether or not they happen to be on the program agenda of operating agencies. Work in such problem areas as intergroup relations, juvenile delinquency, drug abuse, family stability, urban education, and so forth, has of course been supported by Government agencies, but often on a boom-and-bust basis—a crash program one year and little or no activity the next. Perhaps a new social science funding agency could provide some continuity in the attack on social problems and allow for longer range and better articulated programs of research—whether the research be called applied or basic. I would hope that such an agency could also, either by assuming advisory functions or by simply serving as a model, help in improving the quality of research conducted by other governmental agencies.

Senator HARRIS. Dr. Bower, I might ask you if you have any brief additional or highlighting comments you would want to make before I have a question or two.

Dr. BOWER. Thank you, Senator Harris.

I guess I have come at the end of a long line. I think most of the things have been said, so I will be brief.

In my prepared statement I tried to make a strong case for the further consideration of what is called the applied research area or sometimes called mission-oriented research.

I do not like the distinction between applied and basic research. It seems to give the implication that somehow applied research does not contribute to social science. And I think this is absolutely wrong.

Senator HARRIS. Right. I share your opinion about that.

Dr. BOWER. However, this distinction is there and I think it has unfortunate consequences.

It means that often applied research has a bad name in the academic community, that good researchers scorn applied research efforts. The consequences of this, I think, is dual. Government agencies get shortchanged, and they often get bad research as a result; and social science sometimes gets shortchanged because some of the big social innovative programs that could contribute by their study to social science are not well studied.

This is my main point that I make in most of my statement.

As to S. 836, I think my comments are somewhat redundant in view of those I heard already today.

The only thing that worried me about the new foundation is it might have served as a replacement for the Social Sciences Division

of NSF, and I would not like to see that, especially since NFS has made great strides in recent years. I do not think it should be a duplication in form. My criticism of it, not criticism, but rather my characterization of NSF is that it is very much academic discipline oriented, so it does not treat what I think should be treated, and that is major social problems as they exist in the United States, none of which are intradisciplinary in nature.

And so if I have my choice I would like to see a new social science foundation strongly oriented toward the social problem area.

Senator HARRIS. Right. Well, I share some of the concerns that you voiced about the difference between applied and basic research, a distinction which I think is not so easy to make as it is, say, in the natural and physical sciences. Almost anything you do in the social sciences has some rather immediate and direct applications in the minds of a good many people as it relates to their lives, to the Government, to policymaking, and so forth. And that is one reason why social science research is often more controversial than that being done in the natural and physical sciences. But I might say that this bill does not attempt to get into that argument, and I do not think it should because I think we should not attempt to rigidify in the law a definition of basic and applied research in the social sciences.

Now, in the last part of your statement, I wonder if you might, as you seem to have done, want to amend that somewhat on the basis of what you have heard and has been said here this afternoon. Our Government is, and indeed our society is, shot through with duplication and overlapping. I think that is a strength more than a weakness. There is something about our pluralistic system that is most attractive to those who do not have it. The Soviet Union, for example, in science generally, is trying now to move toward a pluralistic system rather than one directed from the top. And I think that European countries, for example, are looking with a good deal of envy toward our scientific system in the United States.

So I do not think we would conclude on the basis of history and experience in this country that the creation of a National Social Science Foundation would in any way replace existing effort. I think history and experience is to the contrary. And with Parkinson's second law continuing to operate I think that would be true in the future.

But furthermore, I do not think there would be duplication of effort resulting from this legislation, and we would want to spell out in this bill the necessity for the National Arts and Humanities Foundation and the National Science Foundation to continue their activity as they relate to the social sciences. First, I think you could, in a somewhat simplified way, do as Dr. Robinson did before, divide social science research into three categories: normative, scientific, and policy oriented.

The arts and humanities supports some of the first type, though not very much, as their funds are limited.

The National Science Foundation supports some of the second category as it is most understandable in the context of the natural and physical sciences. But policy-oriented research which the Social Science Foundation could support is presently handed only by the operating agencies.

Now, that is a simplistic and overgeneralized view, but it does show that duplication need not be a problem, but we would want to spell this out a good deal more in the report. Furthermore, we would want to say in this bill and in the report that the existing foundations would continue what they are doing, because I think, if you look at the National Science Foundation you find that the kind of social science research they are primarily funding are those areas which are very close in method to the natural and physical sciences.

For example, in anthropology. They have a relatively large item listed in their budget for anthropology, but as the testimony before this committee shows a large portion of it is to the field of archeology, which is very close in methodology to the natural and physical sciences.

I would think that the Social Science Foundation would be in the broader field of anthropology, more related to social anthropology. I think you can go down through the disciplines that NSF now funds and find that neither of the existing foundations fund any research in the law as a social science. Virtually no research funding is provided by the two existing foundations for research in political science or in history as a social science. And it could give other examples.

Furthermore, on this question of duplication, it seems to me that even though you had the rather unusual kind of situation where two research projects had exactly the same title, were about the exact subject, I do not think it is necessarily a waste of the taxpayers' money that that be done by two sets of investigators. As a matter of fact, I would probably come down on the other side. I would say it might be good for two researchers or teams to look at exactly the same question and see what they come up with independently.

So I believe that with the small amount of money we are talking about here, which would hopefully grow, that the problem about replacement or duplication is not the real one, though a caveat which certainly ought to be voiced and ought to be met in these hearings, in the report and in the bill itself. And I wondered if with those kinds of assurances, whether you might care to amend your position on S. 836.

Dr. BOWER. Well, I was not aware that I had a direct opposition. I supposed I had a qualified statement.

Senator HARRIS. Well, it says here—here is what it says:

> I would not favor S. 836, therefore, as the replacement for social science in NSF, nor, for that matter, as a replacement for social science in the Endowment for the Humanities.

If not a replacement, would the NSSF be a duplication of social science in NSF? "I would assume it could not be in both arrangements to survive for very long."

And then you come almost to the same position we have, it seems to me, in the last paragraph, and say, "but I am for a new agency to study social problems," which is exactly what we have in mind with S. 836.

Dr. BOWER. Then, obviously, I am in favor of S. 836. I mentioned these things because as you very well know, this has been a large part of the debate about NSSF.

Senator HARRIS. And quite rightly so.

Dr. BOWER. Whether it is a threat to NSF. And if it is, I suppose I would go down in favor of the bird in the hand, so to speak. If it

isn't, if there is nothing new and different that is going to be incorporated in NSSF, then I am in favor of it.

Senator HARRIS. Right. I appreciate that very much, and I appreciate your presence.

As I said to those others who testified today, I appreciate your patience in waiting to present your testimony. Thank you very much.

Dr. BOWER. Thank you and lots of luck.

Senator HARRIS. This concludes our series of hearings concerning S. 836. Without objection, the record of these hearings will remain open for 1 month from this time unless otherwise shortened or the hearings are reopened at the discretion of the Chair and during which period records and correspondence, studies and additional written testimony may be accepted as part of the record.

The subcommittee will stand in recess.

(Whereupon the hearing was concluded at 3 p.m.)

APPENDIX

[S. 836, 90th Cong., first 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 thought, 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 (hereinafter 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 well, 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 functions 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 Expense 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 appropriation 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.

THE AMERICAN MUSEUM OF NATURAL HISTORY,
New York, N.Y., May 19, 1967.

Mr. STEVEN EBBIN,
Subcommittee on Government Research,
Old Senate Office Building,
Washington, D.C.

DEAR MR. EBBIN: This is all I have been able to do in such a short time. Please feel free to use all, or part, or none of this, as seems wisest. And please tell Senator Harris how sorry I am that I will be out of the country, on my way to New Guinea, and cannot attend the hearings.

Sincerely yours,

MARGARET MEAD.

STATEMENT PREPARED BY MARGARET MEAD

This country is facing a serious crisis because the decisions that must be made are partly based on the highest level of well-supported research in the natural sciences, but have practically no comparably competent knowledge from the social sciences to underwrite them. This crisis will grow more acute as we con-

tinue to increase our highly developed technology—altering man's environment and his very physique—while no proportionate gain is made in knowledge which can help solve the human problems of community living and national and world order.

With the establishment of the Land Grant Colleges, this country took the lead in setting up new forms of education and research which laid the groundwork for our present great prosperity, our ability to feed ourselves with relatively little labor, and the quality and quantity of our production. This country has led in establishing a high material standard of living. Our very advances make the need for social science more acute.

Each new science, as it begins to make a contribution to mankind, enters its period of productivity in possession of resources which other sciences have developed, in conceptualization, in methodology and in technology. The social sciences, as latecomers, must attain productivity within the highly complex scientific appartus developed by the natural sciences—using highly sensitive recording and analytical instruments, computers and simulation. The coincidence in time of modern technical developments and acute demands for social action that will improve the quality of American life, enables the social sciences to do what they could not have done 25 years ago. However, they can neither flourish nor produce when their financing is based on the assumption that they are working as they did 25 years ago. This small scale of social science funding has been due, in part, to the simplicity of the methods used by social scientists, employing no machinery except the individual well-trained mind to attack problems which were almost always necessarily small in scale. With the exception of economics, there have been no data permitting large-scale attack on large-scale problems. And this deficiency has also meant that the social sciences could not attract, train and hold enough gifted research workers. These have been drawn instead to areas with prestige, and adequate financing, and hope of real results.

The social sciences are urgently in need of the kind of governmntal recognition that will enable social scientists to work with relative freedom from the bias introduced by particular employers, or by agencies with special tasks and special points of view.

The social sciences need a chance to grow. Although social sciences can now benefit from any advances in the natural sciences, the approaches are still sufficiently differentiated so that the two fields—one highly developed, the other young and relatively undeveloped—cannot yet work together within one institution as well as they are able to work within separate institutions. Ten years from now, the social sciences may well have developed to such a position of competence and authority that the natural sciences will welcome them as partners, but that time is not yet. The social sciences need time to grow, supported generously by Federal funds, but untrammeled by specific policy considerations or inappropriate methodologies.

There is a further reason for Federal support, in that those problems which cry most loudly for solutions based on knowledge are now conditions that are regional, national or global in scope, and must be attacked on a commensurate scale. Neither local research nor local solutions are sufficient. The solution of nationwide problems requires nationwide knowledge and adequate sampling of every part of the country. Moreover, the integration and application of research require intensive monitoring for real events. Laboratory experiments are not enough; field trials and pilot studies are also necessary. Since these must be conducted within actual settings, the costs are high.

