The Case for a National Social Science Foundation

Fred R. Harris

George Bernard Shaw once said: "Some men see things as they are and ask, Why? I see things that have never been and ask, Why not?" The public official, the social scientist, and those concerned with mankind everywhere must ask, Why not? We cannot begin to answer that question until we have greater knowledge and understanding of man and his relationships with other men. Nor can we answer it until we have better cooperation between public officials and social scientists.

A folksinger I saw recently said, as a part of his onstage patter while tuning his guitar, "If I ever get this thing tuned again, I'm going to weld it." Many of us feel that way about modern domestic and world problems; we want to get things solved and settled once and for all.

But the central fact of our age is change, a fact not easy for us to accept or live with. And however much we may tend to perceive reality not as it is but as it once was, change nevertheless does come. It has occurred. It is occurring. It will occur.

Consider the twin facts of America's population growth and continued urbanization. Think of an America of today's population where 14.5 million young people live in such poverty that their diet is below the basic nutritional requirements; or where last year 52,500 people were killed on our crowded highways; or where the air we breathe in most of our major cities is a hazard to health; or where many of our rivers are unfit for fish, not to mention human beings; or where housing and educational needs are staggering. And then try to envision, for example, the problems of housing and education just 11 years from now, and just in the three supercities—strips from San Francisco to Los Angeles, from Buffalo to Chicago, and from New York to Washington—which, experts say, will then have 125 million Americans, more than half the nation's population.

On a larger scale, consider today's world of 3.3 billion people, a world where there is an everwidening gap between the rich one-third and the poor two-thirds, where already there is a hunger crisis. Then visualize the world as it may be just 33 years from now when, experts say, the 3.3 billion will have become 7.5 billion, through population growth mainly in the poorer nations.

Think of the problems that have been brought about in education, for example, by the explosion of knowledge and technology resulting from the fact that 90 percent of all the scientists who have ever lived are alive today, and that 85 percent of all the Ph.D. degrees ever granted in America have been granted since the end of World War II. These problems, too, will multiply and precipitate change.

In addition, there will be changes resulting from altered age distribution. Today in America more than half of all our people are under 25 years of age. These are the best educated, the most dedicated, the best prepared young people this country has ever produced. They will be examining us and what we do. They already are.

Consider even the concept of freedom in the light of present and future conditions. The president of Massachusetts Institute of Technology, Howard Wesley Johnson, recently said:

> We are beginning to discover that the right of free citizens to move freely without hindrance can be made meaningless by the breakdown of mass transportation, and the right of free assembly can be negated by impassable city traffic, or, for that matter, by uncontrolled crime in the city streets. We are beginning to suspect that free speech and free press might become irrelevant if we were slowly strangled by the air we breathe or slowly poisoned by our drinking water. We are beginning to see that equal rights and equal job opportunity, when finally obtained by citizens long denied them, can be made meaningless by intolerable housing conditions or by ineffective education systems. We are beginning to realize that if exploding populations create a world of starving humans almost standing on each other's shoulders, all concepts of freedom can become irrelevant, and American prosperity could be infuriating and incendiary to billions deprived of either hope or future.

Testimony before Senate Committee on Government Research

That is why the state of the social sciences has begun to concern a wide and varied spectrum of people, including public officials. That is why, without exception, those who have appeared before the Senate Subcommittee on Government Research have spoken of the need for greater federal support for research and scholarship in the social sciences, whatever they feel about the form that increased support should take. Federal officials so testifying have included representatives of the Department of Labor; the Office of Economic Opportunity; the State Department; the U.S. Information Agency; the Department of Health, Education, and Welfare; the Peace Corps; Defense Department; and the National Science Foundation.

Robert A. Levine, representing the Office of Economic Opportunity, said:

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

Jack Hood Vaughn, director of the Peace Corps, joined with those advocating greater support for the social sciences when he testified:

> We know far too little about the countries in which we work, and far too little about the whole process of human resource development which is our work.

Paul Miller, Assistant Secretary for Education in the Department of Health, Education, and Welfare, summed it up for all those of similar view:

> I do feel, and, again, the intent of our testimony is that we need in the government much larger support for the social sciences.

Senator Harris (D-Okla.) is chairman of the U.S. Senate Subcommittee on Government Research. This article is based on a speech presented before the Society for Applied Anthropology at its annual meeting, 6 May 1967, in Washington, D.C.

