ICPSR
Inter-university Consortium for Political and Social Research

Annual Report, 1969-1970

Inter-university Consortium for Political and Social Research

ICPSR 4006

March 2004

R.H.

INTER-UNIVERSITY CONSORTIUM FOR POLITICAL RESEARCH

Annual Report

1969-1970

INTER-UNIVERSITY CONSORTIUM FOR POLITICAL RESEARCH

P.O. BOX 1248 • ANN ARBOR, MICHIGAN 48106 • AREA CODE 313, 764-2570

November 1970

TO: The Council of the Inter-university Consortium for Political Research

FROM: The Executive Director of the Center for Political Studies Staff of the Consortium

SUBJECT: Annual Report for the Eighth Year, FY 1969-1970

The Annual Report, one of several documents published periodically by the Consortium staff, is prepared in the early fall of each year and contains the funding proposals, conference reports, and administrative and fiscal information for the previous fiscal year.

TABLE OF CONTENTS

Page

I. INTRODUCTION

The Organization of the Inter-university Consortium for Political Research 1

Memorandum of Organization 5

II. SUMMER TRAINING PROGRAM

Policy Statement on Training Seminars in Research Design and Data Analysis 11

Application to the National Science Foundation for Funds for Support of Advanced Science Seminars on Quantitative Political Analysis 15

Application to the National Science Foundation for Funds for Support of a Summer Seminar of the Utilization of Small Group Research in the Study of Small "Natural-State" Political Groups 29

Interim Report on Conference on the Utilization of Small Group Research in the Study of Small "Natural-State" Political Groups, July 6-18, 1970 39

III. DATA REPOSITORY

Policy Statement and Discussion of Plans for the ICPR Data Repository 41

Proposal to the National Endowment for the Humanities to Support Automation of Statistical Sources of French History: The Statistique Generale De La France, 1850-1890 47

Proposal to the Office of Naval Research Group Psychology Program for Renewal of Support for the Development of an International Relations Archive 55

III. DATA REPOSITORY (continued)

Servicing Report, Historical Archive 59

Servicing Report, International Relations Archive 65

Servicing Report, Survey Research Archive 71

IV. COMPUTING ACTIVITY

Computing Assistance Available from the Consortium 81

OSIRIS II Distribution Policy 89

Distribution of the OSIRIS Package 91

Computers at Consortium Member Institutions 93

OSIRIS for Non-IBM Computers 97

Proposal to National Science Foundation for Support of Documentation to Assist Users of OSIRIS II: A Social Science Software Package 99

V. ICPR ADMINISTRATION

Roster of Member Institutions and Official Representatives 107

ICPR Council Membership 111

Standing Committees of the ICPR Council 113

Archival Advisory Committees 115

ICPR Staff 117

ICPR Summer Instructional Staff, 1970 119

Budgets 121

I. INTRODUCTION

THE ORGANIZATION OF THE INTER-UNIVERSITY CONSORTIUM FOR POLITICAL RESEARCH

Considerations Leading to the Establishment of the ICPR. The Consortium began, organizationally, in the context of the Political Behavior Program of the Survey Research Center. The Political Behavior Program in 1970 was reorganized as the Center for Political Studies, becoming the fourth Center in the Institute for Social Research. The Consortium now, in partnership with approximately 140 universities and colleges, constitutes a major activity of the Center for Political Studies.

The original stimulus for establishing the Consortium grew out of the belief on the part of several scholars that substantial gains could be made in the areas of concern to the Survey Research Center by joining its interests and resources with those of scholars outside its own staff. Over the years many fruitful associations developed with individual scholars who drew on the Survey Research Center's data holdings or who used the services of its technical personnel. These experiences led the SRC to seek ways in which groups of scholars or institutions with common interests might become associated with one or another of the research programs at the SRC.

The Survey Research Center developed an extended program of research on political behavior. A series of studies, supported by grants from the Carnegie Corporation, the Rockefeller Foundation, and the SSRC were conducted and reported in the scientific literature. This series included an elaborate program of studies of the political perceptions, motives and acts of the American electorate. The Political Behavior Program of the Survey Research Center also embraced studies of organizational communications, primary group influence, the interaction of constituents and congressional representatives, and the congressional campaign. In collaboration with scholars abroad it included work in comparative analysis of European and American electoral behavior as a major extension of earlier activity. These activities continue within the Center for Political Studies.

The Center has made a continuing effort to bring outside scholars into contact with this program. In 1950 a grant was obtained from the Carnegie Corporation which made it possible to bring two post-doctoral fellows from the field of political science to the Center for a two-year period. In the summer of 1954 and again in 1958, under the sponsorship of the SSRC, post-doctoral training institutes were conducted in political behavior research. In recent years a number of political scientists have come to the Center on fellowships or sabbatical leave. Many of these individuals have published articles or books based wholly or in part on information provided by the Center. The development of the Inter-University Consortium for Political Research was not intended to displace these contacts with individual scholars, which are valuable and rewarding, but to create a machanism for a more intensive program of collaboration.

Organizational Premises. The time, effort and expense which an Inter-University Consortium requires can only be justified if it holds promise of scientific advances beyond the present level of accomplishment. We are confident that the Consortium, based on the following principles, can indeed lead to important gains.

1. Institutional rather than individual participation. The Consortium has been organized on the basis of institutional rather than individual participation. There is considerable evidence from recent years that an individual's freedom to acquire new skills is relatively meaningless without subsequent support for and facilitation of his efforts to utilize those skills. The most productive members of previous Survey Research Center Political Behavior seminars have profited from active and continued support from their home departments. Seminar members who participated solely on their own initiative or who came from departments not equipped to sustain the interests and exploit the skills developed in the seminar may have returned home no worse for the experience; but these people have found it very difficult to maintain their interests, and the effort expended in their training appears to have been largely dissipated.

With a formal introduction to new research problems and methods through summer seminars and other organizationally sponsored contacts, and with sustained departmental support, it is reasonable to expect individual Consortium participants to continue to enhance their own contributions to knowledge and to graduate instruction. This will result in part from their ability to share intellectual interests with one or more departmental colleagues who are participating in the same program, and in part from the opportunity to organize better training experiences for selected graduate students. Continued benefits from participation also should result from continuing cooperation and active contact with members of other departments sharing the same general interests. Although Consortium sponsored data collections cannot hope to satisfy all of the developing research interests of participants, new data acquisitions should encourage continued fruitful activity by each of them.

The Consortium, organized on the basis of institutional participation, provides a unique channel of communication among interested scholars in the universities, both in the United States and abroad; in particular it facilitates contact among the younger men on these faculties. It also guarantees a substantial measure of institutional support for those individuals who are attracted by the research opportunities this arrangement makes available.

2. Continuing rather than episodic relationships. The Consortium is organized on the assumption of long-term association. The advantages to be gained by the creation of groups of scholars with continuing commitments to given subject matter areas are substantial. The exchange of ideas will be maximized through the continued interest, over time, of academic departments committed to the endeavor and represented by their

appropriate staff members and graduate students. The cumulative effect which results from building closely on one's own work and the work of colleagues will be exploited. The sporadic work of individuals with diverse interests and little or no direct association with the work of predecessors or contemporary colleagues often produces worthwhile results but through the Consortium the power of extended and cumulative programs of research can also be realized.

3. Facilitation of advanced training in research methods. The scholars who have made effective use of the Center's political data have almost invariably been people of considerable sophistication in research methodology. People who lack experience in behavioral research but who could acquire research skills from continuing contact with our resources are unlikely to find an opportunity to do so without the aid of some organizational device such as the Consortium.

Training in the broad array of techniques now associated with quantitative methods constitutes a major interest of the Consortium. Advanced graduate students as well as faculty members will be able to develop skills relevant to many of the newer types of analysis now being explored as well as to the established concerns of behavioral research. The many methodological and technical problems of integrating different kinds of data in a single study design receive systematic attention. Considerable emphasis is placed on combining survey information with the public records of legislative bodies, and with aggregated census and election statistics.

Both the training experience and the research materials will be directed in part toward the facilitation of subsequent teaching in the classrooms and seminars of Consortium participants. The Consortium is intended to serve not only the research interests of the participating individuals but the training of their students as well.

4. Efficient access to major bodies of data. The integration of microsomic and macrosomic analyses, so crucial to many problems of concern to the student of political behavior, often depends on the availability of massive collections of data. This constitutes a major impediment to significant research when even the single definitive collection of election returns, census statistics or judicial or legislative materials from the public record is as much beyond the capabilities of the individual scholar as is the execution of a national or cross-national sample survey. Through the Consortium, the administrative, technical and professional resources of the Center for Political Studies are organized to develop and maintain a major repository of data.

The scope of the repository was originally defined by the data collected by the Survey Research Center's research program in political behavior. Expansion of the repository has followed the lines laid down by the active research needs of the entire Consortium constituency. Major acquisitions of recent years, and those planned for the immediate

future, reflect widely shared interests in electoral, legislative and judicial politics.

A major goal in the operation of the repository is to relieve the individual researcher of several major costs in carrying out his research. Since time is one of the scholar's most valuable commodities, the repository is organized and administered to minimize the lag between specification of data needs and access to the data. A corollary of the emphasis on institutional support for all Consortium activities calls for elimination of all capital investment and overhead charges to the individual user of the repository. An extension of the premise of institutional participation has led to the policy of levying marginal or incremental costs of data retrieval and processing for research needs only where very major analysis projects are involved. All costs of consultation and technical assistance and most costs of data preparation for dissertations and small monographs are borne by the operating budget and are, therefore, essentially free to individual Consortium participants. This policy will be implemented as long as it is financially practicable to do so.

5. The stimulation of new research. The general commitment to facilitate research may be expected to result in a number of activities less programmatic than the training and repository efforts. Given the heterogeneity of the Consortium constituency, it is probably not reasonable to expect the organization to conduct specific research in the name of the collectivity. Nevertheless, Consortium resources can be devoted to encourage both individual and collaborative research efforts. In this connection the Consortium has participated in the organization of a number of research conferences. By providing a vehicle for the widespread sharing of new data collections, the organization has also added to the promise of research proposals advanced by both the Center and by the scholars from other participating institutions.

The specialized summer seminars sponsored in conjunction with the training program may be used to bring together researchers with mutual interests in new research endeavors. The initiative that results in new research plans remains with individuals, but the seminars can be shaped by interested individuals to maximize the possibility of direct research results.

In an even more decentralized fashion, individual research efforts are supported by the Consortium staff and by professional members of the Center staff. Personnel are made available for consultation on a wide range of problems, from research design and data collection to procedures for analysis and complex processing of data. The members of the Consortium staff are explicitly commissioned to offer these services; they also provide liaison with relevant technical and professional personnel on the CPS staff.

MEMORANDUM OF ORGANIZATION

The Inter-university Consortium for Political Research is conceived as a partnership between a group of universities (referred to hereafter as the member universities or members) and the Center for Political Studies of the University of Michigan (CPS). The purpose of the Consortium is to promote the conduct of research on the political process. It is expected that both partners will contribute to the success of the Consortium and that each will benefit from the association.

A. Principles of Membership

1. All institutions of higher education offering work in the social sciences are eligible for admission.

   Membership categories will be based upon use of Consortium facilities as follows:

   CATEGORY (A): Institutions offering graduate work in appropriate content areas. Their faculty and graduate students are eligible for all services of the Consortium.

   CATEGORY (B): Undergraduate institutions and those with limited graduate degree programs. They are eligible for limited services such as data for class instruction and faculty research, for faculty participation in summer seminars, and other services that may be determined by the Council.

   CATEGORY (C): Educational institutions outside the United States and Canada. These will have full access to all Consortium resources except those general funds made available for support of travel.

   By action of the Council and the Official Representatives at the 1969 Annual Meeting, the following schedule of annual fees and incremental increases was established.

	Category A	Category B	Category C
1970-71	$4,000	$2,300	$2,000
1971-72	4,500	2,600	2,000
1972-73	5,000	2,900	2,000

   The decision as to whether two or more departments or research organizations from a single university provide the budgetary support for a single membership in the Consortium should be entirely a matter for

decision by the institution concerned. If the relevant departments of a member university so decide, each could become an independent member of the Consortium on equal footing with all other members.

Each participating unit (department, division, inter-departmental committee, etc.) will be responsible for determining the eligibility of its faculty and students for participation in Consortium activities. Each unit will designate one of its faculty members as the official representative to sit on a Committee of Representatives and take action on behalf of the participating unit.

2. Membership requires the annual transfer of a membership fee to the Center for Political Studies. These contributions are to be used exclusively to finance services to the member universities by a CPS staff to the Consortium. They are to be administered through the CPS ICPR Project Account.

   The CPS staff to the Consortium will endeavor to insure equal services to each membership unit. Given the variety of functions, the limitations on time and space in the performance of some activities, and the variable pace of research activities by individual participants, the goal should be equality in service over a period of years. If over a period of years, use of the services of the Consortium varies markedly between institutions, additional charges may be levied or the fee adjusted by agreement between the Committee of Representatives and the CPS to reflect relative use.

3. Any member is free to withdraw at any time. However, a full year's notice of withdrawal should be given. The Consortium may require that research materials provided by the Consortium, including data, be returned upon termination of membership.

   Budgetary inability to make a single year's annual contribution will not necessitate termination of membership provided the member university is willing to make up the deficit the following year. (If a member on a biennial budget is deprived of institutional support in the second year of a budget, assurance that the deficit will be eliminated the following year will be sufficient to allow full continued participation in the Consortium.) Although payment of the annual contribution will be considered due on July 1, at the beginning of each fiscal year, payment may be made during the fiscal year of expenditure at the earliest convenience of the member.

   Membership should be sought only with the full expectation that maximum benefits will accrue over several years' participation. Membership which contemplates only one- or two-year participation will not be encouraged. In general, it is expected that membership will be entered into only with the confidence that relevant officials of the member institutions understand membership to imply a continuing relationship and agree to attempt to provide the necessary funds on a continuing basis.