But the prospect of high rewards from adequately supported social sciences is very good. A generation ago, we had to work with inadequate solutions to the physical and technical aspects of any problem—how to raise enough food; how to build a desired type of house; how to develop particular drugs, and how to produce new materials. We did not even know how to simulate unknown sets of physical conditions, or how to generate new models. These problems are now solved—on the physical side. Our task is to balance the achievements of the physical sciences with relevant knowledge from the social sciences.

A generation ago, for example, we lacked the knowledge of how to bring the food habits of a group of people in line with nutritional science, and also how to provide particular types of food to meet their needs. Today we can design any number of inexpensive and appropriate food supplements, but we still do not know how to introduce them so that they will obtain acceptance.

A generation ago, the problem was how to raise enough of any given cereal—rice, wheat, corn; today the problem is how to be certain that those in charge

of various modes of acceptance and distribution will be able to use the new seed. A generation ago, we did not know how to build easily demountable, transportable, adequate large-scale buildings; today we lack the knowledge of how these are to be fitted into the existing urban scene. A generation ago, we had no means of near-simultaneous communication and participation around the globe; today we have the facilities but we don't know what to say. We don't know what languages to use if we are to work towards an orderly world, in which the peoples of the newer nations can develop and take their places with the rest of the world. Languages for worldwide communication, or for communication with the traveler and the stranger have not yet been worked out.

Yet at any time, technological decisions may be made which will foreclose many of the options now open to us. The same point can be made about our whole national system of roads, cities, schools, of the locations of industries, and of styles of transportation. Technical change is occurring so rapidly that option after option closes; many that still remain open to us are expensive and remedial rather than inexpensive and preventive. Instead of remedying the defects of infants, we are paying the extravagant costs of institutionalizing adults. Instead of planning our cities so that they are open-ended and constructively responsive to changing conditions, we have made them traps to catch the poor and helpless within a steadily deteriorating down-spiralling situation. None of this need be so. This country has tremendous resources, materially, in manpower, and in our cultural style which states with great enthusiasm, "The difficult we do at once, the impossible takes a little bit longer".

There are certain conditions that surround good work in the social sciences which differ from those found in the natural sciences. We cannot work within anything resembling the Manhattan Project, a secret, single crash program which solved a single large problem. Social science, unlike natural science, requires that it be very widely understood if it is to be used. The mother who is to take her child to a clinic for an injection only needs to trust modern medicine and to believe that it will save her child. But the mother who is to prepare new foods for her child in a new way, or who is to support a new kind of education, must herself be much more deeply involved. We have seen during the past 10 years how important it is that the parents whose children are to be taught the new mathematics, learn about it themselves; otherwise they are likely to reject their children's interests and success. People who do not understand an innovation, in which they themselves must participate, will oppose or neglect it, or often, simply laugh at it.

So social science research must be conducted openly in full view of those who will be called upon to participate, to support, to use its results. In our study * of the way high school children thought about science, just before Sputnik went up, we found a dangerous alienation between the public and the natural sciences. As for the social sciences: they were scarcely considered at all. Even today, high school students do not know enough about the social sciences to choose them intelligently as possible careers. A National Foundation for the Social Sciences would give the social sciences visibility and prestige, help establish the essential climate of opinion in which gifted young people would be attracted into the field, and help ensure that the public would give enthusiastic rather than grudging assent to active participation in the applications of new findings.

Methods of research in the social sciences differ in many other ways from those employed in the natural sciences. We work with living human beings, and we must incorporate their welfare as individuals, as groups, as members of nations—our own and others—into the research plans. To take a small amount of blood from a healthy man, in order to perform a battery of tests, leaves him psychologically as the investigator found him. But to treat him as if he were inanimate matter, or a creature incapable of understanding what is happening to him, or to his group, while statistics are assembled, is quite another matter. We have had to learn to work with those whom we wish to understand, as collaborators, not as mere objects of research. This has required that individuals whose ways of life are studied, themselves be incorporated into the research plans.

We may devise brilliant laboratory experiments on newborn mice to determine the most lethal elements in our man-made urban environments. Such experiments, designed with the participation of social scientists who understand not

*Mead, Margaret & Metraux, Rhoda, 1957, "Image of the Scientist Among High School Students: A Pilot Study", *Science*, 126: 384–390.

only the biological but the social realities, are vitally important. But in the end, we must understand more about man himself. It is only man who creates civilizations within which political ideals are expressed and ideal goals are pursued. It is only man who alters the very surface of the earth by techniques he himself has devised. And man must begin to understand himself if he is to prevail.

If a kind of secret Manhattan Project cannot produce results in social science, single projects are equally ineffective. The full complexity of human problems must be mirrored in the complexity of ways in which these problems are studied, simulated, and dealt with. Where the natural sciences began by simplifying the phenomena of nature, in order to probe it in its total complexity, the social sciences began with a realization of the complexity of human culture and human society. The social sciences had to wait upon the development of tools and concepts complex enough to make scientific study possible. Multiple approaches, each growing out of the intangible contributions of those about whom something is being learned, are at present our only recourse.

We must build into our research plans the very uncertainty and indeterminacy which is characteristic of human life itself. We must build a conceptual structure so viable and so flexible that each successive generation will be free to use it in its own way.

In a technologically advanced world, it takes an advance technology to win and keep human freedom. In a building designed for a public address system, the individual who raises his voice without the help of a microphone, or who speaks in a foreign language for which there is no interpreter, may be free to vocalize but he has no effective freedom of speech.

Civilization began when men learned how to plant and store enough food so that other men had time to think, to organize, to anticipate the order of the seasons, the needs of next year, and the needs of their children and their children's children. We have applied our resources to one part of this problem—to the raising of food and the building of cities—but we must learn the other part: how to anticipate the needs—the human, social needs—of our children and our children's children. We are beginning, however, to know what questions to ask. Once we know the questions, the methods of science which have served us so well and brought us so far, can go to work on the answers. We know something about the other side of the moon, long a symbol of the unknowable. Now let us learn the things we need to know about men on this planet.

JULY 7, 1967.

DR. LELAND J. HAWORTH,
Director,
National Science Foundation,
Washington, D.C.

DEAR DR. HAWORTH: Enclosed is an exerpt from the transcript of testimony by Professor Aaron Wildavsky of the University of California at Berkeley, before the Subcommittee on Government Research, delivered on June 2, 1967.

"And so I have just one final idea for your consideration. You have really two alternatives: either to go with a separate organization, or to really give a big push to something in the National Science Foundation.

"An important question is how interested the NSF is in this, beyond the strategic point of heading off a separate organization. So I think one point would be to ask the NSF to come in with a new program itself, along the following lines:

(1) A change in its name (to National Physical and Social Science Foundation);

(2) A social scientist at its head;

(3) A commitment to seek increased funds along the lines that this committee and social scientists are interested in;

(4) Hiring of social scientists in various divisions."

". . . We would need a commitment to hire people who have sensitivity to social science research—not only in the social science branch, but in all the supporting branches."

As you can see, Professor Wildavsky had made four suggestions concerning reorganization of the National Science Foundation for funding social science research which he feels essential to consider as a possible alternative to the creation of a National Foundation for the Social Sciences. In that such suggested alterations of the NSF legislation to meet these criteria would be of significant interest to the Foundation, I am sending these remarks along to you so that you

might have an opportunity to react to them. I would be most appreciative if you would send us your reactions to these suggestions at your earliest convenience.

With warm personal regards.

Sincerely,

FRED R. HARRIS,
Chairman.

NATIONAL SCIENCE FOUNDATION,
OFFICE OF THE DIRECTOR,
Washington, D.C., August 9, 1967.

Hon. FRED R. HARRIS,
U.S. Senate,
Washington, D.C.

DEAR SENATOR HARRIS: This is in response to your letter of July 7, 1967, in which you forwarded excerpts from the testimony of Professor Wildavsky in which he raised a series of questions, relating to the Foundation. I appreciate the opportunity to comment on them.

In principle, I believe it would be unwise to change the Foundation's name. I feel, and I believe the majority of interested individuals would agree, that the present name is the more appropriate one, particularly if it is understood that we interpret the word "science" comprehensively. Professor Wildavsky's suggestion omits several important areas of NSF responsibility, including biological sciences, engineering, mathematical, and environmental sciences. One problem with any attempt at enumeration is that it tends to get so long that it is self-defeating. The essential point is that NSF does include social sciences along with all other sciences. When Vannevar Bush first proposed the organization which resulted in NSF, in his July 1945 Report to the President, *Science: The Endless Frontier*, he suggested National Research Foundation as the title. As the Foundation evolved, we have engaged in many activities other than the direct support of research, so that Bush's suggested title, if adopted, would have been unduly restrictive in that it would not reflect our education or institutional development programs, for example. No doubt a reasonable new title could be identified if it were the desire of Congress to do so, but it would be difficult to improve upon the simple title that has been used since the Foundation's inception.

I should point out that the Director is not chosen on the basis of his professional origin nor, in my opinion, should he be. Obviously he cannot be trained in all the relevant disciplines; there is no legal requirement that he even be a scientist. In his post, the Director of the National Science Foundation is responsible for all science and does not serve as a special representative of the discipline in which he took his training; indeed, he would be remiss if he did so. As a public servant, he must sympathetically and fairly serve all the sciences.

The Foundation does have social scientists on its staff. The Deputy Director of the National Science Foundation, Dr. John T. Wilson, is a psychologist. In addition to the entire professional staff of the Division of Social Sciences, there are social scientists employed throughout the Foundation, including the Institutional Relations divisions, the Education divisions, Science Information Service, and most prominently in our Planning units, particularly in the Office of Economic and Manpower Studies. The Foundation has approximately 300 professional staff members; that is, persons working in a position in which they are identified as specialists in a specific substantive professional field of science (anthropology, chemistry, astronomy, psychology)*. A total of 31 staff members are in positions classified in the Civil Service Commission social science series. An additional number of social scientists are employed in positions which are not classified as social science. For example, staff positions in the education do not require social scientists, but a number are filled by individuals with such backgrounds.