But, strangely enough, there seems to have been in our government an inverse correlation between the size of the object to be studied and the amount of money we are willing to make available for such study. We have spent many billions of dollars, for example, for research on the atom, while expenditure for the study of man and society remains at a very low level. We spend $16 billion annually for science and technology and, roughly, only $250 million per year for social science. The National Science Foundation, for instance, out of a total budget of $480 million, this year will spend approximately one-twelfth, or $40 million, for support for the social sciences. I have become increasingly convinced that such frugality is much too expensive in the long run.

Miller, again, spoke of the problems caused by the imbalance in expenditures between the natural and the social sciences when he testified before our Subcommittee.

> The overwhelming success of our natural science activity has been a double-edged sword: While it cannot be denied that modern scientific developments have led to technological innovations which enhance all our lives, it must also be acknowledged that this same technology has, at times, vastly outstripped our ability to control it. Smog, water pollution, congestion and human dislocation suffice to list but a few examples. The point I wish to emphasize is that the continued disparity between support for the natural and the social sciences runs the risk of creating a cultural imbalance wherein technological innovation far surpasses our ability to assimilate it.
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> If we direct our attention to the demands of today's world and the needs of tomorrow's, a great majority of our problems are clearly of the sort to which the social sciences have and should increasingly turn their attention. It makes no difference whether we look at our own country specifically or if we look at the world generally. Men face problems of building and renewing the economies of nations. Men are trying to create new kinds of political institutions which are more responsive to people. Men face the real problem of living with—in fact, preserving—diversity in a world brought closer and closer by new marvels of transportation and communication. For all these and other problems, we can no longer afford to relegate the social sciences to a second-rate, stepchild position.

A National Foundation for the Social Sciences

With these problems in mind, and joined by 20 other Senators, I have introduced in the Senate of the United States a bill (S-836) to create a National Foundation for the Social Sciences. The Foundation, with a beginning annual authorization of $20 million, would encourage and support research and scholarship in the behavioral and social sciences and give much-needed visibility and added funds for these vital disciplines; it would be free from the daily operating concerns of the mission-oriented departments and agencies of the federal government.

Senator Fred R. Harris

The Foundation would do no in-house research but would, in keeping with the precedent set by the National Science Foundation and the National Foundation for the Arts and Humanities, on a completely unclassified basis, underwrite, fund, and support academic research and increased research capability and manpower in the fields of political science, economics, psychology, sociology, anthropology, history, law, social statistics, demography, geography, linguistics, international relations, communications, and other social sciences. It would seek to "civilianize" U.S. social science research in foreign countries and would provide a much-needed alternative to the support now available for such research from the Department of Defense and the intelligence agencies; attitudes toward the latter in some foreign countries have caused serious difficulty for the United States and for our social scientists generally.

Passage of the bill will *not* diminish available research funds from any agency or department now supporting social science research but will supplement such support. The present social science research will continue to be needed, and such research will continue to increase, according to testimony before our Subcommittee by representatives of federal operating agencies. This is borne out, also, by experience in regard to the recently created National Foundation for the Arts and Humanities. Despite the fact that archeology and linguistics are disciplines within the jurisdiction of the Arts and Humanities Foundation, expenditures in these fields by the National Science Foundation are continuing to rise and will continue to do so, according to the testimony of Leland Haworth, director of NSF.

The bill will *not* interfere with the growing and highly desirable interdisciplinary effort between the natural and social sciences but, rather, will encourage it. The principal deterrent to such interdisciplinary work in the past has, in my judgment, been the lower status and prestige of the social sciences and the lack of recognition accorded them. This is reflected not only in the attitudes of many natural scientists but also in the attitudes of much of the general public. As Secretary of Labor Willard Wirtz told our Subcommittee:

> I believe that the limiting factor is a very real doubt in democracy's mind as to whether it really wants any more expert advice as far as the social sciences are concerned, for this is peculiarly an area in which every single one of us thinks that he is an expert and that if he is not enough of an expert, he would rather play it by hunch than to try to find out what somebody else's expertness might imply.
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> I do not believe it is much exaggeration to say that the present attitude toward the social sciences is just about the same as the prevailing attitude toward the physical sciences at that point in time in which people looked and saw that the sun comes up in the morning and goes down at night and said let us not bother any more about it.

