APPENDIX A-2

The Early History of the Michigan Memorial - Phoenix Project with Special Reference to the Social Sciences and Humanities

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Oh, bird of portent, symbol for today,
Rekindle vision in despairing eyes;
Let them see stars again, and seeing, say:
Tomorrow's children will be free and wise;
And they will march again, and march as one,
The road from nadir to the farthest sun.[1]

The Early History of the Michigan Memorial - Phoenix Project with Special Reference to the Social Sciences and Humanities

The havoc wrought by wars invariably leaves heavy burdens on the consciences of the survivors. At the outset, wars have their rational justifications. In the aftermath of years of fighting, death, and destruction, justifications can loose their initial clarity. Did those who died do so in vein? War memorials are a way of ensuring that they did not. Built allegedly as monuments to the wounded and dead, they serve to reassure the living of the morality of events that on the surface seem to transgress all laws of morality.

In the years immediately following World War II, many university communities in the U.S. undertook steps to memorialize their colleagues and students lost in action. Fortuitously, noble sentiments meshed well with pressing needs. Convenient ways to memorialize the dead were to augment scholarship funds, refurbish decaying facilities, or erect new buildings. A survey taken in 1948 at Harvard, where squabbling over plans had been ongoing since the end of the War, found five universities undertaking scholarship programs, two more some form of modest campus improvement, and twelve major building programs. Seven of the twenty-five schools surveyed had yet to make a decision.[2]

1 Institutionalizing the Idea

The University of Michigan's effort to establish a War Memorial can be traced to a December 1946 student vote calling for some form of remembrance."[3] By early January, a

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1. Helen J. Sikkens, "To the Phoenix Project," *Michigan Alumnus Quarterly Review* 59(1953-54): 143; hereafter cited as *MAQR*.
2. "What Others Plan," *Harvard Alumni Bulletin* (December 4, 1948):252-253; Texas had two project, thus accounting for the twenty-six responses from twenty-five schools. Eric Walter conducted a similar survey for the War Memorial Committee in November 1947; see Michigan Historical Collections, Michigan Memorial-Phoenix Project, Box 4, folder containing Walter's notes and correspondence from the War Memorial Committee; hereafter cited as MHC, MMPP.
3. Michigan *Daily* (December 1946, exact reference to be added.

student and returning veteran, Arthur Derderian, had circulated a memo calling for the establishment of a War Memorial Committee.[4] These sentiments were championed and carried to the Administration by Dean of Students, Eric Walter, who met with President Ruthven, Alumni Secretary Tapping, Dean Peake, and Professor Litzenburg in late June or early July 1947 to discuss ways to proceed. It was agreed at this meeting that Walter would take the lead and send letters to a select number of famous people seeking guidance. By September, Walter was ready to proceed and wrote to Ruthven recommending the formal establishment of a War Memorial Committee.[5] Ruthven concurred and forwarded Walter's recommendations to the Regents, who voted to establish a War Memorial Committee on September 26, 1947.[6]

The responses Walter received to his letter seeking guidance, while interesting from a historical perspective, provided few original ideas for the War Memorial Committee's deliberations. Orsen Welles recommended the construction of a building, Jacques Barzun a plaque, George Marshall and Lewis Mumford suggested fellowships, and Fred Waring the construction of "a gigantic tower which would be the antenna for a wonderful broadcasting station for television or, at least, frequency modulation. The Name of the station might be HERO, or something similar." Some, such as Winston Churchill, simply referred the matter back to the University as the best judge.[7] However, one close friend of Walter, a book publisher in New York City and Michigan Alumnus, Fred Smith, came up with an idea that departed radically from anything previously imagined at Michigan or at any other university.

Smith stressed action over memorializing. The veterans of the War were "men who are far more interested in making their work and their sacrifices count for something than they are in being remembered." But action, Smith felt, seemed not to be following the war effort.

> I think your committee should bear in mind that there is an unlimited amount of work to be done in the world to make it safe, free, and a place in which to live that allows some degree of satisfaction. That is why, ostensibly, the war was fought. By winning it, those men who fought took the first necessary and important step. But it is all too evident that the follow-through is sorely lacking.... They delivered an opportunity to the rest of us who should be doing something about it. But all of us, undeniably, are going about our end of the task half-heartedly[8]

What sort of work could be done? Smith was impressed by the fact that little was being done to explore the peaceful uses of atomic energy, a fact brought to his attention when the Atomic Energy Commissioner of France, _____ Joliet-Currie, had challenged him to come up with concrete examples to the contrary. Smith inquired and was distressed by how little was being done--nothing of the magnitude of the Manhattan Project, which had developed the destructive

4. "Memo," A.R. Derderian, January 7, 1947, MHC, MMPP, 1-1.
5. Eric Walter to Alexander Ruthven, letter, September 29, 1947, MHC, MMPP, 4.
6. University of Michigan, *Proceedings of the Board of Regents*, September 26, 1947.
7. The responses are neatly filed in MHC, MMPP, 4.
8. Fred Smith to Eric Walter, letter, October 21, 1947, MHC, MMPP, 4.

power of the atom. Accordingly, the challenge put to Smith, he in turn directed to the University of Michigan. His own preference was for a program that would explore the medical uses of atomic energy, but he was supportive of any project that would "bring more security, safety, or contentment to the people of the world."[9]