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*Data as of June 30, 1967, show 304 professional, 238 administrative (which includes many with degrees in various professional fields, but who are working in administrative tasks), 379 clerical, and 11 wage-board; a total of 932.

Dr. Wildavsky's comment that "a commitment to hire people who have sensitivity to social science research—not only in the social science branch, but in all the supporting branches" is therefore one with which I wholeheartedly agree. But I would add that on our staff we have and will continue to have members of disciplines other than the various social sciences who are, nevertheless, "sensitive to" social science research.

I return now to his third question, which concerns "a commitment to seek increased funds along the lines that this Committee and social scientists are interested in." The Foundation has allocated increased funds to the social sciences every year since I have been Director, and I have testified to our intention to continue and broaden our work in this area. The budget currently under consideration by the Congress for fiscal year 1968 singles out social science research as one of our areas of special emphasis and growth. I have also indicated to you some of the ways in which we propose to use these increased funds.

There are, however, certain statutory restrictions on our activities. For example, accounting, though certainly highly useful and important, is not ordinarily regarded as a science—social or otherwise—and we have noted testimony urging its inclusion in the proposed National Foundation for the Social Sciences. Law, as you know, is a borderline area. Nevertheless, we have supported studies by lawyers on social science problems and are willing to support more of this kind of research. James A. Robinson of Ohio State University also drew some useful distinctions in his testimony before your subcommittee. In speaking of political science he identified three components: the historical-philosophical, the scientific, and the policy-oriented. He testified that NSF supported the scientific aspects but not the other two. Without a legislative change, we feel that NSF cannot support the other two, although the National Endowment for the Humanities can and does support historical and philosophical work. The question of policy-oriented research—as distingiushed from research that will be useful to policy-makers (and some research now supported by NSF is of this type)—remains unsettled except as it is supported by agencies responsible for resolution of specific problems, and by private foundations.

Thank you for this opportunity to react to Professor Wildavsky's proposals. I want to say again that your hearings are performing a valuable service and will be of assistance to all of us concerned with more adequate support for social sciences.

Sincerely yours,

LELAND J. HAWORTH,
Director.

EXCERPTS FROM CORRESPONDENCE RECEIVED ON S. 836

ARTHUR SCHLESINGER, JR.

(The City University of New York, Graduate Center, New York, N.Y., April 3, 1967)

"In general, I would support your bill to establish a National Foundation for the Social Sciences . . . I would therefore hope that the Board of the Foundation would not be put exclusively into the hands of the social scientists themselves, as apparently proposed in Section 4(b), but would include representatives of the humanities and natural sciences."

HENRY STEELE COMMAGER

(Amherst College, Amherst, Mass., March 8, 1967)

"I am tremendously impressed with your proposals for a National Foundation for the Social Sciences, and particularly with the safeguards which you have written into it against exploitation or misuse, or even the suspicion of these, by government or by any political body. I think the proposed Foundation might do immense good, particularly if it were associated with universities, academies, and foundations.

JOHN C. HONEY

(Syracuse University, The Maxwell School of Citizenship and Public Affairs, Syracuse, N.Y., April 25, 1967)

"It is a privilege to comment on S. 836, 'A Bill to Create a National Foundation for the Social Sciences.' For the future progress of our own country, as well as of the modernizing world at large there are, I believe, few measures of greater importance which have come before the Congress in recent years.

"In your own statement before the Senate in February you made clear the conditions in our society—race relations, life in the ghettos, juvenile delinquency, poverty, and many other social, economic, political and psychological problems which need to be addressed through research in the social sciences. While there is no doubt that we are in a stage of intellectual infancy in bringing the methods of science to bear on the issues of man in society, there is also no doubt that even our limited efforts to date have produced important new knowledge and applications. A case hardly needs to be made for the social sciences.

"We do need to remind ourselves of two matters, however. Your own statements bear on these and I reiterate them for purposes of emphasis. The support given in the nation to the natural sciences so overwhelmingly exceeds that to the social sciences that the disproportions are sensational. In a speech last year, and using data provided by the National Science Foundation, I estimated that in 1966 the nation would spend one hundredth of one percent as much on social science research as it would spend on research and development in the natural and physical sciences. While such relationships depend, in part, on what figures one assembles, the point is clear that our attention to social science research is startlingly disproportionate.

"The second point is that too few of us realize the unique American intellectual contribution which social science research represents and we fail to appreciate the urgent, indeed desperate need, for the development of social science education and research capabilities in the developing nations.

"Which brings me back to the specifics of your bill. I have noted the absence of direct provisions for fellowships, research assistantships and other educational arrangements. I assume that these are not precluded and that as relationships are worked out between the new Foundation and other parts of the Federal establishment, and as future manpower needs are better defined, direct educational endeavors could be undertaken. I would hope so, given the urgent need both at home and in the developing nations for the skills of well-trained social scientists."

LINDSAY ROGERS

(175 Riverside Drive, New York, N.Y., March 29, 1967)

"Your co-sponsors (some of whom I know) come from the Senate's elite and S. 836 seems to me to be well drafted. The points made in the speech you sent me are all sound ones and I hope the bill passes.

"I must, however, express my regret that your Foundation could not be one for 'social *studies*' rather than 'social *sciences*' . . ."

ROBERT L. THORNDIKE

(Institute of Psychological Research, Teachers College, Columbia University, New York, N.Y., April 3, 1967)

"Let me start by expressing my whole-hearted endorsement of the bill. Our progress in the physical sciences and in the control of our physical environment has so far outstripped our progress in the social sciences as to create a serious imbalance in our society. We have learned how to kill each other off very efficiently, but we have not learned how to construct a society in which men will live together in good will.

"It will be easy to set too high expectations for the contributions that social science will make to our society, and it is important that immediate social betterment not be set as the primary goal. It is my impression that this was neither intended nor implied in the phrasing of the bill. But it must certainly be kept clear that the social scientist, as the physical scientist, is a seeker of knowledge.

He hopes to extend our knowledge and broaden our understanding. If this knowledge turns out to be practically useful, well and good. But practical gains should not be seen as the primary goal of the bill.

"This seems to me important in terms of the fundamental role of a Science Foundation in contrast to the many practically oriented departments in the government. I think it is also important because progress in the social sciences is likely to be slow and halting, and not to display dramatic "man on the moon" type events. This must be appreciated in advance, if one is not to be disappointed by a lack of dramatic progress.

"There are two specific phrases in the bill that I would like to comment on:

"(1) Sec. 7(b) says that the Foundation may 'carry out' projects. I wonder whether it is intended that the Foundation be an operating agency—or merely that it may arrange to have carried out by others (with whom it might contract) certain specifically commissioned activities. I have serious reservations about the Foundation becoming an actual operating agency.

"(2) Sec. 8(b) states that no project shall be 'carried out in any foreign country,' except under specified conditions. The intent of this as applied to current data-gathering activities is clear. However, to the extent that the Foundation supports historians (and perhaps others) whose concern is primarily with records and archives in libraries or other repositories, this requirement might become unduly burdensome. At least at the level of implementation, some clarification may be needed as to what kinds of activities require formal clearance."

F. STUART CHAPIN

(40 Shorewood Drive, Asheville, N.C., April 6, 1967)

"I am strongly in favor of your Bill, S–836, to establish a National Foundation for the Social Sciences."

RUDOLF HEBERLE

(Departments of Sociology and Rural Sociology, Louisiana State University and Agricultural and Mechanical College, Baton Rouge, La., April 7, 1967)

"I believe the Bill will accomplish what its sponsors have in mind, to provide public financial means for research and scholarly work independent from government control and as free of government influence as can be reasonably expected."

"I have, however, strong objections against Sec. 8(b). This rule, in my opinion, violates well established usages among scholars, it is an infraction upon the principles of freedom of research, it is likely to make planning of research in foreign countries extremely difficult and it may even defeat, in part, the very purposes of the Foundation.

"The clause would actually give semi-official status to any scholar going abroad under the auspices of the Foundation; . . . it would subject American research abroad to the control of Foreign governments . . . The 45-day notice, to take up a detail, will make planning of research in foreign countries quite difficult.

"If your Committee feels that, in view of blunders committed by certain government agencies and some American scholars, a safeguard is required, the application of Sec. 8(b) might be limited to projects under Sec. 7(b).

"I do not quite see the sense of Sec. 9(a) which requires former government employees to wait two years before becoming eligible for a Foundation grant."

DANIEL P. MOYNIHAN

(Joint Center for Urban Studies of the Massachusetts Institute of Technology and Harvard University, Cambridge, Mass., April 26, 1967)

"I can only wish the best of success to you and your co-sponsors of S–836. The need for greatly increased Federal support for the social sciences is quite clear. At the same time, we are beginning to recognize that administering this support is quite a different matter from administering support for the physical

sciences. A separate new foundation will assure that social science research projects are given the special kinds of attention they need, and will help make social science research throughout the country more effective.

"One critical role of the social sciences does not appear to have been given much emphasis . . . and that is the evaluation of the effectiveness of governmental programs . . . I would hope that a new National Foundation for the Social Sciences might provide important research support for the process of legislative evaluation, which must soon become an accepted part of our government, at every level. Could the declaration of purpose include something to this effect?"

EDWIN R. HENRY

(College of Business Administration, The University of Rochester, Rochester, N.Y., May 10, 1967)

"Your interest and insight into the problems of support for research and innovation in the broad field of the Social Sciences is heartening, appreciated and commended by all Social Scientists.

"The National Science Foundation has done a reasonably good job of promoting and supporting research in the Physical Sciences, but its performance with respect to the Social Sciences leaves a great deal to be desired. It is my opinion, concurred in by many of my professional and business colleagues, that the needs, interests, research methodologies and personnel of the Social Sciences are so little understood and appreciated by the National Science Foundation with its physical science orientation that there is little hope of NSF becoming influential and effective in the Social Sciences in the foreseeable future.

"I have studied S. 836 and your speech to the Senate on February 6, 1967 and am in full and complete agreement with both.