A member may rejoin the Consortium after dropping its affiliation only upon payment of a "re-entry" fee. This fee is set at 50% of the annual fee in effect at the time of rejoining and the fee is an addition to the normal membership fee that would also be due in full from the date of rejoining. All such cases will be reviewed by the Council of the Committee of Representatives.

4. The Consortium is not designed to interfere with the research activities of any individual participant. There is no expectation that personal research interests need be related to Consortium activities other than insofar as those activities can be utilized by the researcher for his own purposes. There is no obligation to make personal research resources, including data, available for use by the member universities. However, whenever an individual makes use of Consortium data and facilities in an article, monograph, or book, he is expected to deposit two copies of the publication in a special collection to be maintained by the Consortium staff. If a thesis or dissertation is involved, then a copy of the abstract should be deposited.

B. The Organization of Member Universities

1. Each member university will be represented by one person chosen by each participating unit. That person will sit on the ICPR Committee of Representatives. There will be an annual meeting of the Committee of Representatives.

   The Committee will be responsible for establishing policies regulating the participation of individuals in those activities where limited facilities preclude the simultaneous participation of all who might be interested. It also will be responsible for approving activities to be carried out on behalf of the Consortium such as seeking outside financial support or undertaking a major data collection.

2. The Committee of Representatives will elect a Council of nine members at its annual meeting to serve until the next annual meeting. The Council will choose a Nominating Committee prior to each annual meeting of the Committee of Representatives. The Nominating Committee will be composed of the chairman and two representatives not members of the Council. It will present to the annual meeting the names of a proposed chairman and Council members. Three new members will be elected each year to serve three-year terms. The chairman will ordinarily be selected from among the members who will be serving the second year of their terms and will, in turn, normally serve a two-year term as chairman.

   The Chairman of the Council, serving without compensation, will also act as Chairman of the Committee of Representatives. He will have responsibility for calling meetings of the committee and signing documents which are the joint responsibility of the member universities.

   The Council will be the executive committee of the Representatives and will have authority to act on behalf of the Committee of Representatives. It will recommend the creation of standing committees

to the annual meeting of Representatives. It will create interim ad hoc committees when necessary. The Council will normally meet at least three times during each year. Five members will constitute a quorum for council action.

The Council will receive an annual report from the executive director of the Consortium regarding the staff's activities during the previous year. It will also receive general statements of expenditures from Consortium accounts held by the CPS. The Council will transmit these reports and its recommendations to the annual meeting of the Committee of Representatives.

The Council, or subcommittees created at its behest, will select and approve the participants in ICPR program activities. It will advise the staff to the Consortium in the execution of approved program activities and will have the authority to amend and supplement the decisions of the annual meeting of the Committee of Representatives. It will have the authority to arrive at agreements with the CPS; such agreements will constitute decisions by the ICPR and will be sufficient to authorize action on behalf of the ICPR.

A meeting of the Council may be called by the Chairman, the executive director, or four members of the Council.

C. The Role of the Center for Political Studies

1. The Center for Political Studies will administer the activities of the Consortium through provision of the necessary professional and technical staff and of the administrative services appropriate to the management of Consortium funds. The CPS will participate as a partner of the member universities in the development of training and the conduct of research by the ICPR.

2. In general, separate accounts will be maintained by the CPS for the operating budget, supported by the annual membership contributions to the ICPR Project Account, and for each research, conference or training grant received by ICPR. Budgets for each account will be created by agreement of the CPS and the Committee of Representatives or the Council. The CPS staff to the Consortium will submit a general statement of expenditures from each account to the annual meeting of the Committee of Representatives. Interim transfers of funds from the ICPR Project Account to another account may be made on agreement between the CPS and the Council.

3. The CPS staff to the Consortium will consist of an executive director and such additional personnel as are deemed by the CPS to be necessary to accomplish the program objectives agreed upon by the Consortium. This staff will be supplemented as needed to accomodate unusual demands or special activities of the participants.

4. The CPS will cooperate wherever possible in the execution of Consortium activities. It will house the data storage facilities and make available the other facilities and personnel necessary for the reproduction and processing of data. The CPS staff to the Consortium may call upon the various units of the Survey Research Center of the Institute for Social Research for assistance on Consortium activities just as the same individuals would utilize the same resources in carrying out other projects which they have contractual obligation to complete.

   The Center for Political Studies will cooperate wherever possible in providing liaison with other units of the Institute for Social Research on questions concerning sampling, questionnaire design, pre-testing organizing and technical research problems. Consortium members will not be under any obligation to use CPS, Survey Research Center or Institute for Social Research facilities.

5. An authorized member of the Center for Political Studies staff will normally be present at the annual meeting of the Committee of Representatives and at regular meetings of the Council or the subcommittees created by it.

   The CPS staff member will not be a voting member of the Committee of Representatives, the Council, or any of the subcommittees. Action by the ICPR will be taken by agreement between the CPS and the Committee of Representatives or one of its appropriate organs.

   The CPS will select the personnel for the staff to the Consortium and will determine the availability of its facilities for research in residence. Beyond the clear obligation to provide a general statement of expenditures from ICPR accounts which it administers, the CPS staff to the Consortium will be free to pursue the agreed-upon program objectives of the ICPR within the general limits of the established budgets.

   The CPS will also be free, as will each participating member, to pursue its own research objectives independent of the Consortium research program.

D. Relationship between Consortium Members and Other Scholars

Because of the Center for Political Studies' established relationship with the academic community, prerequisites of membership for the constituency of the Consortium must conform to the basic principle of facilitating research by all responsible individuals. The CPS will undertake, however, to give priority to members of the Consortium in any claim on its archives, services or facilities insofar as they relate to the field of political research. Two general operating rules will cover the problem posed by the conflict between prior commitment of the CPS to professional services and current rights which Consortium members have established: (1) Service will be rendered to non-members by the CPS staff only where no handicap is thereby imposed on the Consortium

participants; (2) When services, data, or facilities are made available to non-members, they will pay full costs plus the appropriate overhead. The costs will compensate the staff for time expended in their role as CPS staff members and defray expenses by member universities in making possible or facilitating the provision of the services, data or facilities.

1. Status of Non-members: Graduate Student Training

   Participation in those training functions such as the summer seminar program or special research conferences which are supported solely by contributions of the member universities will normally be limited to students from the member universities.

2. Status of Non-members: Faculty Research Conferences

   In general, participation in special research conferences funded by the Consortium operating budget for faculty members will normally not be open to anyone from a non-member school.

II. SUMMER TRAINING PROGRAM

POLICY STATEMENT ON TRAINING SEMINARS IN RESEARCH DESIGN AND DATA ANALYSIS

One of the original purposes for establishing the ICPR was to formalize and extend some of the training programs in quantitative political analysis which had been offered in the 1950's by the Survey Research Center. The eight-week program which has evolved out of that base annually offers quantitative training to over 250 graduate students and faculty members from scores of universities and colleges. The logic of the program is to make available such training to a relatively large number of persons, reaching beyond the work of already established research scholars. Only a minority of participating universities are prepared to offer a full range of professional research training in quantitative methods to their graduate students. Among member institutions, the burgeoning interest in quantitative research has been reflected in major curricular changes in a number of programs of graduate study. More generally, limited staff resources are being rapidly expanded. The ICPR has sought to meet both the need for a basic introduction to quantitative analysis for those individuals unable to obtain such training at their home institutions and also to provide intensive training in the more advanced and innovative approaches for those individuals who have substantial background.

Each summer since 1963 the Consortium has sponsored two series of training and research seminars, one designed mainly to give instruction in research method, the other to provide a substantive review of work in specialized research areas.

Training Seminars.--The training program arose out of the belief of Consortium members that it was desirable to supplement the methodological training offered graduate students at a majority of member institutions and to permit faculty members to extend their methodological training. Although the evolution of training programs offered at member universities has reduced this need at some universities, the demand from newly created and expanding departments has risen steadily over the first several years.

During its brief history the Consortium's training program has changed a good deal in response to the changing needs of member schools, the increasing number of participants, and the growth of the Consortium's data archives. In 1963 and 1964 the program consisted of two consecutive four-week seminars, the first on research design, the second on data analysis, each carrying three hours' credit. In 1965 the entire eight-week period was devoted to a single seminar on data analysis, carrying six hours' credit. In 1966 and 1967 three differentiated eight-week seminars, each carrying six hours' credit, were offered: the first on research design, the second on data analysis, the third on applications of mathematics to political research. The first and second of these seminars were distinguished partly by the broader range of research topics covered by the seminar on design, partly by the greater statistical preparation expected of participants in the seminar on data analysis. In 1968, separate seminars in statistics, causal inference, dimensional analysis, and dynamic analysis were created

from the old data analysis seminar with the expectation that participants would receive intensive training in one content area and exposure to a wide range of other topics. The research design and data analysis seminar requiring less prior empirical training was retained, and an eight-week course tailored to the needs of historians was added to the schedule. Experience with this modular format led to the 1970 schedule in which participants could attend one intensive seminar scheduled in the afternoon and any or all of ten four-week morning lecture series. A more detailed description of the offerings is prepared for each summer program.

The training program makes extensive use of the Consortium's archives and the University's data-processing facilities. The instructional setting has evolved from standard classroom lecturing to offering topics in modular course "elements" incorporating analysis projects aided by the use of computers. Both real and contrived data have been used extensively to provide the student an opportunity to become actively involved in a simulated research experience.

There has been a marked change in the degree of preparation, as well as the number, of participants over past summers. Persons attending from universities which have participated in each summer program have shown a steadily higher average level of preparation. This trend has been partly offset, however, by the lesser average preparation of persons attending from newer member institutions, many of which have smaller graduate departments and give less methodological training on their own campuses.

Although the training seminars are organized primarily for graduate students and faculty from member institutions, they are available to other qualified applicants. It seems probable, for example, that several foreign scholars will attend each summer's program. Some faculty members from smaller universities or colleges which are not Consortium members, and occasional students from these institutions, can also be expected to participate.

Specialized Research Seminars.--Each summer two seminars are organized to review research in various substantive areas. In 1963 one seminar dealt with comparative political research, another with research on judicial behavior. In 1964 one seminar dealt with research in developing nations, a second with research on legislative behavior. In 1965 one seminar dealt with research on community power structures, another, sponsored jointly with a committee of the American Historical Association, dealt with quantitative historical research. More recently they have dealt with the research problems in the areas of political socialization, political elites, and strategies for studying the political processes at the state level, and international organizations, and small "natural-state" political groups. Tentatively planned are special seminars related to roll call analysis and curricula changes necessary to incorporate stronger methodological training in undergraduate education.

In view of the proliferation of research findings and of the presence of unresolved problems of method, the Consortium seeks to provide the systematic inquiries and confrontations necessary to aid further research. Preliminary plans for research conferences are initiated in response to

requests for a conference expressed by prospective participants. A judgment that a conference could make a significant contribution to a major domain of quantitative research usually depends on two related considerations: (1) during the preceding years, major resources will have been invested in a number of independent research projects and the data from many of the projects will be available for reanalysis; (2) it will be evident that a series of crucial problems of conceptualization, design, and measurement have emerged and should be attacked with the combined resources of the new evidence and experience produced by contemporary work.

Therefore, a conference usually is organized around examinations and reanalyses of data available from the leading contemporary studies. The goal of a conference will be the inspection of major research problems, both of substance and of method, and conference participants are concerned with exploring the most significant problems of concept, method, and technique confronting innovative research. A conference seeks to provide an opportunity for research scholars to engage in discussion with the principal investigators of the major projects. Through the use of the data-processing facilities of the Consortium, conference participants engage in a direct exchange between theoretical questions and the empirical materials relevant to these questions. Conference leaders and participants are concerned, as well, with identifying the lacunae in the evidence pertaining to major conceptual constructions and with defining unresolved problems for empirically-based theory.

Financial Support.--The summer training program is financed by pooling diverse sources of support. In 1970, direct costs of operating the eight-week program were shared by the Consortium and the University of Michigan; operating costs of a short research seminar were supported by the National Science Foundation. In like manner, the cost to participants has been distributed among a variety of sources of support, with the primary source the National Science Foundation. Funds available to the Consortium for subsidizing participation are, by established practice, used to make up the difference between the basic cost of participation and the money available to the prospective participants through their schools. In recent years these funds, supplementing the operating budget which is based on the members' annual subscription fees, have offset as much as half of the total costs to participants. Experience has indicated that it is possible, over the long run, to balance the diverse objectives of maintaining participation at the level set by the availability of staff and teaching facilities while achieving an equitable distribution of supplementary funds among the member schools.

Selection of participants, within the limits imposed by the availability of funds and the need for their equitable distribution, is the province of the member institution. The usual procedure is one in which the Official Representative nominates candidates for participation, indicates the financial resources of each nominee--including funds available from the institution--and provides some preference ranking for the guidance of the staff. Selection is then made by a special Admissions Subcommittee of the Council which is guided by the aforementioned criteria. Difficult decisions are made in consultation with the relevant Official Representatives.

APPLICATION TO THE NATIONAL SCIENCE FOUNDATION FOR FUNDS FOR SUPPORT OF ADVANCED SCIENCE SEMINARS ON QUANTITATIVE POLITICAL ANALYSIS
(Submitted June, 1970, for Summer 1971)

On behalf of the Inter-university Consortium for Political Research, the Survey Research Center of The University of Michigan requests stipend support for the participants in seven Advanced Science Seminars in Quantitative Political Analysis to be given during the summer of 1971.

Background

Plans are currently being made for the ninth consecutive Consortium summer program to be held at The University of Michigan during July and August 1971. During the past years this summer program has grown in importance and now represents one of the main sources in this country for training social scientists, particularly political scientists, in research methodology. Training is provided for both students and faculty as shown in the appendix on attendance during the last years.

The Consortium training program has grown in attendance as well as in amount and type of material presented. From one course and 58 students in 1963, we expect to have at least seven seminars taught in 15 sections in 1971 with between 250 and 300 participants from well over 100 schools.