Smith's suggestion caught fire immediately and quickly consumed all competing ideas, if any ever were entertained seriously. At its second meeting the War Memorial Committee agreed that their efforts should concentrate on "a Peace Memorial with an international aspect rather than one to bring greater glory to Michigan or the United States."[10] By the time of the War Memorial Committee's third meeting, on November 21, 1947, Smith's idea had been discussed with Fred Hodges, Chairman of Radiology; Richard Crane of Physics and the University's leading expert on particle accelerators; Ralph Sawyer, Dean of Rackham, a physicist and influential Navy researcher during the War; and the Administration. The proposal for a "peaceful-use" project was also by this time being taken seriously enough to bring forth cautions, criticisms, and suggestions for changes.[11] But criticism and suggested changes aside, with its introduction, Smith's idea became the central focus of the University's war memorial effort.

The task of testing the feasibility of Smith's idea was initially undertaken by Walter, Sawyer, and Hodges. In early January, 1948, Walter wrote to a number officials in Washington informing them of our possible plans and asking for comments. Next, Walter, Sawyer, and Hodges travelled to Washington to meet with officials of the Atomic Energy Commission and the Office of Naval Research. By late March, they had succeeded in getting permission to proceed and, more importantly, promises of support.[12] With this work accomplished, the War Memorial Committee held two more meetings in early April 1948 to draw up a proposal for submission to the Regents.[13] Their proposal, complete with a hand-drawn and colored illustration of the Phoenix, reached the Regents in time for action at their May meeting. Action followed on May 1, 1948, when the Regents resolved that:

> The University of Michigan create a War Memorial Center to explore the ways and means by which the potentialities of atomic energy may become a beneficent influence in the life of man, to be known as the Phoenix Project of the University of Michigan."[14]

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9. Ibid.
10. "Minutes," War Memorial Committee, October 25, 1947, MHC, MMPP, 4.
11. "Minutes," War Memorial Committee, November 21, 1947, MHC, MMPP 4. The Administration advised the War Memorial Committee not to go to Washington before getting approval from the Regents–advise the was apparently ignored. Concerns were raised about the amount of government control such a project might entail. Sociologist Robert Angell, grandson of former President Angell, put in a strong voice for the social sciences and peace studies. suggestions that were met by referring the matter to the Committee on the Social Sciences.
12. See letters to and from the Atomic Energy Commission and the Office of Naval Research in MHC, MMPP, 4)
13. "Minutes," War Memorial Committee, April 3 and 20, 1948. MHC, MMPP, 4; Walter, Hodges, and Sawyer met with the Executive Officers of the University on April 15, 1948, to get approval to submit their proposal to the Regents.
14. *Regents Proceedings*, May 1, 1948, p. .

The task of implementing this resolution was left to Walter, Smith, and the Executive Officers.

Given all of the possibilities available to the University for a war memorial, it is not immediately obvious why Fred Smith's idea should have been accepted so completely and rapidly. The University had many other needs and could easily have made any one of them the focus of a war memorial campaign. Moreover, the notion of making a research project the focus of a war memorial seems not to have been adopted at any other university. But this particular research project did have appeal at Michigan. The area of research that Smith singled out in his desire to atone for the destructiveness of the Bomb happened to be an area of research that was being fostered by the University well before the War began or the Bomb developed. Thus when Smith struck his spark in his letter to his friend Walter it fell on tinder that was more than ready to catch fire.

2 Physicians and Physicists

Michigan's leadership in research began with its first president, Henry Philip Tappan, who was a key figure in introducing the specialized German system of education into American higher education. From Tappan's era on, Michigan was in the forefront of university research activities in the United States. Developments in two important areas of research--radiology and nuclear physics--helped set the stage for the Phoenix Project, beginning early in the twentieth century.

Radiology, more commonly called "roentgenology" in the early part of the century, found its first applications to medicine at the University in the "electrotherapeutics" courses taught by William J. Herdman, Department of Neurology. Herdman's "plumbing course," as it was commonly known, at first familiarized students primarily with the applications of electrical energy to medical problems. However, soon after the discovery of X-rays by Roentgen in 1895, Herdman broadened his course to include "the methods of generating X-rays, and of employing them in diagnosis and therapeutics."[15] By 1905, a Roentgen-Ray Laboratory had been established in the hospital under the direction of Vernon J. Withy, Instructor in Electrotherapeutics. Hereafter, interest in roentgenology/radiology grew rapidly at the University.

Throughout the years of development of the field of radiology, the need for close ties between physicists and physicians was apparent. The first X-ray machines at the University were built by _____ Carhart in Physics, shortly after Roentgen's 1895 discovery. With each new generation of energy producing apparatus, physicians eagerly waited to look for medical applications.[16] From electric generators and electrostatic devices, medical researchers turned to

15. Paul C. Hodges, "the Role of Radiology in Medicine," *Michigan Alumnus Quarterly Review* 50(1944-45): 250-257, quoting page 254; hereafter referred to as *MAQR*.
16. For an insight into the thinking during these early years, see my discussion of early radiowave therapy in " "

X-rays, radiowaves, and eventually the high-energy particles produced by E.O. Lawrence's cyclotron, developed in Berkeley California in the early 1930s.