"During my period of service as Director of Selection for the Peace Corps, it would have been most helpful had this Foundation been available to help me promote research which, if successful, could have significantly affected both the effectiveness and efficiency of the selection process. As it was the insignificant funds available for research and the long drawn-out process of getting research sponsored and completed elsewhere resulted in very little action to better the selection process. An important consideration in addition is that the kinds of Social Science research needed by the Peace Corps are equally appropriate to bpsiness, industry, governmental organizations and education."

FRED W. RIGGS

(Center for Advanced Study in the Behavioral Sciences, Stanford, California May 3, 1967)

"My view is that the methodological criteria used by the National Science Foundation enables it to support research in the social sciences only when the theoretical framework has been well established, but since these fields are often still in an early stage of development, support for more risky and innovative kinds of research are needed—and I doubt that the NSF will ever support such projects, no matter how much money it gets for social science research.

"At this time the foundations, especially the Ford Foundation, also seem to be curtailing their support for social science research in a rather arbitrary fashion. This means that the need for a Social Science Foundation is further increased.

WILLIAM N. FENTON

(New York State Museum and Science Service, The University of the State of New York, Albany, N.Y., May 1, 1967)

"I applaud your efforts on behalf of the community of social scientists.

"There are many legitimate and useful projects in the social sciences and behavioral sciences that do not fall within the program areas of the existing

foundations in the sciences and in the humanities. A great deal of research could be done right in the United States with American Indian communities and in communities of similar size and other cultural traditions elsewhere. The training of graduate students in the social sciences can be done in this country before they go overseas and such training in the field here would diminish mistakes made abroad and lessen the risks of another project Camelot."

S. RAINS WALLACE

(American Institutes for Research, Pittsburgh, Pa., April 10, 1967)

"I have been aware of your thoughtful concern for the need for enhanced efforts in these areas and, like most of my colleagues, am deeply grateful both as a citizen and a social scientist. I am, therefore, reluctant to raise points which may appear negative to the Bill. I do so only to help accomplish our mutually desired result, i.e., to ensure a greater contribution by the social sciences to our national economy and social structure.

"I have long been an advocate and defender of basic research (whether strictly or loosely defined). However, there appears to be an implication in the Bill that the proposed Foundation would concern itself solely with research at the basic level (Cf. Sec. 2(3) '. . . advancement of the development of research capability and basic knowledge in the social sciences . . .' and Sec. 6 (3b) 'aiding institutions of higher learning or nonprofit research organizations and foundations, which, if aided, will advance basic research.' If my interpretation is correct, I would question the soundness of the position on two grounds:

"a. The needs for the development of technologies in the various social fields (education, urban development, health services, transportation, communications, etc.) are so great and immediate that applied research and development in the translation, implementation and evaluation of what is already in the social science pantry should have a higher priority.

"b. Historically, the support of institutions devoted solely to 'basic research' has been something less than consistent or rational. In government and industry alike, basic research has been praised, promised and subsequently ridiculed. To set up a Foundation for the social sciences which have already had acute problems in communicating the relevance of their to the real world, and to give it a charter limited to basic approaches, is to invite attack without provision for the defense which can be marshalled from the results of parallel applied research. In your speech of February 6, 1967, you mention that social scientists have not found a vigorous advocate in the NSF for their research. I submit that this may be partially the result of a conflict between the desire of the social science community to be more directly responsive to national needs and the NSF policy to support 'pure' research in its strictest sense.

"I am sure that you are familiar with other objections which have been raised to the Bill. Obviously, if agencies already engaged in support of social science research will reduce their efforts because of the existence of a new Foundation, your intent will be perverted. But, as you point out, their present or planned level of effort is not great enough to indicate that the end result would be a net loss. It has also been argued that the establishment of a separate Foundation for the social sciences would inhibit interdisciplinary approaches. My own position is that the NSF has a fine opportunity under the conditions you propose to show that such work could be done under its aegis and to capitalize on the advancements made as a result of the new Foundation.

"I believe the provision in Section 7(b) that mission-oriented departments or agencies may request the Foundation to foster programs on a reimbursable basis is a fine idea. It ensures some degree of relevance and responsiveness within social science research and also might bring into focus the overlapping requirements of the various agencies.

"Finally, I join with others in questioning the severity of Section 9(a) which I beileve would exacerbate the already serious difficulty encountered by government agencies in recruiting and retaining capable social scientists and sporadically disqualify many of the best universities and nonprofit organizations from participation in the Foundation program."

WILLIAM H. NICHOLLS

(Vanderbilt University, Graduate Center for Latin American Studies, Nashville, Tenn., March 29, 1967)

"You are to be congratulated on your sponsorship of S. 836, which would create a National Foundation for the Social Sciences. I feel that your bill would at last give social science research the official recognition and support which it so badly needs and which our federal government all the more needs desperately in view of its numerous policy decisions to which such research could contribute so much. Thus far, the social sciences have been largely a step-child of the National Science Foundation, which tends to be interested only in that small part of the total field of social science research which is subject to mathematical or statistical manipulation of a rather sophisticated (but often sterile) type.

"The only proposed amendment I would make to your bill would be the addition of a clause similar to that of Sec. 102(c) which supports an "equitable distribution of the grants throughout the states." of the International Education Act. It is probably inevitable that a few of our most eminent universities will get the lion's share of any federal funds made available for social science research. It is nonetheless essential that a number of other less eminent but high-quality universities such as Vanderbilt, Duke, Brown, Rice, and Washington (St. Louis), as well as the best State universities, receive at least a modest but very vital share of any national distribution of funds."

JOHN S. OLES

(15035 Prevost Street, Detroit, Mich., May 2, 1967)

"If this project is finally established, it may well prove in future decades to be the most fruitful act of the ninetieth congress."

IRVING ROUSE

(Department of Anthropology, Yale University, New Haven, Conn., May 9, 1967)

"As a member of the Advisory Panel to the Anthropology Program of the National Science Foundation, I have been in a position to observe at close hand the support which that foundation is giving to social science research, not only in Anthropology but also through its programs for Economics, Geography, History and Philosophy of Science, Political Science, and Sociology and Social Psychology. In my experience, these programs, in combination with the related programs of other federal agencies such as the National Institutes of Health, are already giving adequate support to the social sciences, at least so far as pure research is concerned. It may be advisable to provide more support for applied research, particularly in matters of policy, but I should think this would best be handled by the 'mission-oriented agencies and departments of the government' to which you refer in your letter. I therefore see no need for a separate foundation for the social sciences."

MORTON H. FRIED

(Department of Anthropology, East Asian Institute, Columbia University, New-York, N.Y., April 4, 1967)

". . . I believe we are all flattered in the best sense that the various disciplinary efforts which comprise the social sciences are recognized as having not only educational value but social importance as well, such that encouragement of their continued development should be a matter of national concern. I'm less certain, however, that the creation of a separate national foundation is exactly the means by which this is best accomplished. . . . If I may

briefly state two reservations: . . . (1) my fear that a separate foundation for the social sciences will somehow interfere with the normal course of communication between natural and social sciences . . . (2) . . . as a social scientist I enjoy some benefits from having the aegis of natural science available in the National Science Foundation and believe that this association helps in some situations to protect social science as well as to enhance for socially desirable purposes the public personna of the various social science fields."

M. BREWSTER SMITH

(Institute of Human Development, University of California, Berkeley, Calif., April 11, 1967)

"I strongly agree that the social sciences need increasing support, and that it is to the national interest to see that this support is provided. Most of the intractable problems of this country now hinge upon a human ingredient. It would be unrealistic to expect the social and the behavioral sciences in their present imperfect state of development to solve these many problems. But already they can make a contribution toward their solution, and it is only prudent policy to invest substantially in strengthening the resources of these new sciences and in aiding their efforts to come to grips with basic problems of human social behavior as well as with the practically important social problems of the day.

"While, therefore, I share with many of my colleagues a sense of gratitude for your initiative in this matter, I have substantial reservations as to whether a separate 'National Foundation for the Social Sciences' is the appropriate instrumentality for accomplishing the intended objectives. There are several reasons for my misgivings, and you must already have encountered all of them. For one, it seems to me that there are substantial advantages in continuing the major support for basic work in the social sciences under the auspices of the National Science Foundation. It is true that in the beginning, no recognition was given to the social sciences in NSF, and that in the early years in which support was being extended to them, only rather narrow lines of work were permitted. However, as I well know from close personal involvement, both the amount of support and the breadth of areas covered have grown remarkably in recent years. It is my conviction that the leadership of NSF, far from viewing the social sciences as warranting only marginal support grudgingly given, quite genuinely stand behind substantially increased involvement of the NSF in support of the social sciences. Parenthetically, your own initiative has surely accelerated these trends, and this is good.

"If, as I believe, adequate support for basic research can be had via the National Science Foundation, I see pronounced advantages in such an arrangement. The social sciences are politically vulnerable as the physical and biological sciences are not. Particularly if research is increasingly extended to fundamental aspects of urgent current social problems, in line with the objectives of your bill, research is bound to touch upon and to disturb various existing political interests in one way or another. This is inevitable. For the long run continuity of serious social research and for the long run best interest of the country, the Congress might well wish to see the social sciences supported through auspices less exposed to the gusts of short-term political squalls than a separate National Foundation for the Social Sciences would be.

"Also, many of the major social problems that call for a social science attack cut across the social and natural sciences and engineering. Fundamental research on urban problems, on transportation, on the devastation and pollution of the human environment, etc. require the integration of perspectives and information that come from the broadest range of sciences, physical and biological as well as social. To split the support of these sciences apart organizationally would seem undesirable.

"As my remarks above suggest, I favor the broadened mission of NSF to include the support of some kinds of applied research, as contemplated by the Daddario Bill. The Foundation could play a particularly important part in identifying problems for research that currently fall between agency-supported programs, and in organizing a fundamentally conceived (as contrasted with a 'fire-fighting') research approach to these problems.

"One consideration that may have had a part in the thinking underlying the proposal for a National Foundation for the Social Sciences is that the Camelot fiasco could have been avoided had the funds been 'sanitized' by reallocation from the Department of Defense to such a Foundation. If this consideration was indeed involved, I think it is mistaken. My contact with social science and governmental personnel in foreign areas leads me to the conviction that rather than sanitizing DOD funds, the result would have been a 'pollution' and discrediting of the social science foundation. Suspicion of U.S. supported research is presently at a high point, and those concerned in foreign countries, particularly those of the developing world, are not likely to make fine discriminations about the sources of government funds."