Since 1965, the core of this program has been, and should continue to be, the work that has been supported by the Advanced Science Seminar Program of the National Science Foundation. Given the rapid change which has marked the recent state of the relevant social science disciplines, the meaning of "advanced science" as applied to the core activity of the training program has changed every bit as much as have the pedagogical techniques associated with it. The methodology and techniques of the behavioral sciences have advanced almost exponentially over the past decade. It seems fair to suggest that a large fraction of the established research scholars in Political Science have been sufficiently outdistanced by the rapid pace of change to make it difficult for them to appraise much of the research currently reported in the American Political Science Review; their ability to sustain their roles as innovative scholars has been diminished in like manner.

In the face of the many obstacles to a full and swift diffusion of methodological advances via the standard professional literature, the more advanced portions of the Consortium training program provide one of the few available means for rapidly expanding the cadre of researchers equipped with a knowledge of the newest and most powerful research tools. The diversity of program elements, however, is also intended to reach the younger scholars whose home institutions can at best provide comparable training experience in only a subset of the research domains encom-

passed by the Consortium program. For the least experienced and least advantaged, the less complex portions of the program still constitute advanced training that goes well beyond that which would otherwise be open to them.

At the same time, the trained ability of a large number of faculty members and students to exploit the level of work now offered by the Consortium reflects a dramatic change over recent years and now challenges the Consortium teaching staff to maintain a fast pace of innovation in the substance of each year's program. We are acutely aware that the grossly unequal distribution of resources across the nation's universe of schools is not well matched by the distribution of talent, particularly at the graduate school level. Although the eight-week summer program can scarcely be assumed to reshape very many careers, its value to the most capable participants is almost certainly inversely proportional to the resources of their respective schools. Its value to the community of scholarship is consequently that of facilitating the development of a great deal of talent that will add to the skilled manpower now so scarce and yet so vital to the growth of a powerful and useful behavioral science.

In recent years, recognition that the program is concerned with problems facing the behavioral science researcher in other disciplines than Political Science has been followed by a broadening of the disciplinary base of participation. Indeed, there has been sufficient interest on the part of political scientists, sociologists and historians to permit a "spin-off" in the form of a seminar in quantitative methods in historical research now offered through the University of Michigan Department of History as a regular part of the Consortium summer program. In like manner, the growing use of simulation in behavioral science research has led to the creation of a separately funded advanced seminar in simulation as a part of the 1970 program. Over the past three years the summer program has also included an independently supported advanced seminar in mathematical models for political analysis. As attached Appendix B indicates, participants in the 1970 core program are expected to include a substantial number of people from disciplines other than political science.

Beyond stimulating and then supporting the work in quantitative historical methods, mathematics and simulation, the core program of advanced science seminars has also provided the locus for a number of related training and research activities. During the past seven years the program has provided the intellectual as well as administrative context for some eleven research conferences. A fair number of these conferences have, in turn, marked the initiation of collaborative research activities that would, at best, have developed more slowly without the occasion and the impetus of the conferences.

In line with the broader aims of the Consortium, the summer program has also contributed, however directly or indirectly, to the strengthening of local training in research in the member schools. (See Appendix C for our most recent assessment of one aspect of local growth.) Given the fact that the Consortium is only one of many sources of institutional support for the developments to which it is committed, its unique contribution to this proliferation of training in research remains a matter of conjecture.

In any event, it has been possible in recent years to follow a general policy that excludes most students in the major graduate departments across the nation from participation in the least advanced portions of the program on the grounds that the Consortium's role is to provide training more advanced than would normally be available to the prospective participant on his home campus.

Despite the financial economies of scale that will continue to concentrate the Consortium summer program on The University of Michigan campus in the immediate future, we foresee and are agreed upon an ultimate decentralization--or regionalization--of the training program. Quite apart from savings on travel costs for participants from either coast or the South, decentralization of at least some parts of the present program would certainly further strengthen the behavioral sciences at the added host institutions. Decentralization would doubtless also permit a reinforcement of the Consortium's dedication to remain a center of innovation and rather special competence. However, with or without decentralization, the Consortium will remain a national center for specialized training. The cost of the advanced specialized training offered by the summer program will certainly long remain too high for some of the major universities and for many of the small or developing institutions. Throughout the foreseeable future there will continue to be a crucial role as a national training facility that must be taken either by the Consortium or by some similarly national institution.

Plans for 1971

The achievements from past summers represent a challenging dilemma for the period covered in this proposal. On the one hand, many of the better schools are now able to offer methodological courses on their own campuses. This means that those who come to the Consortium training program from such schools should be given advanced material suitable for their level of training. On the other hand, participants from new and lesser known member schools still need training in more basic and fundamental material. These are two different demands on the seminar structure that we need to respond to in the period ahead.

The form in which instruction has been given during the past years has changed as we have gained experience in how to train people in the short time span of eight weeks. The instructional setting started with the usual classroom lecturing and has moved away from those restrictions imposed by a standard university course structure. The plans for 1971 partially reflect the conflicting expectations many participants in past summers have had of wanting to learn something well in a particular area but at the same time not wanting to miss what goes on in other areas. Because people seldom participate in the program more than one summer, we will attempt to respond to both these expectations in the plans for 1971.

The development of the summer seminars has included an increasing use of realistic research situations as tool in the instruction. This movement toward a "case study" method has required a more active partici-

pation by the students. The availability of computers has made it possible for the participants to apply specific methods while in the process of learning these methods. Both real and contrived data have been used to give the participants an opportunity to become actively involved in research experiences, and we plan to continue this active mode of operation in 1971. The practicum experience, moving participants from a passive to an active role, is in our view essential to the devleopment of the analytic skills required in later research.

Seminars will be organized in at least seven areas, described somewhat more fully in the appended materials prepared for prospective participants in the 1970 seminars, including:

1. Research design and data analysis
2. Simulation
3. Applied statistics
4. Causal inference
5. Dimensional analysis
6. Dynamic analysis
7. Quantitative methods for historians

Each participant is expected to choose one of these seminars. In his chosen seminar the participant will get concentrated training throughout the summer. Most of the seminars will be divided into sections in order to create small groups where everyone is able to communicate with the instructor. Students will be placed in sections based on their background in mathematics, statistics and research methodology. That way we will have the more advanced students together and the less advanced students together, and the presentation in each section can be given on the most appropriate level.

Those participants with limited experience in empirical research will be encouraged to participate in the seminar sections on research design and data analysis. This seminar takes up aspects of the planning and execution of a research project as well as selected aspects of data analysis. A variety of data sets from the Consortium archives in fully documented form will be available for this and other seminars where data are analyzed. The seminar for historians follows the same outline, but with special emphasis on methods appropriate for historical research.

The seminar in simulation will be given for the first time during the summer of 1970. After an introduction to computer programming the seminar is structured around three "black boxes," representing three behavioral systems. Each "black box" is a computer program representing an unknown individual or social process. The participants are asked to probe this system trying to uncover the underlying structure. Important methodological and substantive issues associated with simulation modelling are introduced in the context of the three classes of behavior suggested by the three black boxes.

The remaining four seminars are concerned mainly with data analysis. The seminar on applied statistics assumes prior knowledge of equivalent

to at least one course in statistics, and it treats topics like least squares analysis, cross level inference and Bayesian statistics. The various statistical models are introduced in the context of some substantive problem in political science, thereby motivating the use of the statistical model. In the seminar on causal analysis the participants are exposed to the process by which the investigator plans his moves to unveil and evaluate progressively the various multivariate structures which might underlie a set of data. Special aspects of correlation and regression analysis relevant to causal analysis are treated. Other topics include recursive systems, structural equations and identification, path analysis, reciprocal causal analysis, and error and unmeasured variables in causal analysis. The seminar on dimensional analysis takes up techniques which are loosely connected by the ideas of scaling, measurement and data representation. The areas include measurement and scaling theory, non-metric multidimensional scaling, factor analysis and clustering techniques. The study of relationships across time is central to the seminar on dynamic analysis. These broad areas are generally recognized as time-series analysis, cohort analysis, and panel analysis.

The possibility of providing intensive experiences in data analysis in these seminars is increased both by availability of computer software developed by the Consortium and by the presence of the extensive political and social data archived by the Consortium. These make it possible to simulate the data environment in which an investigator works as he applies analytical tools to a range of substantive problems of political research. Computer developments also make it feasible to contrive a complex set of data for later analysis. Participants can gain remarkable insight into the logic and assumptions of the techniques by analyzing such data.

In addition to each summer participant devoting major effort to one of the seminars listed above, we want to provide an overview of the areas already discussed, as well as some other areas, for all participants whose interests and needs go beyond their own seminars. This will be done through an extended set of short lecture series. In these lectures the students will be alerted to the main literature in each of the areas. The lectures are intended to give the participants exposure to a wide range of methodological concerns and techniques it would not be possible to study intensively during a short summer. But if interest and awareness are created, the participants have been given a starting point from which to pursue these interests at a later time. Lectures are planned in the areas of research design, data analysis, basic statistics, applied statistics, mathematics, probability models, causal inference, dimensional analysis and dynamic analysis.

Special curricular development project

To develop the simulated analysis projects required by the several seminars, the Consortium has reveived a major grant from the National Science Foundation's Office of Computing Activities. The materials being produced by this special project over a three-year period will ultimately be available for use beyond the Consortium's own training program. But a close bond exists between the development project and the Consortium's

seminars in the immediate future. On the one hand, the materials developed by the project enhance the value of the training seminars. At the same time, the seminars provide the major arena for testing and improving these experimental curricular materials.

Such testing began during the summer of 1969 and will continue during the period of this proposal. In addition to the evaluation of curricular development materials, it will include the investigation of major pedagogical problems such as the effectiveness of time-sharing vs. batch computer systems, the optimal use of hand and computer problem sets, and the effect of teaching methods on participant attitudes.

Indeed, in the context of our concern with strengthening the training capabilities of member schools, the tie with the curricular development effort provides a strong supporting reason to attach importance to the continuation of the Consortium's training program through the summer of 1971. This effort is part of an evolutionary process of developing an integrated package of substantive instructional materials and computer support, from which others at other institutions may select those components necessary to meet needs on their own campuses.

Personnel

The Consortium seminars have so far been taught mainly by members of the faculty and advanced graduate students in political science at The University of Michigan. For 1970 an organized effort was mounted to broaden the base from which the instructors were drawn, and four persons not associated with The University of Michigan are teaching in the 1970 program. We want to continue this pattern in 1971.

Graduate students who, under supervision, have taught in the Consortium summer program have had substantial benefits from their teaching. They have learned the material in a way that will benefit them well in their work as teachers and researchers in their own right in the future. They have acquired specialized skills that otherwise would have been hard to obtain for the summer program, but it is clear that we will be forced to unusual efforts in the future if we are to continue this "in house" training of the teaching staff.

Administrative arrangements

Substantive, procedural and technical changes in the training program have been matched by changes in fiscal and administrative support. The summer program of 1963 was supported exclusively by the Consortium Operating Budget, which is funded entirely by the annual institutional membership fees. It rapidly became evident that substantial added funding was necessary if the program were to meet the needs to which it was addressed. In particular, the social sciences' traditional failure to support summer research or training costs for students or staff made it impossible for many would-be participants to accept the financial burden of a removed and therefore relatively expensive increment to their professional training.

As a consequence, support was sought and received from the National Science Foundation.

The costs of an experimental program, added to the costs to the participants, were the basis for a series of grants from the Foundation. Given the scope and size of the program, funding of direct costs was placed on a rather generous cost-sharing basis. The Consortium carried a larger portion of the administrative and instructional costs while the foundation supported the balance of those costs and all of the stipend and expense support that made it possible for enrollment in the program to expand.

As the summer training program, offered through The University of Michigan Rackham School of Graduate Studies, became an established feature of Michigan's graduate program, a third phase of funding was begun. Over recent years a tripartite division of support has emerged. The University has assumed the major role in funding the direct instructional costs. The National Science Foundation has supported the costs of participant stipends. The Consortium has carried the administrative costs. Despite steadily increasing demands on the Consortium Operating Budget from other organizational activities, we have willingly increased our budgetary support of the administrative costs to permit the limited NSF funding to go more heavily to the stipend support of participants.

In the face of the rising costs of education, economies of scale and innovative pedagogical techniques have permitted us to carry out the program with relative efficiency and a very low cost per credit hour of instruction received. This economy of operation has added to The University of Michigan's willingness to increase its support of the program. Unfortunately, none of these considerations has eased the financial burden of the individual participant.

In order to facilitate participation in the program, we have consistently maximized the impact of NSF funding by making only partial stipend grants to participants. Thus, as our annual reports to the Foundation show, we have supported each year a much larger number of participants than nominally indicated in the formal budgets. Over the last two years, tuition and fees, cost of living, and cost of transportation have continued to rise sharply. At the same time the number of potential participants able to make use of the summer training facilities has increased dramatically. And the increase in program support from NSF has not risen as rapidly as have the other elements or the costs to the participants.

The national growth and dispersion of training facilities has not kept pace with the rise of effective demands that should be met. Although the basic work in a number of our seminars can now be offered at a number of the most prestigious universities and new centers of excellence, developing institutions introducing new doctoral programs and undergraduate institutions striving to maintain quality by supporting research activities of talented younger staff members are increasingly turning to the Consortium to provide training opportunities that they are

not able to offer themselves. At this level the number of persons who need further training and who deserve access to some of the nation's resources for training is large and growing rapidly. They are not many in any single institution, but as Appendix E suggests, they aggregate in their large numbers from many schools spread across the entire nation.

The more advanced work in the seminars in the Consortium program is duplicated at still fewer schools within our membership. There is, of course, a large and dispersed reserve of faculty talent that, if properly supported, could begin to provide large segments of the entire program to their home campuses. If our curricular development project proceeds to a successful conclusion and then is, indeed, as "exportable" as we expect, some of the demand now directed to the Consortium as a national resource will certainly abate. However, under the most optimistic of schedules we do not expect to feel major relief for at least three or four years. In that period, the demand for training and research competence, beyond that supplied by the limited number of graduate departments that sustain their own training needs, will assuredly grow.