In 1940-41, Fred Hodges, head of Michigan's Department of Roentgenology, spent his sabbatical in Berkeley studying at the Crocker Radiation Laboratory--the medical research facility developed in conjunction with Berkeley's cyclotron. The opportunity for first-hand experience with some of the new medical technology being developed convinced him that Michigan should develop similar research programs. "Even now," he wrote upon returning and with obvious reference to the political events unfolding in Europe,

> armies of investigators in biological fields are being mechanized with the tools of the nuclear physicists. Panzer divisions equipped with cyclotrons available for this type of research are now to be found at several universities throughout this country.[17]

Michigan was more than ready to meet the challenge that lay ahead. In 1942, it had the second largest cyclotron in the United States. Moreover, according to Hodges, "the process of adapting it to biological service has been under way for some time and the University administration is even now making provision for its part-time use for medical research."[18]

Michigan's cyclotron, like Hodge's interest in it, had California connections. Five years before Hodges had travelled to California to study the medical applications of the new high energy research physics, the influential head of Michigan's Physics Department, Harrison M. Randall, had spent a term at Cal Tech and Berkeley. Randall had long since perceived that the future of physics would more and more come to rest on strong programs in nuclear physics. By the late 1920s he had recruited several promising young theoretical physicists to campus. Their presence was further strengthened by the impressive series of lecturers brought to campus each summer for the Physics Summer Sessions: Enrico Fermi in 1930, Wolfgang Pauli and J. Robert Oppenheimer in 1931, Weiner Heisenberg in 1932, Niels Bohr in 1933, and E.O. Lawrence in 1934. Shortly after he returned to Michigan in early 1935, Randall began campaigning for the funds to build an accelerator at Michigan, using medical application as one of his main selling points. Within a matter of months, he succeeded in getting a five-year, $110,000 commitment from the newly established (December 1934) Rackham Trust Fund for his accelerator program.[19]

With the money in hand, Randall lost no time developing Michigan's accelerator program. J.M. Cork, a member of the Physics Department since 1920, was given time in Berkeley during summer and fall 1935 to gain experience with accelerator technology. His efforts were aided by

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17. Fred J. Hodges, "'Atom-Smashing' and Medical Science," *MAQR* 47(1941-42): 340-347. quoting page 347.
18. Ibid., p. 347.
19. A full discussion of the development of Michigan's nuclear physics program can be found in William Parkinson, "On the History of Physics at Michigan: Nuclear Physics," unpublished ms. [1987]. For a brief discussion of the Summer Sessions, see Samuel A. Gouldsmit, "The Michigan Symposium in Theoretical Physics," *Michigan Alumnus Quarterly Review* 67 (1961-61):178-182.

recruiting two able new PhDs from the West Coast: Richard Crane from Cal Tech and R.L. Thorton from Berkeley. Fermi returned to campus for the 1935 Summer Session, Lawrence in 1936, joined this time by P.P. Ewald (Technische Hochschule, Stuttgart, Germany), Hans Bethe (Cornell), E.U. Condon (Princeton), Gregory Breit (University of Wisconsin), and I.I. Rabi (Columbia University). By late 1936, the newly built accelerators began operation. "The medical phase of the work," Randall told Dean Furstenberg of the Medical School in November, "is about to begin. Some work for the botanists has already been underway. Apparently everything is set for a very vigorous program."[20]

With this background in mind, it is not difficult to understand why a number of key members of the University community responded so positively when approached with the suggestion that the University establish as its war memorial a project to explore the peaceful uses of atomic energy. Well in advance of the birth of the Phoenix Project, the normal course of research development at the University had moved in the direction of studying atomic energy and its applications, most if not all of which could be construed as "peaceful." Seen from the perspective of physicians and physicists, the Phoenix Project required no major change in direction, and it did offer the prospect of major infusions into research budgets. Through this coincidence of need and objectives, the Phoenix Project was born and came to flourish.

3 From Proposal to Project

The project Sawyer, Hodges, and the rest of the War Memorial Committee had in mind when they submitted their proposal to the Regents assumed a familiar pattern. Any money raised could go to the construction of facilities. The atomic research itself they felt was best supported in the traditional manner of seeking funds for individual projects from the obvious sources, beginning immediately with the AEC and ONR.

> It is our suggestion that a consecutive series of operations be planned, each one of which can be carried out as soon as money is available. The first of these should be applied for through the United States Atomic Energy Commission immediately so that it might be in operation by July 1, 1948. The exhaustion of operations is inconceivable because there will be a continual growth and development of new properties out of those already begun.[21]

In this way, Smith's call for action could be met both quickly and efficiently, without waiting for the more cumbersome process of a full campaign to get underway.

The University's response to the War Memorial Committee's proposal took a different tact. Rather than proceeding immediately with research projects, the initial focus was placed on

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20. Quoted from Parkinson, p. 4.
21. "The Phoenix Project," undated proposal to the Regents for their May 1, 1948 meeting, MHC, MMPP, 1-1.

planning. During the summer, 1948, a consulting firm was hired to advise on the project. Their first report, submitted in September, made recommendations on funding levels, goals, and strategies. Over the next few months, most of these recommendations were implemented. A national fund-raising committee was set up, under the leadership of Albert Lang, a University alumnus and president of the General Electric Company. The national leadership immediately divided the country into regions, each of which had its own campaign chairman. Locally, a Preliminary Planning Committee was established, under the chairmanship of Sawyer, to work out the practical details of the research project itself. At year's end, 1948, an elaborate organization had been established to see through one of the most ambitious and important fund-raising efforts ever undertaken at the University.