JOHN R. BORCHERT

(Department of Geography, College of Liberal Arts, University of Minnesota, Minneapolis, Minn., March 22, 1967)

"I am very much in sympathy with the purposes which are declared and elaborated throughout the bill. I am not wholly persuaded that these purposes cannot be achieved through a single foundation for the support of science rather than through separate foundations for the physical and social sciences. Although my personal acquaintance with the operation of the present NSF has been comparatively brief, I have been struck with the real value of having the physical and social scientists, and their programs, working in close physical proximity to one another. The increasing application of systems analysis to problems of resource utilization and environmental quality, especially bringing together diverse disciplines in the physical and social sciences, are demanding that gulfs between them be bridged, and providing new opportunities for disciplines that lie in the boundary zone between these two classical divisions of the sciences. In view of this, it might yield little or no net gain to separate the administrators further at this time."

GABRIEL A. ALMOND

(Institute of Political Studies, Stanford University, Stanford, California, March 30, 1967)

"I have given some thought to the question of a separate foundation for the support of the social sciences. I believe that the purposes served by such a foundation might be served as well by an amendment to the legislation establishing the National Science Foundation which would provide for a separate staff in the Office of Science and Technology in the White House to deal with the social sciences and a much stronger representation within the framework of the National Science Foundation of the Social Sciences.

"I mean by that a larger number of social scientists should sit on the Board of the National Science Foundation and the Foundation staff dealing with social science grants should be made more representative and of higher intellectual quality than the present staff serving the behavioral sciences in NSF.

". . . It would appear to me that the needs of government agencies for basic social science research might best be communicated to the appropriate congressional committees when they consider appropriation for the National Science Foundation. It seems to me that it is at this point that these agencies can make out the case for increased funds that might be available for basic research in certain areas."

ROBERT W. PATERSON

(President, Associated University Bureaus of Business and Economic Research, Columbia, Mo., May 8, 1967)

"Support for social science research should be greatly increased either through a new Foundation or through the creation of a formal social science division of the existing National Science Foundation. A good case may be made for either organization form but it's my belief that the latter would be much superior to the establishment of another organization . . ."

HAROLD GUETZKOW

(International Relations Program, Northwestern University, Evanston, Ill., July 17, 1967)

". . . The sooner we have a National Foundation for the Social Sciences, the better."

THEODORE R. VALLANCE

(6611 Byrnes Drive, McLean, Va., March 23, 1967)

"The section dealing with the administering of research for other elements of the Government could be made stronger . . . I believe, if it were clear that the Foundation would conduct only basic research for other parts of the government . . . I believe that the Foundation . . . should concentrate on basic research (perhaps this should be made more generally clear in the language of the Bill) and particularly it should not endeavor to sponsor applied research for mission oriented parts of the Government. There are two reasons for this: applied research by its nature invites difference of opinion as to what the application of the research it *to* (and the Bill seeks to minimize coordinative problems between sponsor and research institution), and this problem would further be complicated if there were a third party (the other Government agency) whose interests would have to be cared for in the relationship . . . As a second . . . observation let me suggest that law and history are not social sciences as usually studied, nor is geography as I understand it . . . I'm not opposed to supporting studies in or of law and history or even geography, and I think that a NFSS could well support such studies if the fund for the Arts and Humanities does not pick up law and history and NSF fails to fund geography adequately and if such studies would follow a social science or systems model, using the substance of history and law as data.

". . . may I suggest that reconsider the wording of section 11 (b) 2 so as to relax slightly the strictures against the Foundation doing any research on its own, and permit a modicum of in-house research that would be related to the planning of Foundation programs . . . If the Foundation is to carry out well its policy forming mandate, it should have an internal research capability . . . to help to accomplish this, rather than leave the determination of the rationale for the Foundation's future in the hands of forces external to the Foundation—forces that are not always rational in relation to the world of practical research policies, however rational they might be within their laboratories.

"Finally, is a NFSS the most effective vehicle for servicing the objective set forth in S. 836? I really don't have a well founded opinion on this yet, for it is a complex question deserving of more detailed analysis than I have been able to make. Thus, while I have long been favorably disposed toward the concept of a NFSS, I should feel more comfortable about a full endorsement of it as an operational concept if some form of benefit/cost analysis . . . could show the NFSS to be superior to other alternatives that are available for attaining the goals which S. 836 seeks so admirably to serve."

ANDREW W. CORDIER

(School of International Affairs, Columbia University, New York, N.Y., April 3, 1967)

"The creation of a National Social Science Foundation supported by federal funds has now become an urgent necessity. As Dean of a graduate school, I observe at close hand in our process of recruiting, the growing disparity between the number and quality of students going into the sciences as compared to those who pursue a career in the social sciences. While this is partly due to the vast opportunities that are provided for personnel in an age of science, part of it is to be accounted for also by the relative lack of resources for students who proceed to the faculty and/or research level and find the fiscal and research resources much below the level existing currently in the science field.

"Yet the health of our society and the world generally depends very much upon the contribution that social scientists can make to the solution of our in-

numerable social ills whether on the urban, national or world level. Through the medium of first rate research pointedly directed to our major problems the proper basis can be established to proceed intelligently toward their solution."

OSCAR COHEN

(Anti-Defamation League of B'nai B'rith, New York, N.Y., March 20, 1957)

"I am delighted to endorse S. 836: 'A Bill to Create a National Foundation for the Social Sciences' which you have co-sponsored. I believe this Bill, if enacted, would constitute a vital support for social science research. This assistance is now badly needed."

HARRY ECKSTEIN

(Princeton University, Center of International Studies, Princeton, N.J. March 30, 1967)

At your request, I am writing down, in summary form, some thoughts about S–836. If you wish, I can elaborate any or all of them, and add a good many more.

(*1*) *The national need for social science research*

This seems adequately covered in Senator Harris' speech of February 6, and is unlikely to be questioned in any case. It might be worth noting, however, that modern technology not only creates unprecedented human problems, but that many problems appearing to be technological are in fact, in large measure, psychological and social ones. For example, slum clearance requires technology but is nearly useless unless human problems of relocation, not to mention human living habits, are dealt with; revolutionary wars are, if anything, remarkable for their low levels of technology and large issues of politics and social policy; and one could go on in this vein for pages; indeed it is difficult to think of any purely technological problem, while easy to think of vast numbers of social problems that have virtually no technological dimension at all.

The relative neglect of social studies, in face of these facts (which are not new) is due to several factors. It used to be widely assumed that since in trying to understand man we are only trying to understand ourselves, good common sense and ripe experience suffice for the purpose, while nature raises all kinds of difficult puzzles; we now know that just the opposite is the case: the systematic study of men and societies raises all the difficulties encountered in the natural sciences, and many additional ones as well. In addition, the free study of social life was hardly compatible with the structures of autocratic societies, and free democratic governments are recent and rare. Because of this most of the historic universities had a long tradition in the natural sciences and humanistic studies, but none in social study, and this sort of thing tends to perpetuate itself. (It is no accident, in view of this, that the United States is in the forefront of all the social sciences, however deficient American social science may be from an ideal standpoint.) Also because of this, much early social study was done outside academic contexts altogether, and was highly polemical, ideological and in fact subversive to existing institutions—in other words, unaffected by the academic ethos of objectivity; the resulting image of the social scientist has stuck to him, and made him appear opinionated rather than learned, and a social danger rather than asset.

(*2*) *Is there a need for additional support of social science research?*

My impression is that few clearly good projects submitted to private foundations fail to obtain funding. However, there is another side to the matter: (a) Marginal projects almost always fail to be supported unless very modest. Even if only a small proportion of these come off there would be an enormous gain to social knowledge. The financing of social research will not be adequate until there is far more money than now to be *wasted*—or, better, risked. This is particularly so because marginal projects include the brainstorms and dreams of

the more brilliant as well as the work of the less capable researchers. The relative lack of risk-money in the social sciences counts especially against men in the less prestigious universities, and thus creates a vicious circle: lack of research money reduces their adequacy, which makes it still less likely that they can get research support. (b) Very many projects social scientists would like to do are never submitted for funding in the first place because it seems hopeless to do so. Social scientists learn what the market will buy and tailor their goods accordingly. (In my own case, I planned a project I considered very important about eight years ago, but did not submit it to anyone for just this reason, until an agency of the Department of Defense expressed an interest in it and in fact funded it.)

While the social sciences undoubtedly need more research support than is presently available because of their underdevelopment, this need arises also from their not inconsiderable and continuing progress. As such progress occurs, the problems become more difficult, the methods more rigorous and expensive, the samples larger, and so on; at the same time, we have got to the point where good empirical work increasingly requires teams of researchers rather than isolated scholars. As in the natural sciences, progress means greater costs in all respects. In my view, social science progress has already far outstripped social science resources. In my field, for example, huge numbers of theories, models, and hypotheses have been developed in the last decade, but most of them remain untested because the research required is impossible on present rations of money, manpower, machinery and time. More than anything else, this gap between the development of theories and their testing needs to be surmounted; all too often in the social sciences one gets a good idea and has to stop there.

(*3*) *Should the Government provide the additional support?*

If private foundations can provide the support needed, there is obviously no need for government to provide it, but the private foundations are not doing so at present, and whatever prevents them now will probably continue to do so in future. Finance through government entails essentially a recognition that better social science is a national need, hence a responsibility of the whole community, not only a special responsibility of philanthropists. Obviously as well, no one is better able to finance social study than the government; the sums required are, in terms of the national budget, minute; and the executive departments are, in any case, already considerably involved in social science research.

(*4*) *Should support be provided through a national social science foundation?*

Government research funds for social science can be channeled through a new national foundation, one of the existing national foundations (NSF), or the administrative departments.

NSF has always been legally able to support the social sciences, but has in fact always treated them as poor and stupid stepchildren. Its very recently increased liberality coincides so exactly with plans for a new national foundation that one must wonder whether it would survive the demise of these plans. NSF has also been remarkably pusillanimous in its support of the social sciences, with its policy of not financing anything that might give political offense and make its general position uncomfortable.