The establishment of a National Social Science Foundation *will* give the recognition, status, visibility, and prestige the social sciences need. Some social scientists fear this visibility, but I do not agree with those who do. If visibility for the social sciences is to be viewed with apprehension, then I would suggest that university courses in those subjects be conducted in secret. Social science does not need the cover of the natural-science umbrella; it can and it must stand or fall on its merit. "Perhaps the time has come," Thomas L. Hughes of the State Department told our Subcommittee, "for the social sciences to be willing and confi-

dent enough to run the risks of being appraised in terms of their own contribution to knowledge and society."

Social science needs a constitutency, and it will get one only when people become aware of the contribution it can make to the solution of their problems. We cannot expect that awareness to come so long as federal support for the social sciences is confined to mission-oriented federal agencies or the natural-sciences-oriented National Science Foundation.

Innovative Thinking

The establishment of a National Social Science Foundation will permit the kind of innovative thinking which modern problems demand. Innovative and original thinking, when it deals with people rather than things—people who are also constituents and voters—is likely to be controversial. Some argue that increased federal support for research and scholarship in the social sciences should come through expansion of the present effort of the National Science Foundation in these fields, rather than through establishment of a National Social Science Foundation—and this is the official view of the present Administration. I do not agree, for a number of reasons, most of which I have already stated. Almost reason enough, however, is the fact that the National Science Foundation can obviously ill afford to foster the innovative and original—and therefore controversial—thinking about modern problems which is needed, if that kind of social science research may put in jeopardy the nine-tenths of its budget which is spent in the relatively noncontroversial natural and physical sciences.

Mission-oriented federal agencies are even more restricted to noncontroversial social science research. Thomas L. Hughes, again, put it very well when he testified before our Subcommittee:

> As the social sciences develop, it is particularly important that government support not force them into an inflexible system inhibiting a variety of public and private initiatives. This can be avoided by deliberately fostering innovation, a function with high risk but one which a foundation can better run than can an operating agency which must always keep its program supportive of its mission.

Secretary of Labor Wirtz made the same point about social science research funded by the Department of Labor:

> Our capabilities are such that we have to limit ourselves to those things that we are surest about, as far as their relevance and as far as their results are concerned. There is not risk research in what we are doing.

Secretary Wirtz went on to say, quite rightly in my view, that whether or not establishment of a new agency, such as a National Social Science Foundation, is warranted depends upon whether the government is willing to sponsor research in the social sciences on broader, more innovative lines. He added:

> If it is, such inquiry cannot be expected to come from the established departments or agencies of the government. If more conventional research is contemplated, the present structure probably permits it.
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> The more we look into our human and social problems, the more we recognize need for innovative, disciplined scholars who can act as engineers in the social change our society needs.
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> If we are ready to look at those things, then it seems to me we have to find a new approach to social science research, and if we are not, my testimony to you would be that the present situation is not so very bad.

I think our government must be willing to foster such new thinking and research if we are to meet the new problems of our changing times. I believe this can best be done by giving the social sciences separate recognition and responsibility through the establishment of a new federal agency, the National Social Science Foundation.

I hope that we will be successful in this effort to increase our knowledge of man so as to better serve the cause of mankind.

Note added in proof. Since this article was prepared, more than 50 additional witnesses primarily social scientists, have testified on this subject before the Subcommittee on Government Research; the overwhelming majority of them favor the creation of a separate National Foundation for the Social Sciences.

Thermodynamics in Einstein's Thought

Thermodynamics played a special role in Einstein's early search for a unified foundation of physics.

Martin J. Klein

Albert Einstein's "Autobiographical Notes" (*1*, p. 32) contain a striking passage that expresses his views on thermodynamics. "A theory is the more impressive," he wrote, "the greater the simplicity of its premises is, the more different kinds of things it relates, and the more extended is its area of applicability. Therefore the deep impression that classical thermodynamics made upon me. It is the only physical theory of universal content concerning which I am convinced that, within the framework of applicability of its basic concepts, it will never be overthrown." This last remark, he added, was "for the special attention of those who are skeptics on principle."

In this article I analyze the nature of that "deep impression" made by thermodynamics on Einstein's mind and trace the role that thermodynamics played in the development of his early work. This role was a major one: all of Einstein's boldly original attacks on what he saw as the critical problems of early-20th-century physics are intimately related to his understanding of thermodynamics. His early papers, which deal with what appear to be a wide variety of problems, are actually

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