These first steps from proposal to project saw the beginnings of a number of important developments that would, over time, establish the overall character of the Phoenix Project. Very early the financial goal was set at $5-6 million and divided roughly one-third for building, two thirds for research. The two-thirds was "to be placed in a special fund, the income from which would be used for the Atomic power research purposes under discussion."[22] In this way, the financial basis for the project was transferred almost entirely from the government support base favored by Hodges and Sawyer to resources raised by the University from private sources.[23]

A second pattern established very early concerned the way the research funds would be spent once raised. The initial recommendations made by the University's consultants to use part of the funds for a research endowment was strongly supported by the Preliminary Planning Committee in its first report, issued in January 1949.[24] However, by this time the consultants had changed their views, now recommending that the Phoenix Project be announced as a ten-year effort to discover peaceful applications of atomic energy. The change in strategy had obvious donor appeal. It allowed donors to give money for specific projects that would be carried out over a prescribed period of time. However, from a research standpoint, this change in strategy caused significant problems. The restrictions placed on the majority of the funds given to the Phoenix Project made it difficult to pursue pure research and projects that did not have popular applications. They also tied the Project to a financial crisis that arrived all too soon. The end of the ten-year period came only one year after one of the Project's most significant achievements, the construction and commissioning of the Ford Nuclear Reactor, had been completed.

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22. H. Brown to Ruthven, letter, September 13, 1948, MHC, MMPP, 3-8.
23. I have not been able to discuss in this paper the importance of the University's attitude toward fund raising in relation to the long-term success of the Phoenix Project. In a word, at this time the University, and particularly Ruthven, was reluctant to pursue extensive government support. In his speeches in support of the Project, Ruthven again and again stressed the fact that the University was taking the effort independent of government support. This philosophy, which was justified by the desire to avoid controls, did not serve the University or the Project well in the 1950s and 1960s.
24. "Report of the Preliminary Planning Committee of the Michigan War Memorial Program - The Phoenix Project," January 24, 1949, MHC, MMPP, 2-4.

One final and important early feature of the Phoenix Project was its commitment to an interdisciplinary focus that included the social sciences and humanities. Largely through the efforts of sociologist Robert Angell, the advisability of involving the social sciences had been discussed at length by the War Memorial Committee.[25] His views, which were shared and articulated by others, reemerged again and again in almost every document on the Phoenix Project produced in the late 1940s and early 1950s. The January 1949 report of the Preliminary Planning Committee was particularly specific in this regard.

The need for involvement of the social sciences and humanities was traced to the belief that "it is increasingly apparent that our national interest and our security require better public understanding of atomic energy and its implications in government and industry." Fostering such understanding was not seen as an easy task. "It is a difficult field for research and for education because it is to a large extent intangible." Nonetheless, the effort had to be made, and to ensure that it was made well, the Preliminary Planning Committee's Report recommended that a social scientist or humanist be hired as Associate Director of the Project, for the specific purposes of maintaining "a clearing house of information on resource materials in the field" and encouraging and stimulating "research projects on the implications of atomic energy."[26]

The social sciences and humanities were seen as more than simply part of the project; in some respects they supplied its most significant justification. Thus the Preliminary Planning Committee's Report went on to argue that the proposed contribution in this area

> ...has as yet been little touched by other agencies and activities. The Atomic Energy Commission, the Office of Education, and the Social Science Research Council all are anxious to see developments in this field and it is perhaps here that the Phoenix Project can make a unique and strategic contribution. If the Phoenix Project can help to prepare this country for the great changes that atomic power and possibly, though we hope not, atomic warfare are bound to cause in the not too distant future, or if the Phoenix Project can take a position of leadership in this function, it will do much to justify its position as the University's War Memorial.[27]

In the final analysis, it was the entire interdisciplinary effort to smooth society's transition into the coming atomic age and not simply peaceful applications by themselves that comprised the ideal of the Phoenix Project. Over the next few years, this ideal was repeatedly invoked in efforts to reach the $6M funding goal of the project.

The University's elaborate planning for the Phoenix Project paid off. Shortly after approval by the Regents in May 1948 funds became available to begin research. The first project funded, W.H. Beierwalter's study of the use of radioactive iodine to treat and study thyroid-adrenal problems, was underway before the end of the year. In 1949, more projects were initiated. the

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25. Add note on Angell's interest in Peace Studies, as reflected in his publications.
26. Ibid.
27. Ibid.

official Phoenix Campaign begun, and an administrative structure put into place. At the national level, fund raising proceeded smoothly under Lang's constant guidance. On campus, most organizational responsibilities were assumed by Sawyer, as chairman of the Preliminary Planning Committee. By late 1950, over $1M had been raised, allowing preparations to begin in earnest for the Phoenix Memorial Laboratory. Two years later, the Michigan Memorial - Phoenix Project had essentially been established in the form it exists today. Sawyer was selected as Director, an Executive Committee had been appointed, and the way was clear for achieving the final goals--completing the laboratory and building a reactor. In sum, by late 1952, the transition from ideal to proposal to project had been achieved.