The administrative departments will, of course, continue to sponsor researches in which they are especially interested. Many social science projects, however, are better done under other governmental auspices, especially, of course, foreign area research. In addition, much of the work they support is, and is bound to be, initiated by themselves (in effect, commissioned) rather than by social scientists; is concerned, and bound to be, with questions of immediate practical import rather than pure research and the long run (although the latter ultimately tends to produce the best practical pay-offs); and, because bureaucrats are bureaucrats and have superiors who are also bureaucrats, is limited by an attitude of safety-first, a lack of adventurousness and imagination—despite a few exceptions. Department sponsorship also invariably involves massive red tape which consumes valuable chunks of research time.

(*5*) *Are there political dangers in NFSS?*

No one can guarantee that government support of social science research through any channel will not involve political inquisitions, harassment, or controls. But the question is not really whether government should have anything

at all to do with social study; it does, and will, because it must; besides, politicians can harass private scholars and foundations too. The question is whether NFSS would be especially vulnerable to such harassment. It is difficult to see why it should be and easier to see how it reduces the dangers. But even if it is, no social scientist is compelled to resort to it as long as other means of support exist (and S–836 abolishes none), nor is NSSF itself compelled to remain in existence if it fails to work. Other democracies—Norway, for example—have managed to develop thriving social sciences through national financing, although the Norwegian experience suggests the particular desirability of special and long-term financing to minimize political interference (Norwegian research being financed out of the profits of the national "football pool"). Given the relative sophistication of our social sciences and the democratic nature of our society, it would seem that if anyone can have a successful NFSS it would be the United States.

LAYMAN E. ALLEN

(Mental Health Research Institute, The University of Michigan, Ann Arbor, Mich., March 10, 1967)

"There has been a glaring weakness in the social science progam of the National Science Foundation that Dr. Leland Haworth's testimony indicates is likely to continue unless remedied by legislation such as that which you have introduced. This weakness is that the definition of 'social science' for purposes of NSF support has been excessively narrow. For example, the NSF definition of social science does not include law—hence, the work of those concerned with what is perhaps the central institution for bringing new knowledge in the other social sciences to bear upon the solution of pressing societal problems has been, by unfortunate definition, excluded. This is not, in my judgment, an appropriate balance in resource commitment for research within social science.

"The recommended legislation moves in the right direction in its broader definition of the research to be supported by the National Foundation for Social Sciences. It is not only encouraging a better balance in resource allocation between social science and other fields of knowledge, but also more appropriate distribution within the social sciences.

"The need for integration of law with the other social sciences is even more pressing than ever before in our increasingly complex and interdependent urban society; and fortunately the potentialities for accomplishing this in more meaningful ways is being radically altered by rapid development in the use of computers and other aspects of the communications sciences. Encouraging realization of these potentialities deserves the support that it is being given in this recommended legislation.

"The provision in Sec. 6(3)(b) of S. 836 for direct aid to institutions of higher learning and nonprofit research organizations, particularly those working on multi-disciplinary problems, is also of central significance. As Dr. Haworth pointed out, these centers have a precarious financial existence at present, resulting in wastage of professional time. Help is needed and deserved here."

PITIRIM A. SOROKIN

(8 Cliff Street, Winchester, Mass., April 8, 1967)

"I heartily welcome and approve your 'Bill to Create a National Foundation for the Social Sciences.' This country and mankind desperately needs now a much greater knowledge of man and human, sociocultural universe than we have at the present time . . ."

KIMBALL YOUNG

(304 W. Fourth Street, Scottsdale, Ariz., March 25, 1967)

"I most heartily support your efforts to establish a National Foundation for the Social Sciences."

MERLE KLING

(Dean, Faculty of Arts and Sciences, Washington University, Saint Louis, Mo., March 14, 1967)

". . . I of course am highly sympathetic to support for the growth and development of the social sciences, and certainly endorse such objectives . . . I felt that Section 8(b) deserved further consideration. The possibility of potential censorship of scholarly research may be a problem in this provision . . ."

JOHN N. PLANK

(The Brookings Institution, Washington, D.C., March 3, 1967)

". . . I want to . . . applaud you for your initiative. As you know I am strongly in your support in this matter and am anxious to be of what help I may be . . ."

W. O. BAKER

(Vice President—Research, Bell Telephone Laboratories, Murray Hill, N.J., March 7, 1967)

". . . we are gravely concerned about any induced separation of the natural and social sciences."

JOSEPH E. JOHNSON

(President, Carnegie Endowment for International Peace, New York City, N.Y., March 16, 1967)

"Needless to say, I congratulate you on your initiative in introducing the bill."

WAYNE H. HOLTZMAN

(Office of the Dean of College of Education, The University of Texas, Austin, Tex., April 7, 1967)

"I want to congratulate you and your colleagues for the attention you are giving to the problems involved in Federal support of the social and behavioral sciences. It is an area that has been neglected too long and we are indeed grateful to you for the splendid job you are doing in reviewing these problems and making constructive proposals for improving the situation.

". . . I am still personally uncertain about the desirability of establishing an independent national foundation for the social sciences. As a psychologist . . . I recognize that other social scientists, particularly in such areas as political science, history, and international relations, are not currently being adequately supported (and probably will not be adequately supported) with the existing framework."

RALPH W. TYLER

(Center for Advanced Study in Behavioral Sciences, Stanford, Calif., April 4, 1967)

"I believe that there is need for better and more adequate research in the Social Sciences and that this objective would be aided by our support from the Federal Government. However, I am not sure that the objective is better realized by creating another Foundation or by getting recognition from the present funding agencies of the need for expansion and improvement in the support of Social Science research."

CHARLES Y. GLOCK

(Director, Survey Research Center, University of California at Berkeley, March 27, 1967)

"The Social Sciences in our country have grown tremendously and impressively over the last two decades and have in my judgment developed the necessary theoretical and methodological sophistication to make now important contributions to informing national and international policy. With funds for sustained and orderly growth I think that over the next decades the social sciences can make as much contribution to the advancement to our society as the natural sciences have in the past."

LLOYD N. MORRISETT

(Vice President, Carnegie Corporation of New York, New York City, N.Y., March 17, 1967)

". . . We do believe in the importance of social science and the necessity for a strong base of government support . . ."

PHILIP D. CURTIN

(Department of History, The University of Wisconsin, Madison, Wisc., April 17, 1967)

". . . This is a most useful project which I have followed with interest. Those . . . in the field of history have been in an especially difficult position in recent years. Scholars who consider History to be one of the Social Sciences and construct their research in that spirit find that they have a difficult time receiving support from either the National Science Foundation or from the National Foundation for the Humanities. We hope that a National Foundation for the Social Sciences will help correct part of this problem . . ."

SAMUEL P. HAYS

(Chairman, Department of History, University of Pittsburgh, Pittsburgh, Pa., March 16, 1967)

"Those in the social sciences throughout the nation, I feel sure, are grateful for the increased interest in Washington in their fields of study, and are encouraged by proposals such as yours."

DEPARTMENT OF GOVERNMENT, SOUTHERN ILLINOIS UNIVERSITY, CARBONDALE, ILL., FEBRUARY 10, 1967

The undersigned, all faculty of the Department of Government at Southern Illinois University, Carbondale, wish to endorse strongly your proposal for the establishment of a National Foundation for the Social Sciences, as embodied in S. 836 which you recently introduced in the Senate.

We are extremely aware of the scarcity of funds to support research in the social sciences and of the reluctance of existing governmental sources to provide support at the level which many social scientists consider necessary. Any effort in the direction of obtaining more funds is well appreciated in the community of social scientists, and your efforts are to be applauded.

Sincerely,

Stephen L. Wasby, Assistant Professor; Norman R. Luttbeg, Assistant Professor; Joann P. Paine, Assistant Professor; Frederic H. Guild, Visiting Professor; John H. Baker, Assistant Professor; David T. Kenney, Director, Public Affairs Research Bureau; Jack F. Isakoff, Professor; William S. Hardenbergh, Associate Professor; M. M. Sappenfield, Associate Professor; Ward M. Morton, Professor; Charles T. Goodsell, Associate Professor; Melvin Kahn, Associate Professor; H. B. Jacobini, Professor; Egon Kamarasy, Assistant Professor; Orville Alexander, Professor and Chairman of the Department.

LUTHER GULICK

(Chairman, Institute of Public Administration, New York, N.Y., March 22, 1967)

"You are quite right in insisting that research on human beings and their behavior must go hand in hand with research in science and technology. Without the social science progress, many so-called 'advances' in material science may be illusory if not dangerous."

VERNON VAN DYKE

(Department of Political Science, The University of Iowa, Iowa City, Iowa March 21, 1967)

"I write simply to express my very warm endorsement of your proposal . . . I hope that federal support for research in the natural and health sciences can continue; at the same time, I believe that there is a powerful case for bringing support for the social sciences up toward the level established in these other fields."

ROGER HILSMAN

(Institute of War and Peace Studies, Columbia University, New York, N.Y., March 9, 1967)

". . . I want you to know that I warmly support your effort to encourage research in the social sciences."

ABRAM BERGSON

(Director, Russian Research Center, Harvard University, Cambridge, Mass., March 24, 1967)

". . . As a social scientist . . . may I say that I much appreciate your interest in providing additional support for social science research in this country."

CHAUNCY D. HARRIS

(Department of Geography, The University of Chicago, Chicago, Ill., March 20, 1967)

". . . You are rendering a great service to the United States Government and to the American people by effectively calling attention to the needs for and value of increased support for research in the social sciences . . . The introduction of S. 836 by you in the Senate and the proposed hearings . . . should make a major contribution towards calling attention to the need for increased support for the social sciences and hopefully should result in effective governmental recognition of this need and of steps to improve the situation."

HARRY LEROY JONES

(American Bar Association, Chicago, Ill., March 13, 1967)

I am writing to suggest that the A.B.A. support S. 836, a bill to establish a National Social Science Foundation. The foundation envisioned by this bill would be the equivalent for the social sciences of the National Science Foundation which, as you know, makes grants for the physical sciences.