Budget

As the following budget proposal indicates, we are requesting an increase in stipends and travel from the $93,000 granted for the 1970 program to $147,000/year for 1971. Following the precedent of last year, we will not request Foundation support for any portion of the $50,000 or more we estimate to be the direct costs of providing administrative and technical support of the program. We will request a continuation of this year's support from The University of Michigan to cover the instructional costs of the program.

The financial ability of the Consortium to bear the proposed burden of administrative costs is indicated by the budget statements attached as Appendix F. The first portion of the appendix indicates the steady and rapid increase in the operating budget over the past six years.

The second portion of Appendix F indicates the discretionary latitude available to Consortium Council and staff in distributing funds among organizational activities. In particular, the amounts allocated to archival development work in 1970-71 could, if necessary, be allocated to include support for increased summer program costs in 1971-72 if the expected level of University support is not forthcoming.

National Science Foundation funds would, therefore, be used to enable social scientists, including sociologists, economists, social psychologists and historians as well as political scientists, to participate in one or another of the seminars that will constitute the Consortium summer program in 1971. (Participation in the simulation seminar or the research conferences will be separately funded.) All of the direct and indirect costs of instruction and administration will be borne by The University of Michigan through the College of Literature, Sciences and the Arts, the teaching departments, or the Inter-university Consortium for Political Research. Enrollment will be permitted to expand to approximately 300, including both faculty and advanced graduate students.

Advanced Science Seminar Project

Proposed Budget

Summer 1971

A. Participant Support

1. Subsistence stipend for 245 for 8 wks. @ average of $60/wk. ($60 x 245 x 8)	$117,600	
2. Travel @ $120/participant average ($120 x 245)	29,400	
Total Participant Support		$147,000

B. Direct Operating Costs

Contributions toward Direct Operating Costs: 1) Tuition, $75,000; 2) University of Michigan, $87,000 and Inter-university Consortium for Political Research, $50,000 for a total contribution of $212,000.

Total Amount Requested from NSF	$147,000

APPENDIX A: NUMBER OF PARTICIPANTS PER YEAR BY SCHOOL, 1963-69

APPENDIX B: APPLICANTS FROM DISCIPLINES OTHER THAN POLITICAL SCIENCE, 1970

APPENDIX C: IMPACT OF ICPR SUMMER PROGRAM ON COURSE DEVELOPMENT*

Institutions Reporting	81
New Courses in Existence	
1. Graduate Methods	59
2. Graduate Substantive	12
3. Undergraduate Methods	47
4. Undergraduate Substantive	10
Total New	128
Revised Courses	
1. Graduate Methods	13
2. Graduate Substantive	9
3. Undergraduate Methods	6
4. Undergraduate Substantive	19
Total Revised	47
Proposed or Planned Courses	
1. Graduate Methods	30
2. Graduate Substantive	9
3. Undergraduate Methods	17
4. Undergraduate Substantive	14
Total Proposed or Planned	64

* Data were provided in 1968 in response to a request from member schools to indicate direct consequences of their participation in the Consortium.

APPENDIX D: SUMMER PROGRAM STAFF, 1970

APPENDIX E: ROSTER OF MEMBER INSTITUTIONS

APPENDIX F

I. ICPR Annual Operating Budget Summary as Supported by Membership Fees for each Fiscal Year from 1962-63 with projection through Fiscal Year 1971-72:

Year	Income	Year	Income
1962-63	$ 60,000	1967-68	$325,000
1963-64	$ 79,000	1968-69	$370,000
1964-65	$ 95,500	1969-70	$413,000
1965-66	$132,700	1970-71	$460,000*
1966-67	$171,750	1971-72	$566,000*

*Projected on the basis of current membership and reflecting approved increases in the membership fee structure.

II. ICPR Annual Operating Budget, 1970-71, as presented to the Council, June 4-5, 1970.

A.	Technical Services to Members		
	(1) Historical Archives Servicing		$ 61,750
	(2) Survey Archives Servicing		$ 70,500
	(3) System Distribution		$ 11,500
		Total	$143,750
B.	Survey Archive Development		$166,750
C.	Summer Program		$ 50,300
D.	Consortium Administration		$ 99,200
	GRAND TOTAL OPERATING BUDGET		$460,000
E.	Expected Income from Membership Fees		
	(1) 88 Class "A" @ $4,000		$352,000
	(2) 48 Class "B" @ $2,300		$108,000
		Operating Budget Total	$460,000
F.	Projected Operating Budget		
	(1) Fiscal Year 1971-72		
	a. 94 Class "A" @ $4,500		$423,000
	b. 55 Class "B" @ $2,600		$143,000
		Total	$566,000

ICPR SUMMER PROGRAM SCHEDULE

June 29 - August 22, 1970

General Lectures (choose any)

Time	July 1 - July 25	July 27 - August 22
9	Research Design	Data Analysis
10	Topics in Statistics	Causal Inference
11	Dynamic Analysis	Dimensional Analysis
12	Mathematics in Pol. Sc.	Probability Models
1	Basic Statistics (I)	Basic Statistics (II)

Intensive Seminars (choose one)

July 1 - August 22

Time			
2-4	Instruction in MTS	Methodological Workshops (6 sections)	P.S. 687
		Causal Inference (3 sections)	P.S. 788
		Dimensional Analysis (2 sections)	PS. 789
		Dynamic Analysis	P.S. 790
		Selected Statistical Techniques (3 sections)	P.S. 787
		Historical Analysis	Hist. 799
		Computer Programming	Simulation (By permission) P.S. 689 Soc. 629

ICPR SUMMER PROGRAM ATTENDANCE, 8-WEEK SEMINARS

1970

	687	787	788	789	790	H799	MSSB	Total
Credit	34	9	16	15	6	13	7	100
Audit	26	26	17	16	9	6	7	107
Ph.D. Guest	18	5	2	8	9	4	1	47
Total	78	40	35	39	24	23	15	254

687 Methodological Workshops
787 Statistics
788 Causal Inference
789 Dimensional Analysis
790 Dynamic Analysis

1969

	687	787(788)	H799	Total
Credit	29	29	5	63
Audit	34	67	7	108
Ph.D. Guest	16	14	6	36
Total	79	110	18	207

1968

	687	787	MSSB	H799	Total
Credit	54	49	6	14	123
Audit	28	27	4	5	64
Ph.D. Guest	17	24	6	8	55
Total	99	100	16	27	242

1967

	687	787	MSSB	Total
Credit	36	73	9	118
Audit	14	59	6	79
Ph.D. Guest	10	14	3	27
Total	60	146	18	224

1966

	687	787	MSSB	Total
Credit	43	46	11	100
Audit	9	40	7	56
Ph.D. Guest	11	0	6	17
Total	63	86	24	173

1965

	687/787	
Credit	62	62
Audit	35	36
Ph.D. Guest	18	16
Total	115	114

1964

	687/787	
Credit	23	19
Audit	19	16
Ph.D. Guest	6	8
Total	48	43

1963

	687/787	
Credit	12	11
Audit	24	19
Ph.D. Guest	10	6
Total	46	36

687 Research Design
787 Data Analysis
787(788) Data Analysis (Statistical Module)
MSSB MSSB-sponsored Mathematical Political Analysis; 1970, Computer Simulation
H799 Historical Data Analysis
687/787 Research Design 1st 4 weeks, Data Analysis 2nd 4 weeks

Number of member schools participating:
1970: 98 of 132, 74%
1969: 92 of 129, 71%
1968: 93 of 112, 83%
1967: 77 of 95, 81%
1966: 56 of 73, 76%
1965: 36 of 58, 62%
1964: 27 of 38, 71%
1963: 20 of 25, 80%

September 30, 1970

APPLICATION TO THE NATIONAL SCIENCE FOUNDATION FOR FUNDS FOR SUPPORT OF A SUMMER SEMINAR OF THE UTILIZATION OF SMALL GROUP RESEARCH IN THE STUDY OF SMALL "NATURAL-STATE" POLITICAL GROUPS

On behalf of the Inter-university Consortium for Political Research, the Survey Research Center of The University of Michigan requests support for a two-week summer seminar on the utilization of "small group" research in the study of small "natural-state" political groups.

The purpose of the seminar is to tackle a paradox that in recent years has forcefully come to the attention of a handful of scholars in political science interested in the role that small groups play in political and governmental processes. On the one hand, the pervasiveness and importance of various kinds of small groups in governance and politics is frequently noted in numerous connections, but has yet to be systematically explored on an intensive scale, either empirically or theoretically, by contemporary political science. On the other hand, although political scientists have increasingly studied small groups in the real world of government and politics such as legislative committees, party cliques, judicial bodies or administrative units, they have either failed to pay attention to the prolix contributions made to small group research by sociologists and psychologists, or they have found it difficult to apply sociological and psychological formulations and methodological inventions in the study of real-world small political groups. It is neither possible nor particularly relevant here to speculate upon why this is the case. Rather, it is our intention to show that an effort should be made to direct the energies of more political scientists toward the utilization of small group theories and methods in the study of small political groups, and to indicate the kinds of benefits which could be realized by doing so.

The proposed seminar, to be held in the summer of 1970, would be located on The University of Michigan campus in Ann Arbor, Michigan, and would be held in conjunction with the Consortium-sponsored summer program of research training. The idea of the seminar developed over the last two years as it became clear that there might well exist in the country an "invisible college" of younger political science scholars engaged in the study of small political groups but working in isolation and not even acquainted with each other.

In order to identify these scholars and discover their interest in a summer seminar as a first step toward establishing lines of communication and common research concerns, a letter was sent to about fifty persons throughout the country asking for nominations of possible participants. Of some 35 nominations received, about 25 could be taken seriously. These nominees were in turn asked to declare the nature of their interest in small political groups and to submit a curriculum vitae. At the moment, some 18 people seem to be strongly interested in the seminar and further responses can be expected. The participants in the seminar would be selected from among this group and from among others who might

come to our attention before final selections are made.

We ask support in this proposal for twenty seminar participants and six "resource" participants who would be specially invited to meet with the seminarians. We would also expect that some sessions of the seminar will be attended by advanced graduate students of the basic Consortium summer program. The seminar will be organized and directed by Professor Heinz Eulau of Stanford University who will be assisted by Professor Charles Walcott, University of Minnesota.

Although the detailed format of the seminar is yet to be worked out, its over-all design can be briefly indicated. It would seem desirable to devote the morning hours to meetings between smaller numbers of seminar participants who are interested in either particular substantive topics, theoretical approaches or methodological matters. The afternoon sessions would bring all seminarians together for presentations of research in progress, lectures by invited guests or reports from the morning groups. Evening sessions would be devoted to the development of research designs which, in due course, might serve to make research on small political groups replicative and cumulative. Details are to be worked out as soon as the list of participants has been firmly established.

Given the short duration of the seminar, on the one hand, and the wide range of possible seminar topics and interests, on the other hand, the seminar program should be made as realistic as possible. It would serve little purpose if, in the remainder of this proposal, we were to claim more as seminar objectives than what can actually be accomplished. As the seminar represents a maiden effort to bring together younger scholars most of whom do not even know each other or of each other, it would be counter-productive to exaggerate the possible pay-offs that can be expected. Minimally, the seminar will represent a learning experience for all participants. Maximally, the seminar might serve as the base for a data-centered summer research conference to be held in a subsequent year over a longer period of time, or it might serve as the staging ground for joint research by at least some seminar participants.

We shall, in what follows, briefly outline the concerns of political science in the field of small group research and review, if ever so briefly, possible topics relevant to the seminar.

Relevance for Empirical Political Theory

If we loosely define as a "small group" any recurrent, face-to-face relationship involving more than one but fewer than (very roughly) twenty people, it is easy to demonstrate the pervasiveness of small groups in the political process. Small groups such as family and friendship groups function to orient the individual toward politics, to direct and to promote or inhibit political participation. Political parties, from the grassroots up to the national decision-making level, are organized into small groups. Legislative activity is importantly affected by informal small groups such as the New York Democratic group studied by Fiellin (1962). Local legisla-

tive bodies are normally themselves small groups. Work groups and decision-making committees in public administration are typically small groups, as are collegial courts. For that matter, such bodies as the U.N. Security Council are small groups; a summit meeting is also a small group.

All of this is rather obvious, but it is not necessarily important. Though all the groups mentioned, and many more as well, may conform to a loose definition of "small group," this does not necessarily justify attention to small groups per se. The relevant question is whether such small groups as the Supreme Court, an interdepartmental committee, a ward council, and a Congressional subcommittee have anything in common besides a similarity in size and interaction frequency.

Certainly an answer to such a question is not immediately available. The concern here is not to answer it, but to argue for the relevance of its being asked, and to suggest the potential importance of possible answers for the discipline of political science. Pursuant to this, three broad areas will be briefly discussed: (1) the development of theory and research concerning small groups in cognate disciplines; (2) the contributions of political scientists toward adapting and extending this body of knowledge to date; (3) the relevance of this material to existing or potential theories of the political process; and (4) practical applications of small group research to problems of social and political change.

Political scientists interested in small groups have stressed the possible advantages of integrating into political science theory and research the concepts and the large body of empirical findings which have been developed concerning small groups. Particularly in the disciplines of sociology and social psychology, the small group has long been an important focus of study. Moreover, small group theory has been fruitfully incorporated into such areas as business administration and organization theory, so its potential for application to political analysis has seemed promising (Golembiewski, 1962).

This potential stems not only from the fact that much political behavior is group behavior, but also from the apparent compatibility of many of the concepts advanced in the study of small groups with the kinds of concepts found most interesting and relevant by analysis of political behavior. This point can be briefly, if inadequately, illustrated with reference to a few characterizations of the main thrusts of small group research.

It has been found, for instance, that the behavior of individuals in work groups can be grouped into three basic dimensions: (1) individual prominence and achievement; (2) aiding attainment by the group; and (3) sociability. As Verba points out, these categories are closely compatible with a political conception of the role of the group within an organization (Verba, 1961). They point to the relevance of such "political" concepts as power, influence, and leadership. In addition, studies directed toward the examination of such factors provide useful insight into the problems and promise of constructing operational definitions of these concepts, as well as empirically-grounded propositions concerning them.