4 Fostering the Social Sciences and Humanities

Throughout this transition, the great strength of the emerging project was clearly the scientific research it generated. Atomic energy had seemingly limitless applications, which the scientists on campus were ready to explore. Crane in Physics developed projects on C^{14} dating. Hodges in Radiology continued his work with radioisotopes. Lawry in Botany used P^{32} to study chromosomes. A number of projects were submitted by chemists using radioisotopes to aid in the study of chemical reactions. Natural scientists had no problem meeting the objectives of the project and in the process advancing their own research objectives. Atomic energy has richly varied peaceful applications. However, the same was not true for the social sciences and humanities.

That the social sciences and humanities presented special problems was understood early in the history of the Phoenix Project, as noted above (page 8). Nonetheless, specific steps were taken to foster their involvement in the Project. Even before approval by the Regents in May 1948, the concept of the Phoenix Project was discussed with the Social Science Division.[28] Following approval, a representative of the Social Sciences, Horace Minor, was asked to survey his colleagues for suggestions and draw up a list of possible projects, a task he had completed by January 1949.[29] In April 1949, Sawyer discussed the problems relating to social science research (the humanities had by this time largely been forgotten) in a letter to Ruthven.

> This field is one in which relatively little work is being done elsewhere at present. The problems are generally more difficult to formulate and to prosecute than those in the natural sciences. They include problems that are at the very core of economic and political life and of international relations. They are problems, too, in which the University's social scientists are keenly interested.[30]

28. Social Science Division, "Minutes," December 10, 1947, MHC, MMPP, 4.
29. Horace Minor to Ralph Sawyer, letter, January 21, 1949, MHC, MMPP, 1-2.
30. Ralph Sawyer to Alexander Ruthven, letter, April 15, 1949, MHC, MMPP, 2-4.

However, confidence remained high that social science research would follow as readily as work in the natural sciences as soon as funding became available.

Shortly after Sawyer's April report to Ruthven an unexpected opportunity arose to seek major support for the Phoenix Project, including, perhaps, the social sciences. During the summer of 1949, Henry Ford II established the Ford Foundation. Details on the new Foundation were relayed to Ruthven's must trusted administrative officer, Marvin Niehuss, in July 1949.[31] On August 30, Ruthven wrote a long letter to Ford describing the Phoenix Project and asking for $2M in support. He noted particularly the University's desire to explore the "implications and applications of atomic energy for humanitarian and utilitarian purposes," stressing that the Phoenix Project was

> unique in that physical and biological scientists will work side by side with social scientists and humanists in a coordinated effort to explore, evaluate, and develop the significance of atomic energy on our civilization.[32]

So that Ford did not miss the stress on the social sciences and humanitarian concerns, Ruthven added: "The emphasis at the University of Michigan in investigating the effects of atomic development upon our political, economic, and social structure is of significance and will not be overlooked."[33]

Ruthven's August letter reached Ford and the Foundation too early. The Foundation was not yet fully organized, it had not appointed a President, nor had its goals been defined. These activities took to mid-year 1950. By this time, it became clear that the new Foundation had a major interest in social problems and the social sciences.

> The Ford Foundation shares in the growing concern to increase our scientific knowledge of factors which influence or determine human conduct and to extend the utilization of such knowledge for the maximum benefit of individuals and society.[34]

Accordingly, the University recast its description of the Phoenix Project so that the social science component was unmistakable, upped the anti to $2-3M , primarily for the support of the social sciences, and reopened negotiations.

The "Special Presentation to the Ford Foundation in Behalf of the Phoenix Project" that the University ultimately made went through several drafts before being sent in December 1950. Along the way, there was considerable internal discussion on how best to sell the Project. Faculty such as William Haber pushed for solid content. In response to one draft. which he found "exceedingly weak," Haber suggested:

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31. Alan W. MacCarthy to Marvin Niehuss, letter, July 8, 1949, MHC, MMPP, 2-10.
32. Alexander Ruthven to Henry Ford II, letter, August 30, 1949, MHC MMPP, 2-10; copies of this letter were also send to the newly appointed Trustees of the Foundation.
33. Ibid.
34. Ford Foundation, "Program Description," August 2, 1950, MHC, MMPP, 2-10.

> It was my impression when we last met that we would try to tie this program of research into the economic, political, and sociological consequences of technological change. I see no reference to that idea, which struck me then as providing a desirable approach.[35]

Eventually, more content was added, the presentation rewritten several times and sent to the Foundation along with a long covering letter from Ruthven in which he again outlined the University's concern for substantial work in the social sciences.[36]

Accompanying the submission of the formal Presentation in December, the University initiated an extensive lobbying campaign. Contacts were made with friends and wives of the Trustees of the Foundation in an attempt to get a favorable review. Additional information was sent along as well. Discussion took place as to whether pressure ought to be applied to get an early decision or whether the amount requested should be altered.[37] In the end, none of these efforts did any good. If anything, they may have caused some harm. By mid-January, word began to circulate "about Henry Ford's confusion over the current Ford Foundation Presentation."[38] By month's end, the Foundation's President, Paul Hoffman had written to Ruthven informing him that the Project would not be supported.[39] With this rejection, the one and only major effort to gain support for the social science component of the Phoenix Project came to an end.

The failure of the Ford initiative did not exclude the social sciences from participation in the Phoenix Project. On the contrary, significant work in the social sciences was funded during the early years of the Project. Some of this work proceeded smoothly, as did most of the work in the natural sciences; other was the occasion of problems, which, in the long run, served to weaken the social science component of the Project.