Ever since the Congress denied funds to the Commission on International Rules of Judicial Procedure, of which I was Director, in 1959, I have been engaged in trying to raise money for the improvement of the administration of justice. It is a heart-breaking task. Congress would not give the Commission any money because the members of the House Appropriations Committee thought, or so

they said, that the Bar Associations or foundations should do the work. Every year when Congressmen John J. Rooney was saving the taxpayers from bankruptcy by denying funds to our Commission, the Congress was voting hundreds of millions for research in the physical sciences. I understand that The National Institute of Health has regularly had money literally forced upon it.

The foundations, and I applied to many of them, would not give the Commission any money because they said reform of international procedure was a governmental function, and, besides, they were interested only in medical research etc. (The Carnegie Corporation did give $350,000 to the Commission and Columbia University for 1960–62, but refused to renew the grant to enable the Commission to complete its program.) How many lawyers know that of the 6006 foundations listed in the Foundation Directory only 5 (that's right, only five!) list law as within their field of interest? Of course, more than 5 have made grants for legal purposes, but in relatively small amounts.

Over the past year, I have made applications for grants on behalf of the newly organized World Association of Judges, of which I am Executive Director, to more than 50 of the leading foundations—those that list international relations, world peace, political science, etc. as within their field of interest. Results so far have been negative.

You probably know that Dean Robert B. McKay of N.Y.U. has been making a study of discrimination against the law in the allocation of research funds.

It is high time that we lawyers raise our voices in an attempt to remedy this neglect of the law in the dispensation of grants. One way we can do so is by supporting S. 836 which specifically defines the social sciences to include law. A Social Science Foundation may not be the final answer, but it is a step in the right direction.

I would bring a proposal to support the bill before the section of International and Comparative Law of which I am a former Chairman, but it would take too long to gain Association approval, and hearings are scheduled on the bill for June. May I therefore express the hope that you will be able through the appointment of an ad hoc Committee of the Board of Governors, or otherwise, to bring the approval of the Association to the support of the bill.

WILBERT J. M'KEACHIE

(Chairman, Department of Psychology, The University of Michigan, Ann Arbor, Mich., March 22, 1967)

"You and your colleagues are to be commended for your forward-looking attitudes and the interest you are taking in encouraging research in the social sciences."

". . . it is gratifying to note the efforts you and your colleagues are making to insure a solid system of support for advancement of knowlege in the social sciences."

E. ADAMSON HOEBEL

(Department of Anthropology, College of Liberal Arts, University of Minnesota, Minneapolis, Minn.)

". . . let me congratulate you on the wisdom of the bill, and then to express my appreciation as a citizen-social scientist for your sponsorship of it.

". . . the limited and indirect nature of much of the research support for the social sciences heretofore, should be replaced with the kind of direct and clearly focused agency proposed in your bill."

MELFORD E. SPIRO

(Department of Anthropology, The University of Chicago, Chicago, Ill., April 5, 1967)

"I am most enthusiastic about your bill, and wish to congratulate you both for its conception and for your courage in introducing it."

RICHARD B. WOODBURY

(Curator, Office of Anthropology, Smithsonian Institute, Washington, D.C., May 8, 1967)

(I do not) "yet feel certain whether the creation of a new foundation or the further strengthening of the National Science Foundation, which has supported anthropology wisely and well, is the better course. It is profoundly gratifying, nevertheless, that there is an increasing awareness in many quarters, due to a large degree to your efforts, of the potential and needs of social science."

FREDERICA DE LAGUNA

(Chairman, Department of Anthropology, Bryn Mawr College, Bryn Mawr, Pa., May 20, 1967)

"My own feeling is that there is no need for a separate foundation for the Social Sciences. Rather than propose the establishment of a new foundation, would it not be better to strengthen the two established foundations. . . . As for my own discipline, Anthropology, I should be loath to see it fragmented, as would be the case if projects had to be handled by three different foundations."

ROBERT A. NISBET

(Department of Sociology, University of California, Riverside, Calif. March 9, 1967)

". . . assuming the necessity of a separate social sciences foundation, it seems to me that your bill—and the remarks with which you introduced it—come about as close as is possible to protecting such a foundation from potentially distractive influences emanating either from within the government or from the larger society.

"I would be less than frank, however, if I did not state that my own preference is for approaching the whole problem through the structure of the existing National Sciences Foundation. I should like to see—by explicit legislative action—a widening of the present scope of the social sciences within the National Sciences Foundation, together with prescribed increase in the social sciences' policy role in the NSF and, finally marked increase in Federal funds for use by the social sciences."

KARL A. FOX

(Head of the Department of Economics and Sociology, Iowa State University of Science and Technology, Ames, Iowa, March 22, 1967)

"I certainly appreciate your efforts toward increased recognition and support for research in the social sciences . . .

"I think the social sciences as sciences have a good deal to gain from competition and comparison with the physical and natural sciences. I am somewhat persuaded by the 'unity of science' argument and would like to see what NSF can do given substantially increased funds for research grants and fellowships in the social sciences."

T. W. SCHULTZ

(Department of Economics, The University of Chicago, Chicago, Ill. April 24, 1967)

"I am sure that I am not unbiased for obviously as an economist I have a vested interest. But if I am able to put that aside, I am sure that my judgment

would be that a foundation for the social sciences, such as you have envisaged, could do great good over the years to come by serving our national interest in advancing knowledge in this area."

JAMES C. BONBRIGHT

(Professor of Finance, Emeritus, Columbia University, New York, N.Y. March 20, 1967)

". . . I hope that the Bill will be passed and that its administration under wise and imaginative Board of trustees may have truly outstanding consequences for the cause of human welfare.

"If the Board of Trustees should be made up of at least twenty-five members, which may well be desirable in order to secure the benefit of contributions from persons of widely different types of training and experience, I believe that it might be well to have a much smaller, executive committee or board, intermediate between the Trustees on the one hand and the Director on the other hand. The social sciences constitute such a broad field that any single Director might feel the urgent need of a smaller group of men with whom he could have frequent conferences. Five members at most, all of them committed to spend considerable thought and time in Washington, might accomplish what the full board of trustees could not be expected to accomplish."

J. M. KEENAN

(Stanford Research Institute, Menlo Park, Calif., February 21, 1967)

". . . I am strongly in favor of the establishment of the organization."

V. L. ISRAELSEN

(Department of Economics, College of Business and Social Sciences, Utah State University, Logan, Utah, June 13, 1967)

"I have carefully examined S. 836. I very strongly endorse and support the content of this bill. . . . Not only is new and fundamental knowledge of man's relationship to man imperative, but also machinery or organization for the implementation and application of the basic research findings.

"One aspect, it seems to me, that deserves far greater emphasis than I have noted in the Hearings is the 'cost of not doing.' The 'cost of not doing' will be infinitely greater than the 'cost of doing' the essential fact finding needed. . . . In my opinion, it is vital that undernourishment of the social sciences be corrected. Your bill is a major step in that direction."

ROBERT B. KAMM

(President, Oklahoma State University, Stillwater, Okla., August 28, 1967)

"I am writing to heartily endorse S. 836 . . . providing for the establishment of the National Foundation for the Social Sciences, to promote research and scholarship in the various sciences."

"We at Oklahoma State University have read the bill and feel that there is a great need for assistance in the area of the Social Sciences, such as outlined."

ALLEN D. TILLMAN

(Department of Animal Science, Oklahoma State University, Stillwater, Okla., August 9, 1967)

"May I add my support to your quest in establishing an organization which will increase our efforts to increase our knowledge of man."

DANIEL N. BRAUNSTEIN

(College of Business Administration, The University of Rochester, Rochester, N.Y., June 12, 1967)

"I am very excited about the possibility of such a foundation, and look forward to the stimulus to social science research which would likely be created."

"Much behavioral research in government organizations ignores long-range problems because the agency's short-range mission must be carried out first. Yet such long-range behavioral research is potentially very powerful. It may create greater efficiency, yet it could be not undertaken by an agency with a more immediate mission. Thus a National Foundation for the Social Sciences would have a payoff in ultimately improving government operations. I would be very interested in seeing this bill progress."

HERBERT A. SIMON

(Graduate School of Industrial Administration, Carnegie Institute of Technology, Pittsburgh, Pa., June 13, 1967)

"Whatever legislation emerges from the hearings of your committee, the hearings are almost certain to promote new growth and strength for the social sciences. I know you will not interpret the varied opinions your committee is hearing from the social science community regarding the precise means to be employed, as reflecting any doubts about the significance of the goal or any lack of enthusiasm for the committee's activity."

MELVIN R. MARKS

(College of Business Administration, The University of Rochester, Rochester, N.Y., May 22, 1967)

". . . As a Fellow in the American Psychological Association, and in its Divisions of Industrial Psychology, and Evaluation & Measurement I approve heartily of this bill."

CHARLTON R. PRICE

(Stanford Research Institute, Menlo Park, Calif., May 19, 1967)

"I believe strongly in the goals of this measure and will be pleased to do all I can to bring about its passage."

WILLARD C. OLSON

(Dean, School of Education, The University of Michigan, Ann Arbor, Mich., April 13, 1967)

"We feel that education should be included by name among the social sciences mentioned under Section 3. . . ."

EMANUEL SAXE

(Dean, Bernard M. Baruch School of Business and Public Administration, The City College of The City University of New York, New York, N.Y., March 16, 1967)

"It would seem to me that in Section 3 of this Bill, wherein appears the definition of Social Sciences, specific inclusion should be made of the field of *Business*, which is an academic discipline serving the needs of one out of every five undergraduate students, and a very considerable portion of the graduate students. in the United States."

STEPHEN H. CHOWE

(Director, Meyerhoff Center of Political Psychology and Communication, The American University, Washington, D.C., February 8, 1967)

"I think Mr. Leland J. Haworth's testimony is probably a better choice if we must have something of this kind; that is, to expand the existing division of social sciences in the National Science Foundation instead of building another bureaucracy. I must emphasize that increasing bureaucracy is not necessarily going to solve our problems . . ."

SANFORD H. BOLZ

(The American Jewish Committee, Washington, D.C., February 1, 1967)

". . . Let me assure you . . . of our interested and strong support of this measure . . ."