Golembiewski provides another interesting categorization of the small group literature, grouping widely-employed variables into three "panels," designated respectively the "structural" panel (such factors as roles, leadership, cohesiveness, and structural integration), the "style" panel (e.g., task, norms, threat), and the "population" panel (characteristics of the individuals in the group) (Golembiewski, 1962a). The first two panels would seem to include concepts and propositions highly relevant to the study of such group-level phenomena as communication, decision-making, and the consequences of alternative forms of formal organization (e.g., hierarchical vs. non-hierarchical). The third panel focuses upon such matters of concern to political scientists as personality and ideology.

Numerous other, more specific approaches could be mentioned. For example, the theories of Thibaut and Kelley, heavily influenced by the rationalistic assumptions of economic theory, could easily prove fruitful in relation to game-theory oriented models of political behavior (Thibaut and Kelley, 1959). In the area of decision-making alone there is a vast literature, summarized by Collins and Guetzkow, which contains findings and hypotheses reflecting numerous theoretical orientations, and applicable in principle to a host of political contexts (Collins and Guetzkow, 1964).

This discussion of the potential relevance of general small group theory to political science should not be taken to imply that the study of small groups has been totally ignored by political scientists until now. The political science literature contains several works in this area, but it would probably be fair to say that they have not had a major impact upon the discipline as a whole. Overall, political science appears at present to lack not only a consensus as to how to approach group-level phenomena most effectively, but even a consensus as to the relevance of doing it at all.

The result of this relative inattention, it can be argued, is something of a gap in contemporary empirical political theory. On the one hand, notable advances have been made in the direction of understanding the political attitudes and behavior of individuals. The literature devoted to the analysis of voting behavior, political participation, legislative and judicial behavior, etc., is large and impressive. On the other hand, comparable attention has been devoted to research and (primarily) theory at the systemic level, dealing with the political system as a whole. However, there are levels of analysis between these which have not been treated so exhaustively or impressively.

One such area is the organizational, or sub-systemic level, e.g., parties, interest groups, legislatures, administrative agencies, etc. The quality and quantity of scholarship in these areas varies. However, one significant finding in all of them seems to be that small groups are important to the functioning of larger organizations, and that such organizations must be analyzed and explained with at least some reference to their group structure. The increasing concern of students of public administration with theories of organizational behavior, for instance, has made this point quite clear, since organizational theory incorporates a great deal of small group theory.

Moreover, studies of individual political behavior have emphasized the importance of group relationships as explanatory factors. An understanding of the importance of membership and reference groups seems to be crucial for the understanding of politics at the individual as well as the aggregate level. Indeed, it would seem probable that small group theory will ultimately be needed to bridge the analytical gap between the explanation of individual behavior and the explanation of the behavior of collectivities. If this is the case, then attention to group-level phenomena and to the relationship between group and individual as well as between group and organization should be a matter of high priority for political science at this time.

Although attention to small groups by political scientists has been relatively sparse and somewhat unsystematic, there are a number of studies in this area which may be suggestive of the directions in which future efforts might proceed. Perhaps the best-known of these is Verba's Small Groups and Political Behavior (1961). In this book, Verba argues strongly for the introduction of small group concepts and theories into political science, and demonstrates their relevance with a survey and analysis of materials pertaining to leadership.

Of related interest is Barber's original research on boards of finance, dealing largely with the concepts of power and influence in group decision-making (Barber, 1966). Barber not only applies small group analysis to his problem, but introduces the methodological innovation of bringing "real-world" political decision-making bodies into a laboratory situation for study. This suggests one possible way of overcoming the "artificiality" of laboratory-based small group theory.

The small group perspective on the study of leadership, influence, and the decision-making process has also appealed to students of the judicial process. The University of Chicago Law School's jury studies, reported by Strodtbeck, provide one example of this sort, illustrating also some of the practical problems of conducting small group research in "natural" settings (Strodtbeck, 1956, 1957). The investigations of city councils by Eulau and his associates provide a rather successful demonstration of the application of small group analysis in a different natural setting (Eulau, 1966, 1969).

As mentioned above, the area of public administration has profited greatly from the introduction of small group analysis. An excellent illustration of the relevance of such theory in this area is provided by Golembiewski's Behavior and Organization (1962).

At the level of non-official political behavior, the importance of small groups in the formation of political opinions and the communication of political information has been clearly demonstrated in numerous studies. The works of Berelson and others on voting (Berelson, 1954) and Katz on political communication (Katz, 1957) are well-known examples of research in this area.

From still another theoretical and methodological perspective, studies of the process of coalition-formation in the small group setting have proliferated and have recently come explicitly to the attention of political science through the theoretical work of Riker (1962) and Kelley (1968), and the relevance of such group-based theory for the analysis of larger political bodies (conceived essentially as small groups, each member being a collectivity) has been demonstrated by Leiserson (1968).

Such examples as these do not exhaust the small group literature in political science, but they represent it reasonably well. What they reflect is both the promise of the small group approach in numerous areas of the discipline, and the fragmented, rather uncoordinated state of this field at the present time. Numerous lines of approach have been suggested or tentatively explored, but few if any have been pursued much farther. Moreover, there has been little in the way of attempts to synthesize or integrate the various trends in small group analysis, e.g., to integrate theories of coalition formation with theories of group dynamics through a focus upon a common subject matter. In sum, while some of the groundwork has been laid, there is much to be done before small group analysis becomes, as it should, an important aspect of empirical political theory.

The Development of Small Group Theory

The primary argument for further attention to small group theory by political scientists has been in terms of the need to fill the apparent gap between the study of individual political behavior on the one hand and the analysis of political systems on the other. Small group analysis suggests itself both because there is a rich literature which deals with small groups, and because the theories and concepts developed in this literature are of obvious relevance to the theoretical concerns of students of political behavior and processes. Moreover, the importance of small groups is suggested by even a cursory survey of the number and kinds of small groups which seem to play an important role in the functioning of political systems.

The possible payoffs arising from attention to small groups may be regarded from a somewhat different perspective as contributing to theoretical integration in three ways. First, a focus upon small groups would serve to bring political scientists closer in their research concerns to those sociologists and psychologists working with small groups. This would open new avenues of interaction and cross-fertilization across disciplinary boundaries.

Second, the development of a viable theory of small group processes would serve to bring a common focus to disparate fields of political science. Currently, research in the area of judicial behavior, for example, says little to a scholar concerned with public bureaucracy or political parties. However, if work in these areas had something of a shared theoretical orientation, then conceivably the findings in one area of the discipline could then be regarded as having something of a common theoretical perspective and the possibility of research becoming genuinely cumulative would be considerably enhanced.

Third, political science itself could contribute much to the development and integration of small group theory. At the present time, the small group field is itself characterized by a diversity of substantive concerns and theoretical models. It is not inconceivable that by focusing primarily upon substantive problems (the behavior of political groups), and by approaching the small group literature with a kind of open-minded eclecticism and willingness to innovate, political scientists could develop new syntheses from the conceptual components of small group theory. It is altogether probable, in fact, that no one theoretical model will be found sufficient to the needs of political analysis, and that political scientists will seek to blend such elements as conflict and bargaining theories with the conventional foci of group dynamics. The results could be highly rewarding and uniquely relevant to the particular substantive concerns of political science.

Practical Applications

Although the main focus of the proposed seminar will be on theoretical development and secondarily on an appraisal of relevant methods, the seminar may well consider some of the practical applications of small group theory and analysis in regard to problems of social change and public policy that political scientists are called on to consider and help solve. Insofar as public policy (or at least its successful outcome) is related to the way in which people behave, that particular problem is found in some of the operations of the Office of Economic Opportunity. For several years OEO has attempted to hire, as members of local staff agencies, people coming from disadvantaged areas. In several places where this has taken place these workers have tended to lose rapport with their former neighbors in the target area. The OEO workers have, on occasions, after receiving a higher income enabling them to move to better housing, adopted some of the attitudes of their new peer group (other workers for OEO). The practical result has been that the workers for the target area, within a relatively short period of time, no longer relate adequately to the target area population, thus destroying the original intent of the recruitment policy. In some areas "sensitivity training" has been used in an attempt to alleviate the problem.

The point of the illustration is this: based upon what social scientists have reported over the past thirty or so years, the attitude change described above could have been predicted. If it had been predicted, the workers could have been given the proper kind of training before any problems arose, thus negating the necessity for a last minute effort at sensitivity training. This example provides an analogue to small group study and methodology applied by political scientists. Within a bureaucratic framework, for example, some approaches might well be applied which would allow executive reorganization to take place along behavioral rather than structural lines. Likewise, personnel policies relative to promotion and advancement might be premised on certain sociometric techniques rather than on other, less adequate lines. Within the bureaucracies of Federal, State, and Local government, many committees are established which sometimes fulfill the functions assigned to them, and sometimes do not fulfill

such functions. One possible reason for failure may rest with as simple a problem as the size of the group. There are certainly a number of relevant areas in which small group technology could be brought to bear on a host of everyday problems.

As already noted, most of the study of small groups, regardless of the type of small group, has been carried on by sociologists and social psychologists. Among the types of groups studied, in addition to laboratory groups, have been groups in industry and government, especially the military. During World War II, and after, segments of the military, especially the Air Force, saw the desirability of grouping at least some men on the basis of behavior rather than on the basis of some arbitrary rules. In seeking means by which such groups could be constructed social psychologists were called in. There is little reason why political scientists could not serve in an equally useful capacity, except for the problem of their ignorance of small group analysis. Especially where a small group might have relationships with the broader political structure, a political scientist could contribute by virtue of his specialized training.

One of the problems which relates to much of what has been said is that of small group "structure." By "structure" is meant the behavioral (or attitudinal) organization of a group rather than an organization imposed on a set of people in an arbitrary manner. A good bit of research has been devoted to the problem of group structure and its relation to attitude change and development. Related to group structure is the ability of groups to set goals, make decisions, and solve problems. James D. Thompson and William J. McEwen have noted that it is possible to view the "setting of goals . . . as a necessary and recurring problem facing any organization, whether it is governmental, military, business, educational, medical, religious, or other types." (Thompson and McEwen, 1958). These authors see goals-setting behavior as an interactional (group relevant) process. Decision-making and problem solving in groups have also received considerable attention.

Given some of the social problems faced in the United States today, small group analysis might well be applied in concrete organizational settings such as government committees, the military, and educational institutions. Political scientists rarely make use of the findings of such studies in applied situations--rather they let social psychologists or sociologists step beyond academe in the quest for social change. However, such programs of the Federal Government as embodied in OEO and in Model Cities are beginning to demand much more from political science than we have produced to date. The political scientist has at least two alternatives open: acquire the knowledge and skills necessary to deal with "real world" problems, or continue to allow sociologists and social psychologists to dominate in the fostering and engineering of social change. The latter alternative would be unfortunate, because most current social problems are either overtly or implicitly political in character.

The practical problem to be faced by political scientists is this: does the discipline have a role to play in fostering social and political change? If so, what theories, methods and techniques can be used for this purpose? Theories and methods associated with the study of small

groups appear to be closely related to many contemporary problems. Before political scientists can proceed with the task just stated, however, it will be necessary to acquaint them with the tools available.

The current state of small group research in political science may be one of under-development, but it is not one of inactivity. It has been established that several scholars are working with small group theory in various areas, independently and largely unknown to one another. The pressing need at this point is for communication and discussion. Basic problems of methodology (e.g., techniques of field study and the question of the relevance of laboratory research) need to be discussed. Theoretical points of view and research findings need to be compared, so that people with similar interests can benefit from one another's work. Some overall coordination and integration of research efforts might be a promising possibility. The seminar which we propose would be a modest but essential first step in the direction of attaining these goals.

Organization and Costs

The plan for the seminar was developed at a meeting of the following in Ann Arbor, in connection with the annual meeting of the ICPR in June, 1969: Professor Heinz Eulau, Stanford University; Professor S. Sidney Ulmer, University of Kentucky; Professor Charles Walcott, University of Minnesota; Professor C. Michael Lanphier, York University; and Professor Thomas Wm. Madron, Western Kentucky University. Messrs. Walcott, Lanphier and Madron prepared working papers during the summer of 1969 which served as bases for this proposal. From this point on, preparation of the seminar can proceed by mail. As Professor Eulau, the seminar leader, is also serving on the ICPR Executive Council, his frequent visits to Ann Arbor in connection with other ICPR business will facilitate coordination between the seminar leadership and ICPR staff.

Bibliography

Barber, James David, Power in Committees. Chicago, Rand McNally, 1966.

Berelson, Bernard and others, Voting. Chicago, University of Chicago Press, 1954.

Collins, Barry E. and Guetzkow, Harold, A Social Psychology of Group Processes for Decision-Making. New York, John Wiley & sons, 1964.

Eulau, Heinz, and Lupsha, Peter, "Decisional Structures and Coalition Formation in Small Legislative Bodies," in Elke Frank, ed., Lawmakers in a Changing World. Englewood Cliffs, N.J.: Prentice-Hall, 1966, pp. 150-86.

Eulau, Heinz, "The Informal Organization of Decisional Structures in Small Legislative Bodies," Midwest Journal of Political Science, Vol. 13 (August, 1969).

Fiellin, Alan, "The Functions of Informal Groups in Legislative Institutions," Journal of Politics, Vol. 24 (1962).

Golembiewski, Robert T., Behavior and Organization. Chicago, Rand McNally & Co., 1962.

Golembiewski, Robert T., The Small Group: An Analysis of Research Concepts and Operations. Chicago, University of Chicago Press, 1962.

Katz, Elihu, "The Two-Step Flow of Communications," Public Opinion Quarterly, Vol. 21 (1957).

Kelley, E.W., "Techniques of Studying Coalition Formation," Midwest Journal of Political Science, Vol. 12 (1968).

Leiserson, Michael, "Factions and Coalitions in One-Party Japan: An Interpretation Based on the Theory of Games," American Political Science Review, Vol. 62 (September, 1968).