The first signs of problems appear in the minutes of the March 2, 1951 meeting of the Preliminary Planning Committee. At that meeting, the committee received a request for support from the Survey Research Center (a component of ISR) to study "Public Response to the Emergency." The total cost for the project was $400K, $100K of which the Phoenix Project was being asked to supply.[40] This exceptionally large request (most projects fell in the $1-10K range; none of the early ones exceeded $50K) prompted further discussion. On March 9, Rensis Likert of Political Science appeared before the Preliminary Planning Committee to clarify the Survey Research Center's plans and to answer questions. Following his appearance, the Committee voted

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35. William Haber to Bowen, October 30, 1950, MHC, MMPP, 2-10.
36. Alexander Ruthven to Paul Hoffman, President of the Foundation, December 15, 1950, MHC, MMPP, 2-10; Ruthven sent a follow-up letter directly to Ford in January 25, 1951, MHC. MMPP, 2-10.
37. Bowen to Byran Shimp, memo. January 26, 1951, MHC, MMPP, 2-10; Alexander Ruthven to Paul Hoffman. letter, January 12, 1951; Paul Hoffman to Alexander Ruthven, letter, January 19, 1951; Walter MacCarthy to Byron Shimp, letter, January 15, 1951; Byron Shimp to Walter MacCarthy, letter, January 23, 1951; and Bowen to Byron Shimp et al., letter, January 26, 1951, MHC, MMPP, 2-11.
38. Bowen to Byron Shimp et al., January 26, 1951, MHC, MMPP, 2-11.
39. Paul Hoffman to Alexander Ruthven, letter, January 30, 1951, MHC, MMPP, 2-11.
40. "Minutes," PPC, March 2, 1951, MHC, MMPP, 2-4.

to ask Likert to submit "a specific project related to atomic energy, together with a budget."[41] The assumption underlying this request was clear. By Spring 1951 the Committee had adopted a "projects only" mentality, which would hereafter influence all thinking. Funds were given for proposals that addressed well-defined problems; they were not available for efforts that sought to stimulate work that had not been carefully defined in advance.

A working agreement to fund the Survey Research Center project was finally worked out in May 1951. At this time, $25K was approved for a Law School project on the "Legal Problems arising from the Peace-Time Uses of Atomic Energy" (Project 30). $25K was also set aside for the Survey Research Center's study of "The Impact of Atomic Energy upon the American Public" (Project 31). In the latter case, however, the Preliminary Planning Committee left the final decision to the Phoenix Project Advisory Committee[42] and to the Regents, who were to be asked to grant permission to spend $25K on this project. Moreover, the approval was also "contingent upon the presentation of a revised outline for using the sum of money which meets the approval of Chairman Sawyer and of the ad hoc Committee."[43]

These two projects were augmented the next year by a third ("Public Administration Aspects of the Atomic Energy Program" [Project 48]), sponsored by the Institute of Public Administration.[44] As the major work in the social sciences, the three proceeded more or less without major problems. By far the most successful of the three was the work undertaken by the Law School.[45] Whenever evidence of the success of the social science phase of the Phoenix Project was needed, this project was singled out.[46] The other two projects (Projects 31 and 48) were less successful and from time to time received special attention from the Executive Committee, which had replaced the Preliminary Planning Committee as the main advisory body in late 1951.[47] However, whatever their shortcomings, in total these three early projects accounted for over 60% of the total number in the social sciences undertaken over the 39 years the Phoenix Project has been in existence.[48]

As significant as the early social science work was, it was accompanied by some concern about the collegial and intellectual foundations on which it rested. Such concern not only surfaced within the executive bodies of the Phoenix Project but among some of the researchers who were planning the social science work itself. As early as August 1952, the participants in Project 48,

41. "Minutes," PPC, September 9, 1951, MHC, MMPP, 4-2.
42. Note explain the Advisory Committee
43. "Minutes," PPC, May 7, 1951, 2-4; explanation of the ad hoc Committee and a note that it is not unusual for a committee to give power to a chairman to make a final decision.
44. "Minutes," Phoenix Project Executive Committee, June 9, 1952, 1-2; the Preliminary Planning Committee was phased out and replaced by the Executive Committee in late 1951. Project 48 had a predecessor, Project 15, but it was not formally seen as an extension of this earlier project.
45. Results, Law School project.
46. See, for example, "Phoenix Project Story," October 1952, MCH, MMPP, 1-2.
47. See for example the discussion of Project 48 in "Minutes," Executive Committee, March 27, 1954, MHC, MMPP, 1-27.
48. As of June, 1987, 26 social science projects have been funded. As will be noted late, this figure represents less than 4% of the total number of project that have been funded.

dealing with the public administration of atomic energy, sponsored an informal conference on "Atomic Energy Policy and Administration." The purpose of the conference was both to plan Project 48 and to discuss the potential for broader contributions to the Phoenix Project.[49] Following this informal conference a report was sent to the Phoenix Project Executive Committee discussing "The Broader Social Sciences Implications of Atomic Energy." Sawyer forwarded this report to the Research Grants Committee of the Social Sciences Division, which in turn made numerous suggestions for subsequent work. When no action was taken, a person instrumental in this entire effort, James Pollock of Political Science, wrote to Sawyer with a specific request.