JOHN M. KUHLMAN

(Department of Economics, University of Missouri, Columbia, Mo., September 12, 1967)

"I certainly want to commend you for your interest in and support of the social sciences. Certainly, if the 1940's and the 1950's can be thought of as the age of the physical and natural sicences, then the 1960's and 1970's will probably be thought of as the age of the social sciences. The first two decades saw fantastic breakthroughs in the more traditional sciences. The pressing problems of the present decade are the social problems such as urban ghettos, poverty, economic growth, and the like. It is and promises to be an era in which increasing support will go to the social sciences which promise to throw some light on these problems.

"Those of us in the social sciences have worked very diligently to establish the scientific status of our disciplines. If these is to be a foundation to support the social sciences I would hope that its efforts be confined to the social sciences and not be extended to cover all fields of academic inquiry not presently being supported. The result, it seems to me, could only be to hold back the development of the social sciences."

DAVID R. KRATHWOHL

(Dean, School of Education, Syracuse University, Syracuse, N.Y., September 5, 1967)

"I appreciate the opportunity to discuss with you S. 836, a bill to establish a National Foundation for the Social Sciences. As a dean of a school of education* dealing with the problems of professional education, I am much concerned with the support of the social sciences of which the study of education is a part and on which education's development so much depends. All of us in educational research have long been concerned with need for an increase in the support of social science research, particularly as it applies to the field of education.

"I do have a concern about organization for such additional support. There are advantages in having multiple sources of support since there are many untried "roads to Rome" in the social sciences and where one agency may permit support of only certain of these roads, another agency may be venturesome. But there can also be problems if each of these agencies develops a program which they pursue with utmost vigor, seeking to involve staff and outside funds in their plan. On the surface, it appears that this is just what one would like them to do. But, as a university administrator seeking to wisely use the University's resources, I find my staff tends to be fragmented by the multiple pressures, tending to work more closely along directions desired by a Federal

*I am president-elect of the American Educational Research Association. However, these are my personal views, as the Association has not had opportunity to consider this bill in a meeting.

agency than with each other. There is, thus, another side to this support which needs to be carefully studied.

"There could be, and perhaps should be, competitive overlap among such agencies as OE, OEO, NIH, and others in project research on a variety of problems. But none of these organizations is likely to be concerned with the overall problem of resource development and management in the social science research area. This could well be the most important focus and role of a Social Science Foundation. I would encourage its careful consideration.

"In our inquiries we have been given to understand that the problems of education are included in the scope of the bill. It would be most desirable if this were made explicit."

JOHN I. GOODLAD

(American Educational Research Association, Los Angeles, Calif., Sept. 5, 1967)

"I have a keen interest in S. 836, a bill for a National Foundation for the Social Sciences. However, the point of view expressed here is my own.

"I heartily endorse the intent of the bill which is clear and needs no elaboration here. With two exceptions, I agree with its specifics. These two specifics are the definition of social sciences and Sec. 7(b). Let me deal with the latter first.

"Funds for long-term basic research in any field always are in short supply. A Corollary condition—brought about in part, at least, by the first—is that researchers capable of sustaining long-term effort with minimum reward in the form of success also are in short supply. These two problems are compounded on one hand by the temptation to seek short-term amelioration of pressing social problems and on the other, where Federal support is involved, by the necessity of our elected officials accounting to their constituents on a short-term basis with respect to their official acts. Consequently, support for basic research is but a trickle. To endanger this trickle even further and to encroach further upon the time of those individuals capable of and involved in basic research by making the proposed National Foundation in the Social Sciences responsive to the various departments and agencies of the Government would be a serious mistake.

"Now, to my second reservation with respect to specifics. I assume that argument for omitting 'education' from the list of social sciences is that education is pervasive. It is just this argument that has resulted in education being treated as a common-sense realm and in continuing neglect of educational phenomena as subject matter for basic research. Unless the field is specially identified, it will continue to be neglected.

"I tend to agree with Dean Don K. Price of Harvard University in his belief that a single foundation would serve all interests best, but only as an ultimate rather than an immediate objective. Research in the social sciences currently is neglected; there is no question here. The imbalance is not likely to be taken care of soon by adjustments within the National Science Foundation. It is hoped in time that three major national foundations—in the natural sciences, social sciences, and the humanities—will provide proper balance and perspective. Then it will be appropriate to consider their merger into a single national foundation.

"The early creation of a National Foundation in the Social Sciences appears to be a natural and necessary step toward balanced concern for understanding phenomena affecting all mankind."

RICHARD A. DERSHIMER

(American Educational Research Association, Executive Officer, Washington, D.C., Sept. 8, 1967)

"I am pleased to respond as a member of the educational research community to your request for a reaction to S. 836, which provides for the establishment of the National Foundation for the Social Sciences.

"My first reaction is an unavoidable question: Why has the term 'education' been omitted from Section 3? If the answer is that education traditionally is not included in the definition of the social sciences, the response is expected but

hardly defensible. The past isolation of educationists is dissolving. There is slowly emerging, primarily from psychology and sociology but from other disciplines as well, a group of scholars and researchers, along with educationists, who are concerned with all aspects of human learning and, in James S. Coleman's words, with 'the links between education, on the one hand, and the economy, polity, society or culture on the other'. (See his introduction to *Education and Political Development.*) The educational research community is in the forefront of this development, and it would seem desirable that a foundation concerned with the social sciences would want to encourage this rather recent development. Certainly education is no less a subject of interdisciplinary study than communication or international relations.

"It would be equally as unfortunate if education were omitted for jurisdictional reasons, that is, because it is presently lodged primarily in the Office of Education. Actually, educational researchers obtain funds from the National Science Foundation, the Office of Economic Opportunity, the National Institutes of Health, the Children's Bureau and several of the armed forces research agencies. I concur wholeheartedly with Don K. Price, who testified to your committee on June 20, that it is important that the social sciences develop a variety of sources of support.

"There is, however, a special need in educational research for an agency that can develop close contact with and be responsive to the academic research communities. All of the above-mentioned agencies are highly mission oriented and have a wide range of constituents. Originally, most of the money allocated for the R & D program of the U.S. Office of Education went to university-based professors on the basis of proposals initiated in the field and judged as meritorious by committees of peers. But as education became a 'hotter' political and social issue, the U.S. Office staff earmarked more and more funds for 'solicited' projects. The present Associate Commissioner for Research has attempted to maintain a balance in his program between priorities as determined by the field and priorities as determined by the administration and Congress. However, the increase in funding of projects in other branches of the U.S. Office has distributed the major effort of the U.S. Office behind 'seat pants' innovations that are more in demand by practitioners. In 1967, roughly $40 million went to research initiated by the field; this represented about 11 per cent of the funds used to finance research, development, and innovations of the U.S. Office. It is quite likely that in the future this percentage will decrease. For example, the funds for Title III of the Elementary and Secondary Education Act were increased this year by $114 million, while the funds for research were held at about the same level.

"Whether this interaction with the academic community can best be maintained through a separate foundation for the social sciences or whether the responsibility of the National Science Foundation should be expanded is an issue that demands careful study. At the present time I lean in the direction of creating a new and separate agency for two reasons: the need to develop more politically sophisticated communities in the social sciences; and the differences between the natural and social sciences.

"I agree wholeheartedly with Don Price in his chapter in the book, *Sociology of Science*, when he stresses the need for academicians to learn to use 'political processes' as well as 'technical discussions'. I can testify that most educational researchers prefer not to 'dirty their hands' politically. A separate foundation would do much to shift the responsibility for developing federal policies and programs onto the shoulders of social scientists.

"The second reason is more difficult to document but it involves the relationships between the natural and the social sciences. The natural scientists are deferred to, accorded the greatest prestige, and have developed the most influential institutions and networks. Consequently, they can be expected to have the greatest voice in all agencies that support research, including the National Science Foundation, for many years to come. This is as it should be, but it does impose some difficulties. In education, the natural scientists frequently have shown little concern with the complexities of the problems of learning and instruction and have tended to seek the most direct ways of altering teacher behavior. This approach has added much to our experience but little to the base of empirical knowledge.

"If policies like these would prevail in any existing agency, educational research would make little progress. It will be served much better if it is directed by social scientists who are familiar with the approaches and the frustrations of studying and attempting to alter human behavior."

AUSTIN LAMONT, M.D.

(Hospital of the University of Pennsylvania, Philadelphia, Pa., September 7, 1967)

"I wish to congratulate you for your perceptive and persuasive analysis of the need for a National Social Science Foundation. I believe that research in the social sciences is far more important at present than sending a man to the moon or building another particle accelerator."

C. J. FREDERICK

(Chief Psychologist, Patton State Hospital, Patton, Calif., September 7, 1967)

"Both as a psychological scientist and as a native Oklahoman now working in Southern California, I want to commend you for your recent efforts to create a National Science Foundation for the Social Sciences. Since psychology is a social science as well as a biological and behavioral one, this is of particular interest to me, of course."

LEROY H. FISHER

(Department of History, Oklahoma State University, Stillwater, Okla., September 28, 1967)

"The purpose of this letter is to urge that you promote with all vigor the bill introduced by you for the establishment of the National Foundation for the Social Sciences, designed to promote research and a scholarship in these areas of study.

"There is a vast void in the development of the social sciences in the United States as compared with the giant strides that have been made in the area of the physical and biological sciences. Your proposal is urgently needed if the social sciences are ever to catch up with the physical and biological sciences. Because of so much support for the physical and biological sciences, there has been open discrimination against those of us who are working in the social science fields. The United States in the area of national defense shows her deficiencies as compared with the older developed nations in the areas of the social sciences. This is obviously due to the lack of nurture by the Federal Government, and I urge that immediate steps be taken by you and others in the United States Senate and the United States House of Representatives to correct this serious and appalling deficiency."

FLOYD K. HARMSTON

(Program Director, Resource Development, Research Center, University of Missouri, Columbia, Mo., September 28, 1967)

"It is hard to put across the idea that being a social scientist is actually a more difficult task than being a physicist. We bemoan the lack of talent in the field, while overlooking this basic fact. Further, the physicist can come up with far out ideas and this is accepted as normal. Let a sociologist come up with such an idea and all the amateur sociologists in all the barber shops across the Nation condemn him with final damnation.

"It is surprising that we have as much talent as we do, in view of the support and general acceptance of social scientists in existence. Nevertheless, we do have talent and with proper support can obtain much more.

"We are, of course, vitally interested in the establishment of a National Social Science Foundation."

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