Riker, William H., The Theory of Political Coalitions, New Haven, Yale University Press, 1962.

Strodtbeck, F.L., and Mann, R.D., "Sex Role Differentiation in Jury Deliberations," Sociometry, Vol. 19 (1956).

Strodtbeck, F.L., James, Rita M., & Hawkins, C., "Social Status in Jury Deliberations," American Sociological Review, Vol. 22 (1957).

Thibaut, John W. and Kelley, Harold H., The Social Psychology of Groups. New York, John Wiley & Sons, 1959.

Thompson, James D. and McEwen, William J., "Organizational Goals and Environment: Goal-setting as an interaction process," American Sociological Review, Vol. 23 (1958).

Verba, Sidney, Small Groups and Political Behavior, Princeton, Princeton University Press, 1961.

INTERIM REPORT ON CONFERENCE ON THE UTILIZATION OF SMALL GROUP RESEARCH IN THE STUDY OF SMALL "NATURAL-STATE" POLITICAL GROUPS, JULY 6-18, 1970

A Summer Seminar on Small Political Groups and Political Behavior was held in Ann Arbor, Michigan, July 6 to 18, 1970, under the auspices of the Inter-University Consortium for Political Research, with support of the National Science Foundation. The purpose of the seminar was to explore the future prospects and promises of research on small groups and small-group phenomena in political science. In attendance were Burton Atkins (South Dakota), James J. Best (Washington), David A. Caputo (Purdue), James W. Dyson (Florida State), Heinz Eulau, seminar leader (Stanford), Henry R. Glick (Florida State), Sheilah Koeppen (Minnesota), Alden Lind (North Carolina), Philip Lochner (Stanford), Thomas W. Madron (Western Kentucky), Lawrence Nitz (Hawaii), Frank P. Scioli, Jr. (Drew), Suzanne Sebert (Minnesota), Joseph Uveges (Western Kentucky), Joel Verner (Illinois State), and Charles Walcott, associate seminar leader (Minnesota).

During the first week of the seminar, the following papers were presented and discussed:

"Decision-making in State Supreme Courts: The Judiciary as a Small Group" (Glick)

"Municipal Budgeting as a Group Process in Four New England Cities" (Caputo)

"An Experimental Investigation of Political Conformity" (Scioli)

"Rational Strategies under Conditions of Non-Transferable Utilities" (Nitz)

"Experimental Findings and their Application to the Study of Legislative Groups" (Dyson)

"An Interaction Process Analysis of Participation in the Guatemalan National Congress" (Verner)

"The Use of Observational Media in Small Group Research" (Best)

"An Interaction Model of Decisional Structures in California City Councils" (Eulau)

"Alternative Approaches to Studying Small Group Processes in International Politics: The Case of Arms Control Negotiation" (Walcott)

"The Role of Perceptual Convergence in Minimizing Interpersonal Conflict" (Lind)

During the second week the seminar broke up into five task groups for the purpose of (a) developing general statements concerning the possibilities and problems of small group research in political science, and (b) designing four research projects that would serve to illustrate these possibilities and problems. The seminar reassembled in the last two days in order to discuss and criticize the first drafts of the proposed research designs. It is hoped that the work of the seminar can be published in the near future.

III. DATA REPOSITORY

POLICY STATEMENT AND DISCUSSION OF PLANS FOR THE ICPR DATA REPOSITORY

One explanation for the belated interest in rigorously empirical investigations of political phenomena rests on the paucity of relevant data available for political research. The economists and sociologists have been the beneficiaries of an immense range of data collected for other purposes. Political science and history, among the social sciences, have been willing to remain bound to sources of evidence more appropriate to legal, literary, or philosophic traditions than to a concern with scientific investigation. Even those aspects of the public record which offer rich prospects for systematic analysis--legislative and judicial records, census and election statistics--have been inadequately exploited to those ends. Indeed, it is only within the last decade that professional effort has been exerted to prevent such basic information as presidential election returns from becoming fugitive materials lost to the study of electoral behavior.

The will to engage in behavioral research has been seriously handicapped by the magnitude of the task of data collection. The scholar who is interested in understanding or explaining a theoretically significant or politically important phenomenon is often, almost by definition, faced with the task of collecting data from an immense if not infinitely large universe of persons or events. Without the modern techniques of data collection, processing and manipulation, comprehensive and rigorous investigation has often been impossible. But with the advent of the methods and techniques currently used by psychology, sociology and economics, a number of impressive data collections pertinent to political research have been mounted and successfully completed.

One of the major functions of the Consortium is to establish, maintain and service a unique data repository. Within the nominal limits established to give priority to the ongoing work of Consortium participants, data and data-processing services will be available, as a matter of policy, to all scholars whether or not their institutions are members of the Consortium. Administrative and staff arrangements will, of course, favor the scholar whose school maintains a continuing affiliation with the Consortium. For either event, the successful administration of the repository will do much to minimize present inequities in access to data and to remove impediments which have served to limit the real utility of data resources heretofore available to scholars.

Moreover, the value of such a repository will be greatly enhanced by its association with the research and training activities of the Consortium. Inadequate as past data resources have been, they have been under-used. Their potential contribution to political research has not been realized because too few interested scholars have possessed the skills necessary to their exploitation. Through the Consortium, research scholarship and relevant data are brought together.

The presence of a professional staff, such as that supported by the Consortium, is vitally necessary to the successful operation of a data repository of the kind contemplated by the Consortium. Given the current state of research methodology in the social sciences, each important data collection is more or less unique in respects that have crucially important consequences for the subsequent use of data. Intimate familiarity with a study, acquired only through repeated experiences with the processing of data from the study, is absolutely essential in many instances if gross errors in data processing and interpretation are to be avoided. In some utopian future, social science data may be produced by procedures commonly understood or shared by a real community of research scholars. The processing of these data may then be routinized for handling by a bureaucracy of administrators and relatively unskilled personnel. In the unavoidable present, secondary analysis of data must rest on highly specialized judgment in the preparation of data ("cleaning" of data, codebooks, and other documentation; standardization of coding categories; consistency checking; error detection and correction; etc.) for widespread distribution if discontinuities between research procedures and research objectives are to be avoided.

The scope of the repository will be determined primarily by the active research interests of its users. Until recently this had been accomplished through periodic surveys of the membership of their data needs, informal communications with senior research scholars, formal proposals such as that which led to the development of the Historical Archive and the Data Acquisition Subcommittee of the Council. However, the establishment of an International Relations Archive and the impending arrival of several large foreign data sets which along with the Data Confrontation Seminar material constituted an excellent foundation for a comparative political data archive, made it abundantly clear that a more differentiated set of selection criteria (and professional advice beyond the competencies of the Council Subcommittee on Data Acquisitions) was necessary to rationalize the acquisition of new data. A Council discussion led to a proposal which replaced the Data Acquisitions Subcommittee with the following advisory groups organized, neither exhaustively nor mutually exclusively, around these five themes:

1. Comparative Political data
2. Historical data
3. International Relations/International Organizations data
4. American data
5. Organizational data

Each group is chaired by a Council member with competence in the relevant area and made up of leading research scholars in each domain.[1] The

---

[1] A complete list of the members of these committees can be found on page 110 of this document.

groups are of varying size and are charged with several key functions: the setting of priorities for the acquisition and processing of additional data sets in their domain; locating data sets being generated by ongoing research which are appropriate for inclusion in the respective archives; encouraging standardization of preliminary processing and documentation through personal and professional contacts; and, finally, advising the Consortium technical staff on needed software development in each domain so as to make the data more readily usable in their final archived format. These changes should help assure that the data sets which are selected for inclusion in the Archives come from among those studies which command widest interest among Consortium participants and which reflect the best in contemporary research procedures.

Consortium resources will not be expended in the acquisition and processing of data possessing only an unspecifiable potential for use, nor will they be used in collecting data of inferior quality. The ultimate state of the Consortium archives may well find a very large body of materials pertaining to an extended range of research interests. Nevertheless, the data will represent only some fraction of those potentially available because the function of the Consortium repository is less that of establishing a general data library and more that of providing an efficient, discriminating facilitation of specific research and research plans of participating research scholars.

Another unique feature of the Consortium data repository pertains to the financial and administrative arrangements affecting access to the data. Part of the rationale behind the members' financial support of the Consortium is provided by the conviction that capitalization through various forms of institutional support is necessary to reduce marginal costs of access to research facilities. The charges for data services, for example, must be at a level commensurate with the limited funds available to advanced graduate students and members of the teaching faculty. Through creation of a permanent staff and provision of a budgetary allotment for data processing, the Consortium is able to provide data and services to participants with no cost to the individual. The same assistance is available to non-members for the basic marginal costs incurred.

On the administrative side, the Consortium staff and the data-processing facilities of the Institute for Social Research and the Computing Center of the University of Michigan provide services of several kinds and levels of complexity. Where the participant has adequate facilities available on the home campus, he may simply request copies of any and all survey data for deposit in his own storage facilities. To meet other needs, the staff will construct special data summaries (analysis cards) or may carry out requested data processing--including simple tabulations or compilations as well as high-speed computer analysis. There is sufficient flexibility to adapt staff services to any reasonable level of demand, from provision of data cards or tapes to extended consultation on research design.

The development and maintenance of the data repository is supplemented by various efforts to improve Consortium participants' access to other data collections. Descriptions of data collections held by individuals as well as institutions, both within and outside the Consortium, will be provided to participants. Limited data collection, of no more than occasional relevance to the dominant research interests of the participants, will thus nevertheless remain visible to the possible users. Moreover, a decision not to give the Consortium administrative control over a data collection need not remove that collection from the resources available to participants. Indeed, wherever the person or agency responsible for a collection of data has the facilities for its administration and is willing to provide access to outside scholars, the Consortium has no desire to duplicate these services and is quite willing to do no more than publicize their existence. In this spirit the Consortium is committed to supporting such efforts as the International Social Science Council and the European Consortium for Political Research in developing international cooperation among archives.

Finally, in anticipation of demands which may be felt in the near future, the Consortium is vitally interested in the development of data-processing and retrieval systems adapted to the constituency-oriented needs of the Consortium data repository.

The Strategy and Tactics of Repository Expansion.--An outline for one strategy of data collection has been suggested by our experiences in defining the county election data collection described in the 1964 proposal to the National Science Foundation and by the procedures which led to the recovery of an extended set of legislative materials -- namely all the Congressional Roll Call records for the period 1787 through 1969. The basic principle defining the concerns of the Consortium repository has been applied in both instances: the scholars who are doing the research and using the data should establish the priorities for data collection. At some point the intellectual utilities must be balanced against the costs in expenditures of scarce and limited resources. But we assume the calculus of decision should be one in which the users establish the alternatives.

As an illustration, it may be useful to review the means by which we brought about the recovery of a major collection of legislative materials. The strategy of collection--establishing data specifications and priorities for recovery--was laid in a series of meetings of twenty or thirty leading research scholars. The first meeting was a conference held in April 1964. The conference was sponsored by the Consortium and financed by a grant from the Social Science Research Council. The objectives for this meeting were three: (1) identify major research objectives, (2) specify data needs for objectives, and (3) define the technical and methodological problems associated with use of the data. The same objectives were pursued in a second conference in late spring 1964--under the assumption that consensus beyond easy agreement on major data needs would not be easy to achieve.

With these preliminary conferences as preparation, the major effort was made in the course of a two-week seminar held as a part of the 1964 Consortium summer program of training in research. All told, those giving intellectual leadership to the systematic study of legislative behavior considered the problems of research strategy and tactics for a period of six or seven months. Their considerations were given point by the nature of the ultimate objective: the collection and processing of data presently not accessible to the research community; activities now funded and in process. Comparable efforts are needed in other domains. Although this planning activity can be supported with a minor part of the financial resources of the Consortium, it is of crucial importance to the Consortium's concept of repository development. The ideal of generalized data collections is certainly worthy of support and should remain the ultimate objective of the effort to improve the research facilities available to social scientists. At present, however, the resources to realize this aspiration do not seem to exist. Questions of organizational format and technical capacities aside, there are current research demands to be met and future demands to be anticipated. We have concluded that both immediate and long-run interests can be well served by an attempt to tailor archival growth to the active and emerging needs for data. This seems to offer the best prospect for maximum response to present deficiencies in our research establishment as well as for maximum return on the investment of resources.

In a different form of repository expansion effort to provide for other data needs, the ICPR financed another series of meetings which ultimately led to National Science Foundation support for the establishment of the Council on Social Science Data Archives. The Council on Social Science Data Archives provided important communication channels and other facilities for useful cooperation with the Roper Public Opinion Research Center, the International Data Service and Reference Library at Berkeley, and other academically based archives within the United States. We are also engaged in cooperative efforts to make data of the United States Government and transportation and regional studies more readily accessible to interested members.

In addition, we are cognizant of the importance of data produced outside the United States. Consequently, we have established or are developing working relations with the Zentralarchiv, University of Cologne; the Steinmetz Stichtung, Amsterdam; DATUM, Bad-Godesberg, Germany, and other archives, research groups, and scholarly organizations abroad. The most recent development in this regard is the European Consortium for Political Research, which is currently in the founding period. Cooperation and assistance with this highly promising organization will be maintained with a view toward maximizing cross-national cooperation in data generation, exchange of technological development, and sharing of research capacities.

PROPOSAL TO THE NATIONAL ENDOWMENT FOR THE HUMANITIES TO SUPPORT AUTOMATION OF STATISTICAL SOURCES OF FRENCH HISTORY: THE STATISTIQUE GENERALE DE LA FRANCE, 1850-1890

This is a proposal to convert major but selected portions of the Statistique Generale de la France to machine-readable form for general use by the international community of scholars. The project is sponsored by two French and two American groups of scholars and has been encouraged and supported by numerous individual students of French history and society in the United States and France. The sponsoring groups are the Fourth and Sixth Sections of the Ecole Pratique des Hautes Etudes and the Conseil National de la Recherche Scientifique in France; and the Center for Western European Studies at The University of Michigan and the Inter-university Consortium for Political Research (ICPR) with headquarters in Ann Arbor. The French and American groups include scholars from several disciplines, among them many experts in various aspects of French history, some of whom have considerable experience in the use of quantitative approaches. The ICPR adds not only the essential technical expertise but also long experience in the recovery, processing and dissemination of political, demographic and social data. A cooperative organization, the ICPR includes as members some 135 colleges and universities in the United States and other nations, and it has for years organized cooperation among many institutions and designed projects in which complex data are made available to an extermely wide range of scholars for research and instructional purposes.