Pollock's letter to Sawyer clearly layed out the major problems that were associated with fostering social science research in conjunction with the Phoenix Project. The areas that needed to be investigated were difficult ones. Most social scientists had not "yet become fully aware" of them, "let alone the need of research for their solution." "For this reason," Pollock continued,

> I support the Research Grants Committee's conclusion that the immediate need is for the creation of a working committee to review the possibilities of social science research in atomic energy, to detect and catalogue long range social science issues, to stimulate others to work out project areas, to establish criteria for setting priorities among the studies that might be made, and to promote interest in social science research related to atomic energy.[50]

Pollock's request, therefore, was for a planning committee to be established to evaluate and help promote social science research.

Pollock's request was discussed by the Phoenix Project Executive Committee on March 5, 1954, and quickly dismissed.[51] In accord with the "project only" mentality that had grown up (see page 12 above), the need for a conference or planning group seemed unnecessary. Any one could submit a project. If that project was worthy of support it would be funded. If not, it would be rejected. The fact that social science research might not have yet matured to the point of knowing precisely what projects ought to be pursued seems not to have been considered.

As the three early social science projects came to an end, no new major projects replaced them. In all, over the complete course of the Phoenix Project, less than 4% of the total have been in the social sciences. By the end of the academic year 1986-87, only 26 social science projects, out of 693 total, can be classed as "social science." (None, to my knowledge, have been undertaken in the humanities.) The small number of projects, when combined with the fact that most have been small and focused on narrow problems,[52] has severely limited the contribution of the social sciences to the ideal of the Phoenix Project.

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49. James Pollack to Ralph Sawyer, letter, ca. March 5, 1954, MHC. Ralph Sawyer papers, 8.
50. Ibid., I have yet to locate a copy of the Report of the Research Grants Committee referred to in Pollock's letter.
51. "Minutes," EC, March 5, 1954, MHC, MMPP, 1-27.
52. Examples of some of the projects.

As a result, the Phoenix Project did not become, as Ruthven had promised the faculty in May 1949, a "university-wide . . . effort of all the Natural and Social Sciences."[53] It did not provide social scientists with the opportunity "to work closely with researchers in the physical and biological fields" or with "an opportunity, never before experienced, to correlate social theory and studies with technical advances as they develop."[54] In the end, the University did not follow its own advice: "If we are to enjoy the full benefits of such peacetime uses of atomic energy, we should start now to study the implications."[55] Neither at the University nor country wide was a concerted effort made to anticipate as fully and honestly as possible the problems that would arise from the wide-spread use of atomic energy in society, a fact that is today all too evident in the consequences.

5 Conclusions, Observations, and Recommendations

The cause of the Phoenix Project's failure to develop an integrated approach to the social problems associated with the coming atomic age is certainly much deeper than the unfavorable response to Pollock's letter. In the early 1950s, the possibilities for useful application were only beginning to be explored. Hopes for immediate benefits ran high, probably higher in some areas than was justifiable, even at the time. Cures for cancer, disease eradication, limitless cheap energy, low-cost food preservation, and much more seemed just over the horizon. Knowledge of the manufacture of the Bomb was still contained; the hope for continued political control had not been abandoned. With so much hope at hand and the social/political problems not yet apparent or pressing, it was both logical and convenient to press ahead with well-defined projects that could achieve tangible ends.

However, not everyone was comfortable with this situation. Scarcely two years into the Project, Crane wrote a long, thoughtful letter to Sawyer in conjunction with being asked to serve on the Executive Board.[56] "Lately," Crane observed, "I have had the growing conviction that the project ought to swing quite strongly, if possible, toward problems which are broader than the solution of specific questions in tracer chemistry, biology, etc." He was drawn to this view by uneasiness over "our national tendency to muddle along without seeing much further ahead than our noses." "Far too much of our so-called planning," he continued,

> consists of planning how to get out of past difficulties, rather than how to meet future ones. Certainly one almost never hears of anyone trying to foresee conditions beyond the fighting stage of the next war.[57]

53. Ruthven, memo to the faculty, [May 1949], MHC, MMPP, 1-2.
54. "Peacetime Atomic Energy," misc. publicity document drawn up in summer, 1950, MHC, MMPP, 3-8.
55. Ibid.
56. Note on Executive Board.
57. Richard Crane to Ralph Sawyer, letter, June 29, 1950, MHC, MMPP, 3-13.

The remainder of his letter contained suggestions for specific steps that could be taken to anticipate future problems more responsibly .

The task of coordinating the broader work Crane described was seen in the original design of the Phoenix Project as the primary responsibility of the Associate Director. As noted above, this position was initially set aside for a social scientist or humanist (page 8). However, by late 1951, it was becoming more and more evident that the full design of the Project, as described in 1949, could not be implemented. Building costs increased dramatically in the early 1950s, necessitating cut backs and modifications in the plans for the Laboratory. Many of the major donations to the Project were narrowly targetted for specific work, leaving few unrestricted funds for maintaining the Project in general. Thus, in 1952, instead of hiring a full-time scientist to head the Project, as had originally been recommended, Ralph Sawyer was appointed Director. The fact that Sawyer was still Dean of Rackham meant that a practicing scientist had to be hired as Associate Director. In 1952, a young Michigan PhD then working in the Medical School, Henry Gomberg, was taken on to fill this position. As a consequence, when Pollock's letter arrived on Sawyer's desk, there was no social scientist or humanist in an administrative position to argue its case.