Recognizing the usefulness of the Statistique. The Statistique Generale is a printed collection, most of which is available in major research libraries, that has long been used as a basic reference by all students of modern French society. Yet historians have recognized for some time that this rich collection could tell us more if it could be more effectively exploited. When the Society for French Historical Studies met at The University of Michigan in 1966, several papers pointed out the need both to apply quantitative methodologies to established problems of French history and to establish more sophisticated measures of social conditions and social change. These conclusions were supported at a conference held during the following year at the ICPR under the sponsorship of the American Historical Association and supported by the National Endowment for the Humanities. The experts in European history assembled at that conference (a score of historians from the United States and several European countries) emphasized the need for better statistical data not only for economic but also for social and cultural history, and they agreed that there was no richer or more useful collection of such data than the Statistique Generale de la France. At the same time, these scholars made it clear that the potential value of this collection could be realized only through the use of the computer and related electronic data processing equipment.

Since these meetings, the work of many historians, including some of the sponsors of this proposal, have further confirmed these views. Professors Le Roy Ladurie and Francois Furet of the Ecole Pratique have

been analyzing the registers of military recruitment in France and have found that these records give important insights into regional variations in literacy, diet, health, and occupation in the eighteenth and nineteenth centuries. Professor Charles Tilly of The University of Michigan has found through quantitative analysis that the incidence of collective violence in France provides a significant measure of social organization and of ideological change and division. Both of these projects demonstrate the wide range of historical understanding that can emerge from the careful analysis of good data for a lengthy period of history. Yet these projects, like many others, could have been much better executed if the Statistique Generale had been available in machine-readable form. These experiences make it clear, moreover, that conversion of sufficiently large bodies of the Statistique Generale to machine-readable form requires a level of technical expertise and financial support beyond that available to even the most fortunate individual scholars.

Nor does this proposal meet the needs of only a few. Already seventeen scholars from all parts of the United States have written of their support. This seems, then, exactly the right moment to launch the project: the wide interest guarantees that the resulting data files will be used in many and varied ways; and the talents, experience and facilities necessary to carry out the project effectively have been brought together. Even so, this remains a pioneering venture, likely to have considerable influence upon European Studies in general.

The information contained in the Statistique Generale. The systematic and centralized collection of statistics, reorganized by Napoleon, was formally centered in a special bureau in 1833, which in 1840 was named Le Bureaux de la Statistique Generale. Information was collected by local officials following the instructions of the central bureau and the national government. For publication, data were most commonly aggregated to the Departmental level. Two important points follow from these procedures. Because these statistics were collected officially and on instruction, it is possible to discover in the national and the various local archives a good deal of information about the ways in which they were collected and about the meaning of the different categories and definitions employed. It is therefore possible to determine the precise meaning of the published data and to compensate for variations over time in the modes of data collection and in the forms of publication. Second, the raw data on which the published aggregate figures rest can in some instances still be recovered, offering unusual opportunities to interpret and assess the quality of the published statistics.

From the appearance of the first volume in 1835 to the present, more than 150 volumes of the Statistique Generale have been published in several series. Many of the earlier volumes contain retrospective statistics for major categories back to 1800. Thus the collection provides basic data for the entire period from 1800 to the present. Although the content and scope of the Statistique Generale varies somewhat from period to period, the collection can be thought of as divided into three sets. One set (The Movement de la Population) includes vital statistics--births, deaths, marriages, incidences of diseases, etc.--on an annual basis from 1800 to the present, aggregated to the departmental level with supplementary data

for arrondissements and major cities. Cantonal and communal figures, where still extant, remain unpublished. A second set consists of quinquennial censuses (denombrements) which begin in 1841 and were published with rare exceptions every five years to 1936, although similar and usable figures are also available for 1801, 1806, 1826, 1831, 1936. Since 1946 full-fledged censuses have been taken every eight years. The censuses go beyond vital statistics to include much in the way of social and economic data which are supplemented in turn by more than a score of special "Enquetes" conducted at various times. The Enquetes comprise the third set of data and include statistics on landholding and agricultural production; industrial activity including size of industry and value of product; number and size of financial institutions; prices and rates of consumption; workers' organizations and working conditions; number of court cases and of persons tried for various types of crime; number, size, and costs of insane asylums, hospitals, welfare institutions, and prisons; pupils in public and private schools and expenditures for education. Although published less regularly than the other two sets, the Enquetes are all available for extended periods of time and provide data at the departmental level with some additional information for arrondissements and major cities. These materials can also be supplemented by important statistics from the various ministries (notably agriculture, commerce, post and telegraph, finances, war, etc.) and by election returns, roll-call votes in the Chamber of Deputies and the Senate, and by special studies on patterns of religious practice.

The Problems of Selection. It is obvious that truly major scholarly benefits would result if virtually all of these data were available in readily usable machine-readable form for use by historians and other scholars, and indeed, our eventual goal is the automation of at least the entire Statistique Generale. The availability of this source in machine-readable form would stimulate and facilitate a wide variety of investigations. The interaction, for example, between governmental actions and regional variety could be explored as never before. The relationship among population movement, economic change, social behavior, illiteracy and education, and voting behavior (which clearly lies at the heart of all studies of the process called modernization) could at last be systematically and precisely assessed. Such studies will undoubtedly add to and alter our understanding of the economic, cultural, and social development of France.

At the same time, it is equally obvious that so gigantic an undertaking cannot begin all at once. In close consultation with French and American colleagues during a number of meetings in Ann Arbor in the Fall of 1969 and at a special conference in Paris in May 1970, we have determined upon the segment of these data with which we should begin. In making this selection we chose certain categories of data covering a limited period of time according to six important criteria.

First, it was necessary to define a fully feasible project that could be accomplished at a high level of accuracy, in a limited amount of time (no more than eighteen months), and with relatively limited financial resources. These considerations argued for beginning with 1850 when the data came to be collected with higher standards of accuracy and in

categories that have remained recognizable and comparable ever since. Under Louis Napoleon, 1850-70, the Statistical Bureau was also extremely ambitious both as to the accuracy of its data and the wide range of statistics it sought to collect. The codes developed to handle this material will therefore be appropriate for extension to earlier and later periods. By setting the 1880's as the terminal date, we further assured the feasibility of this project.

Second, the project should in itself serve as a test of the kinds of investigations and findings that might follow from putting all of the French statistics into machine-readable form. We therefore decided to include for this period the annual "movement de la population," the "denombrement," and one set of statistics from the many special categories and Enquetes. Thus the automated data files produced by the project will include the several types of data contained in the Statistique Generale. Selection of data from several sources, moreover, will allow systematic comparisons which will aid in the assessment of the accuracy and quality of the original sources.

Third, beyond this sort of internal check, the project as defined will allow other important tests of the quality of the data. The resources of various departmental archives are extensive for this period and the procedures employed in collecting these data are relatively well known. The project includes comparison of published statistics with unpublished cantonal data from which the published data were originally compiled. Three departments have been selected for this purpose: Seine-et-Oise, Sarthe, and Creuse. These departments have been selected because they represent sharp contrasts (and therefore a useful sample) in terms of demographic, economic and cultural development, and because their archives are known to be especially rich for this period. Although the cantonal data for even these departments are fragmentary, they are extensive and complete enough to provide an indication of the quality, accuracy and completeness of the published data. It should be noted that the comparison of cantonal data with the published sources will be carried out primarily by French scholars with French financial support.

Fourth, these data for this period should be important to a wide range of scholarship. The period is a critical one in French development and the data important to social, political, literary and economic historians as well as sociologists and political scientists. The demographic materials are essential for regional comparisons and for studies of urbanization or, indeed, for investigation of any of the changes associated with modernization. The educational statistics have broader interest. During this period no issue cut more deeply into French life than the problems of education. Every literary review, every political debate was concerned with the question of what curriculum was appropriate for "progress" and democratization, for specific occupations, for various social classes, for urban and rural life, and for the preservation of French culture. The bitter conflicts between the Church and anti-clericals which did so much to shape French politics centered on the role of Church and State in universal education.

Fifth, the project as defined should supplement other research projects of long standing, thereby having an impact beyond its own immediate content. The data included here will clearly prove central for most studies of French politics and culture in the nineteenth century; they will add importantly to the demographic studies now so numerous in both France and the United States; and they will offer many possibilities for comparison with the development of education in other countries, a topic increasingly being studied. Specifically, we have identified a number of demographic, social, and political studies that will make immediate use of these findings.

Sixth, the project should be self-contained, useful and important in its own right even if the larger undertaking it foresees is never accomplished. The period chosen serves as a guarantee that this will be so. The period from 1850 to 1890 is the one in which France was transformed into a modern industrial democracy. It cuts across the Commune to include the Second Empire (a period of dramatic industrialization, urbanization, and expansion of governmental activity) and the establishment of the Third Republic. This was also the period in which France came to adopt universal, secular education, a period that adopted social mobility as a democratic principle and that extended education not only throughout the country but to women as well. Finally, it was not only a period of rapid change in which all these questions were being discussed, but it was a period of extraordinary creativity in literature, science, and the arts.

The Plan of the Project

The actual work of converting project data to machine-readable form will be carried out at The University of Michigan employing the staff and the computational facilities of the ICPR. Data will be converted to machine-readable form and stored on magnetic tape and other appropriate media in a manner that replicates the original printed form. Full source references and annotations describing idiosyncracies and shortcomings of the data will be recorded in machine-readable form along with the actual data itself. In supplying these materials to users source references and other ancillary information will also be provided as a matter of routine. All data will be both keypunched and verified, and a variety of mechanically aided error tests will be carried out to gauge the fidelity of the recorded data to the original sources and to assess the accuracy and internal consistency of the original sources themselves.

The computer programs necessary to carry out this work are operational at the ICPR. Thus programming costs will be held to a minimum. The ICPR computer program system was largely developed and tested in carrying out the work of converting historical election returns, census materials and congressional roll call records for the United States to machine-readable form for analysis, retrieval and dissemination to the research community. This system not only includes the capabilities necessary for the basic data processing described above but also the additional capabilities required to accomplish project goals. The system, which permits the correction of data files and the addition of new materials to existing files, includes capabilities for subsetting and conversion

of automated files to a variety of technical forms in order to attain compatibility with other computational systems. Copies of the automated data will be stored at the Maison de l'Homme in Paris and at the ICPR, and possibly elsewhere, for dissemination to investigators.

While the data processing work will be carried out by the staff of the ICPR, guidance and assistance in this work will be provided by members of the staffs of the Ecole Pratique and the Center for Western European Studies. All major decisions will be made by both the French and American scholars involved, and the advice and guidance of experts at The University of Michigan and elsewhere will be sought and relied upon when necessary. The French will also send younger scholars to the United States to assist the ICPR staff in the work of data processing. These scholars will bring to the project vital familiarity with original source materials. On the other hand, by working with the ICPR staff they will gain technical expertise and familiarity with the data in their automated form. In this way it will be assured that the automated data files produced by the project will be fully usable in France. In these latter terms, moreover, the project will have an important training function.

Data processing work will be carried out in collaboration with a closely related project to be conducted in France with French financial support. Teams, primarily of French scholars, will conduct limited but systematic comparisons of the published data with original unpublished materials preserved in local archives. As indicated elsewhere, this work will contribute to assessing the quality of the published data and will lead to the preparation of guides for using the automated collection. These guides will provide information as to the manner in which data were originally collected, the meaning of the definitions and classification categories employed, discontinuities and changes in the boundaries of the geographical units for which data are recorded, and, in general, indicate the errors and shortcomings known to be characteristic of the data.

A series of limited but significant substantive investigations are also part of the general project and will result in the publication of several articles jointly authored by the French and American participants. These will concern aspects of the developing patterns of French education and its relation to regional factors of economic and demographic change. Some of the major implications of these findings for French history and for the comparative study of education will be explored. In addition to their substantive value, these investigations will be intended to demonstrate the value of the data collection for the study of French history, and for comparative studies more generally; to further identify technical problems involved in the use of the data collection; and to serve as further tests of the quality of the data.

A time period of twenty months has been allocated to the project. It is anticipated, however, that the bulk of the work can be completed well short of that time period. Virtually all of the original keypunching and verification of the data will be completed during the first twelve months of the project period, and proofing, error checking, and correction procedures will be begun. During the following six months the latter procedures will be completed, a copy of the machine-readable data with

complete documentation will be transported to France, and the entire data collection, amounting to the equivalent of approximately 600,000 IBM cards, will be made available for general scholarly use. In the course of the same six month period, analysis related to the substantive investigations will be carried out. During the final two months, the principal investigators working with their French collaborators will complete the preparation of the substantive articles and of the guides to the use of the data.

The Personnel

Vitae for the principal investigators are appended to this proposal. Mr. Grew brings to the project substantive knowledge of French history and society, and of European and comparative studies more generally, and extensive experience in working with the sources of modern European history. Mr. Clubb, also a historian, brings technical expertise and experience in the conversion of historical materials to machine-readable form gained through his work in collecting, processing and disseminating major collections of American historical data. The major French collaborators in the project, Professors Le Roy Ladurie and Francois Furet, are both historians of France of considerable stature whose work has involved the application of computers to historical studies.

The project will benefit from the experience of the staff of the ICPR. Erik Austin and Michael Traugott, respectively advanced graduate students in history and political science at The University of Michigan, will carry out much of the actual work of organizing and preparing the raw data for keypunching, of preparing documentation, and of executing mechanically aided error checks and correction procedures. Over the past several years these young scholars have participated in the work of the ICPR in converting historical materials to machine-readable form and of disseminating these materials to scholars for research and instructional purposes.