The importance of having a social scientist or humanist actively involved in the day-to-day running of the Project can be seen in developments a decade later when a graduate student in English and former Daily editor, Leonard Greenbaum, joined the staff. Almost immediately, Greenbaum started raising general issues in the Project's new publication, called appropriately Phoenix. In the very first issue of Phoenix, published in 1961, he editorialized on the problems of specialization, isolation, and C.P. Snow's "two cultures." His second editorial a few months later dealt with reactors, the Bomb, and peace. Two years later, the Phoenix Project helped sponsor a lecture by Hans Bethe, who had visited Michigan in the 1930s to discuss cyclotrons and nuclear physics and who now returned to discuss "Disarmament and Strategic Stability." A year later, in 1965, Greenbaum published Bethe's lecture in the Phoenix along with the results of a social science project on "Atomic Energy Policy in France" (Project 211).[58]

Even before Greenbaum's untimely death in 1971, funds for this sort of activity were declining. Phoenix stopped publication with the issue containing Bethe's talk, primarily for financial reasons. The gift from the Fegerburg family that had sponsored Bethe's visit to campus and an earlier one by Oppenheimer was not continued. Therefore, by the early 1970s, the limited coordination and motivation that had been fostered during Greenbaum's term of service on the Project came to an end. Today, the social science component of the Project continues as an insignificant series of independent projects that have little overall continuity and even less social impact.

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58. Phoenix (April 1965).

The reasons for this state of affairs are, in this writer's view, twofold. First, it is still the case that there is no clear agenda for undertaking social science or humanities research relating to the social impact of atomic energy on society. This is particularly the case in the two most troublesome areas of social impact, the use of atomic energy as a domestic energy source and for war. For each area, the recommendation proposed by Pollock in 1954 can simply be repeated as a recommendation for today: **there is an "immediate need . . . for the creation of a working committee to review the possibilities of social science research in atomic energy, to detect and catalogue long-range social science issues, to stimulate others to work out project areas, to establish criteria for setting priorities among the studies that might be made, and to promote interest in social science research related to atomic energy."** The only addition this writer would make to Pollock's recommendation is that **all planning should include humanists as well as social scientists.**

The second reason for the neglect of issues relating to the social impact of atomic energy is that despite years of rhetoric to the contrary, the University, as an administrative body, has not taken seriously its responsibilities in this area. The neglect is for the most part not deliberate or pernicious. No one has ever outwardly said: "forget the social sciences, get on with the solid contributions that can be made by the natural sciences." Nonetheless, the cumulative impact of years of decision making has been precisely this; our preoccupation with pursuing the endless series of legitimate projects put forth by the natural sciences has diverted money and attention away from broader responsibilities, from looking at the consequences of our own actions. The pressing need to advance scientific research as rapidly as possible, particularly in the medical sciences, has made it impossible, as Crane had hoped nearly forty years ago, "to swing quite strongly . . . toward problems which are broader than the solution of specific questions in tracer chemistry, biology, etc."[59] The social sciences and humanities have been neglected because there have always been more pressing needs. Such are the priorities of the modern research university.

Could this situation be changed? It could! It would take little imagination and probably no additional funds to redirect the small income from the Phoenix endowment primarily to the support of the social science ideals of the original Project. If the will is there, a way certainly can be found. This is not the difficult issue. The difficult issue is to decide whether the current situation ought to be changed, to favor more the social-science and humanities component of the Project over the natural science component.

Certainly, a strong case can be made in favor of some changes. The social problems created by the discovery and exploitation of atomic energy have not disappeared over the last forty years. If anything, they are more pressing today than they were when the Phoenix Project was founded. At the same time, the peaceful application of atomic energy has become a reality and in most

59. Cited in note 57 above.

areas routine. Most of the natural science projects now supported by the Project are not breaking new ground as far as extending peaceful applications is concerned; they are simply applying well-established techniques to new areas. Thus, in terms of pressing needs, the social sciences and humanities would seem to have the better case.

Moreover, given the relatively small size of the current Phoenix budget, the opportunities for impact would seem to be greater in the social sciences and humanities than in the natural sciences. Using the current level of ca. $50K spent annually on projects, the loss of most if not all of this money from the natural sciences would not be catastrophic. $50K represents only a small fraction of the budgets for research in this area and is in fact much less than the cost of many individual projects supported by outside sources. The infusion of $50K annually into the social sciences and humanities could virtually create a field of research where none now exists, by assuring continuity for work that at present has very uncertain foundations within the federal, corporate, and private granting structure.

In sum, if responsibility to society is seen as a major objective of the Phoenix Project, which it certainly was when the Project was founded, then rationales exist for at least shifting the focus of current efforts more toward the social sciences and humanities and away from the natural sciences. Such a shift will not easily be achieved, since the main emphasis of the Project from the beginning has been on the natural sciences. However, given the promises made to society forty years ago and the claims that continue to be made regarding the role the University plays in helping society cope with major problems, some effort would seem to be called for to achieve the "university wide" balance that was initially imagined. The ideal remains, the responsibilities have not lessened, the problems are even more pressing, the opportunities for change exist. There is, as Fred Smith noted more than forty years ago, "an unlimited amount of work to be done in the world to make it safe, free, and a place in which to live that allows some degree of satisfaction." The challenge remains to undertake this work in an aggressive and responsible manner.