Keypunching and verification will be carried out by the ICPR keypunch staff which has extensive experience in working with historical materials and in coping with the peculiarities and difficulties which these materials present. M. Guy Chaussinand, a young historian and a member of the Centre de Recherches Historiques of the Ecole Pratique, will join the ICPR staff during the course of the project and will assist in the work of organizing documenting and processing project data. In so doing M. Chaussinand will not only contribute vitally to the project but will also gain technical skill which will contribute importantly to subsequent management, dissemination and scholarly use of the data in France. Similarly, a programmer from the staff of the Ecole Pratique will also join the ICPR staff during the project and will subsequently play a significant part in the computational work of the Maison de l'Homme which will be, at least initially, the repository in France for the automated data. By assisting in project work and in the necessary work of maintaining the ICPR program system, this individual will gain skills and experience which provide further assurance that project data will be fully usable in France.

The parallel project involving comparison of the published data with unpublished sources and the preparation of documentation and guides to the use of the automated data will be carried out in France under the immediate supervision of Professors Ladurie and Furet. This project will draw upon the staff of the Centre de Recherches Historiques. In this work, Professor Jacques Dupaquier of the Sixth Section of the Ecole Pratique, who is well known for his work in French demographic history and for his extensive knowledge of the Statistique Generale and other statistical sources of French history, will play a major role. It is also expected that several junior American historians, graduate students in all likelihood, will have the valuable experience of participation in this work done in France. It should be noted, however, that this project will be supported entirely by French financial resources.

PROPOSAL TO THE OFFICE OF NAVAL RESEARCH
GROUP PSYCHOLOGY PROGRAM FOR RENEWAL OF SUPPORT FOR
THE DEVELOPMENT OF AN INTERNATIONAL RELATIONS ARCHIVE

Status Report

The International Relations Archive is a major service of the Inter-university Consortium for Political Research (ICPR). Renewal of the current contract will ensure that materials of crucial importance for quantitative work in international relations are added to those produced by this year's effort. The following pages make some distinction between tasks underway with the present funding and those projected for the renewal. The overall goals and methods of meeting them, however, remain the same throughout the entire project. To ensure that all of its archival work is of maximum relevance to the most pressing research needs, the Consortium established a number of professional advisory committees. One of these, the International Relations Archive Advisory Committee, is important as a continuing source of guidance on priorities for the International Relations Archive.

The International Relations Archive drew upon the existing Consortium archival and administrative staffs for all supervisory, consultative and administrative personnel. Fractions of time come from six individuals originally based in either the Historical Research Archive or the Survey Research Archive of the Consortium. These individuals handle administration and supervision of archive operations, plus recruitment and training of new staff members for the International Relations Archive. Fractions of two other individuals' time are utilized for the servicing functions involved in dissemination of the existing data in the archive. Two staff members come from the Consortium's programming staff. In addition, five core staff individuals are being trained to process international relations data. Overall, there is a full-time equivalent of more than ten staff members working in the International Relations Archive.

During the April, 1969 meeting of the Consortium's Council, archival advisory committees were created in the following areas: American, comparative, historical, international relations and organizational data. A member of the Council chairs each committee and the participants of the committees come from among the leading scholars in each substantive speciality. Here are four major tasks of the committees:

1. Advising the Council and staff as to priorities for acquisition and processing of all relevant data held by archives or individual researchers. Both data acquisition and developmental work in documentation, reformatting and processing are shaped by the committees' professional and technical advice.

2. Locating data sets that are generated by ongoing research projects that provide multiple utility and therefore are appropriate for inclusion in the Consortium archive.

3. Promoting standardization of processing and documentation through professional contact with scholars generating new data such that a data collection organized for the original research purposes is also well on its way to proper organization for Consortium archival management.

4. Assessing the availability of software for the management and manipulation of data in its domain. This assumes that the Consortium software developments are related to the researcher's definitions of ways in which he would like to utilize the data.

The members of the International Relations Archive Advisory Committee are: Professors James Rosenau, Chairman (Rutgers University), Phillip Burgess (Ohio State University), Ernst Haas (University of California at Berkeley), Charles Hermann (Princeton University), Ole Hosti (University of British Columbia), Charles McClelland (University of Southern California), Mancur Olson (University of Maryland), Rudolph Remmel (University of Hawaii), and Paul Smoker (University of Lancaster). This group meets to review the activities of the archival staff at regular intervals and helps to plan future work.

The International Relations Archive Advisory Committee met for the first time in conjunction with the American Political Science Association meetings in New York on September 4, 1969. The Committee discussed data acquisitions and priorities. Studies considered by the Committee are from a list of suggestions generated by some of the official representatives of the Consortium and from a list of international relations studies already in the Consortium archives. The Committee recommended data from six studies for processing and acquisition: United Nations Roll Calls from 1946 through 1969; University of Hawaii, Dimensionality of Nations; University of Southern California, World Event Interaction Survey: The University of Michigan, Correlates of War and Cross-National Historical Data; the San Diego State Cross-National Data Bank of Political Instability Events. All of the recommended data sets are in the archive and are being processed, with the exception of the Cross-National Historical Data, which will be received during 1970.

Having selected several data collections to be added to the archive, the Advisory Committee then had to consider what degree of further processing of these data would be appropriate. The Consortium has three broad classifications for data in the archives:

1. Unprocessed data - The documentation received from the original data collector has not been checked for completeness or organization. The data have not been checked for wild codes, inconsistencies, technical problems or standardization of coding. The data are distributed in their original form.

2. Preprocessed data (intermediate data sets) - Non-numeric codings have been recoded to numeric values. Wild codes have been documented in the codebook. The codebook is produced, based on the original documentation, and placed in machine-readable form. Consistency checks of the data have not been done.

3. Fully processed data - The coding of the data meets Consortium standards, wild code and consistency checks have been done, and corrections made on the data. The documentation is further refined if necessary.

The standards of the Consortium for fully processed data have been high. It remains very desirable to meet these standards. Experience shows, however, that the associated time delays and costs of this effort can be quite significant. With this in mind, the Advisory Committee decided that the six studies noted above should be preprocessed rather than fully processed to facilitate getting international relations data to the community of scholars as quickly as possible. Since three of the selected studies are already in the Consortium archives in unprocessed form, the selections made allowed immediate allocation of these studies to the archive processing staff.

A meeting of the International Relations Archive Advisory Committee was held on January 31, 1970. Members of the Committee developed lists of suggestions on data, as well as related computer programs used by the individual researchers for analyses. From the members' suggestions and the potential data sets listed later in the section on archival development, will come additional data sets for acquisition and processing. Perhaps five of these studies should be preprocessed by July 1, 1970.

In November, 1969, the archive and programming staffs completed an intensive review of software needs. Discussions with several research groups were included: the Inter-university Comparative Foreign Policy group based at Rutgers, the World Event Interaction Survey effort at The University of Southern California, the Correlates of War and the Comparative International Processes projects at The University of Michigan. Desirable analysis capabilities and processing needs for archival work have been developed as a result. Existing capabilities seem basically adequate in the data cleaning, documentation and management area, requiring only a moderate number of modifications. The analysis software, however, needs more extensive work and expansion.

Renewal Plans

The primary plans for continued archival development center around additional data acquisitions. At present, the archival staff and the Advisory Committee are considering additional data sets concerning national attributes and indicators over time, such as the Yale University World Handbook of Political and Social Indicators II, the State University of New York's Political Data Archive Project and the Minnesota Political Data Archive. The International Relations Archive also is considering the following possibilities for acquisition: Northwestern University inter-societal data; Columbia University data on indicators of European integration; Harvard University data on North Atlantic trade; MIT data on arms transfers from great powers to less developed countries and on limited wars since World War II; Michigan State University event data on the Middle East; Stanford University data

on national attributes and interactions of major powers; University of Washington data on international treaties; Yale University perceptual and event data on the Vietnam war; Bendix Corporation data on Sino-Soviet perceptions and behavior; and simulation outputs from Northwestern University, Ohio State University and Princeton University.

A second set of data for possible acquisition is a subset of the several hundred surveys conducted by the United States Information Agency. The archival staff is listing these data sets, cross-referenced by time, nations, and scope of substantive interest. A ranking of the data by the Advisory Committee will indicate when the International Relations Archive might begin processing this body of data. There is also the possibility that the International Relations Archive may generate data on a continuing basis in order to preserve and increase the value of certain data sets already in the Archive. Among such projects might be the continued updating of the World Handbook of Political and Social Indicators if Yale University does not continue with this project. In addition, the International Relations Archive may expand the World Event Interaction Survey with data prior to 1966.

Much of the renewal work in computer programming involves extending the capabilities of the Consortium softward system. Data display and plotting capabilities will require a significant amount of additional work. Time series analysis programs also are an important concern. Programs to manipulate data through lagging of variables and transpositions of entire files and high on the priority list. Current explorations of the possibilities of converting existing programs to fit the Consortium software system will probably produce a considerable list of tasks. Finally, some programming will continue in the area of archival processing software.

SERVICING REPORT, HISTORICAL ARCHIVE

July 1, 1969-June 30, 1970

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Alabama, Huntsville	Roll Call (1)	10,471
University of Alabama, University	Election (2)	35,514
University of Bergen	DCS (2)	19,720
Brookings Institution*	Roll Call (1)	9,981
University of California, Berkeley	Election (3)	99,314
University of California, Davis	Election (1)	***
University of California, Los Angeles	Ecological (1)	155,398
University of California, Santa Barbara	Roll Call (2)	21,211
California State College, Long Beach	Ecological (1)	53,907
Catholic University of America*	Election (1)	***
Center for Political Research**	Roll Call (2)	21,353
University of Chicago*	Ecological (2) Roll Call (1)	573,388
Colorado College*	Election (1)	***
Columbia University	Election (2) Roll Call (1)	60,327
University of Connecticut	Ecological (3) Election (2)	561,041
Cornell University	Election (2)	30,291
Dartmouth College	Roll Call (1)	2,376
Dataventure**	Roll Call (1)	16,655

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Democratic National Committee**	Roll Call (1)	2,000
Denison University	Election (1)	2,369
Duke University	Election (1) Roll Call (3)	42,161
Edinboro College*	Election (1)	2,339
University of Florida	Ecological (1) Election (1) Roll Call (2)	138,760
Florida Atlantic University	Election (1)	75,125
Florida State University	Roll Call (1)	12,912
University of Georgia, Athens	Ecological (1)	14,160
Harvard University	Ecological (1) Election (1)	70,762
Hunter College of City University of New York	Ecological (1) Election (2)	309,533
Indiana University	Ecological (2) Election (1) Roll Call (2)	172,589
University of Iowa	Ecological (2) Roll Call (5)	551,907
Johns Hopkins University	Ecological (1)	17,075
Kansas State University	Ecological (4) Election (1) Roll Call (3)	504,530
University of Kentucky	Election (2) Roll Call (1)	144,192
Louisiana State University	Roll Call (2)	12,121
Loyola University	Ecological (1) Election (1)	90,082

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Massachusetts	DCS (2)	1,489
University of Michigan	DCS (3) Ecological (4) Election (5) Roll Call (6)	172,472
Michigan State University	Ecological (2) Election (1) Roll Call (1)	99,615
University of Minnesota	Ecological (3) Election (5) Roll Call (1)	111,191
University of Missouri, Columbia	Election (2) Roll Call (2)	22,840
University of New Hampshire	Election (1)	***
State University of New York, Binghamton	Ecological (3) Roll Call (3)	130,575
State University of New York, Buffalo	Ecological (1) Election (3)	127,687
University of North Carolina	Election (1) Roll Call (3)	25,905
Northern Illinois University	Ecological (2) Election (1) Roll Call (1)	19,564
Northwestern University	Ecological (1) Election (1)	13,362
Ohio State University	DCS (1)	267,915
University of Oklahoma	Election (1)	1,046
Oklahoma State University	Election (1) Roll Call (4)	28,008
University of Oslo*	DCS (1)	239,320
University of Pennsylvania	Election (1) Warner Data (1)	2,049

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Pittsburgh	Election (1)	8,983
Princeton University	Election (3) Roll Call (2)	115,028
Republican National Committee**	Roll Call (1)	2,000
Rice University	Election (1) Roll Call (1)	8,504
University of Rochester	Election (2) French Republic Roll Call (1) Roll Call (1)	51,496
Southern Illinois University	Roll Call (3)	16,627
Strathclyde University	Ecological (1)	***
Temple University	Election (3)	46,419
University of Tennessee	Ecological (1) Election (1)	60,491
University of Texas, Austin	Ecological (1) Roll Call (1)	24,984
University of Texas, El Paso	Election (1)	25,711
Texas Technological College	Roll Call (1)	14,297
University of Toledo*	Roll Call (1)	22,247
Vanderbilt University	Election (1)	2,560
University of Vermont	Election (1) Roll Call (3)	34,475
University of Virginia	Election (2) Roll Call (1)	154,566
Washington University	Ecological (1) Election (2)	78,753
University of Washington	Election (1)	21,522

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Wayne State University	Roll Call (2)	7,340
Wesleyan University	Roll Call (1)	35,136
Western Carolina University*	Election (1)	70,103
Wichita State University	Election (1)	5,151
University of Windsor	DCS (1)	7,840
Winger, Richard**	Election (1)	***
University of Wisconsin, Madison	Ecological (1) Election (6) Roll Call (3)	208,208
Wright State University*	Election (2)	***
Yale University	Ecological (2) DCS (1) Election (5) Roll Call (2)	235,512
TOTALS	DCS (11)	
	Ecological (44)	
	Election (85)	
	French Republic Roll Call (1)	
	United States Roll Calls (74)	
	Warner (1)	
	Total (216)	6.354,555

* Non-member academic institutions

** Non-member non-academic institutions

*** Raw data in textual form

SERVICING REPORT, INTERNATIONAL RELATIONS ARCHIVE

July 1, 1969-June 30, 1970

* Non-member academic institutions

** Non-member non-academic institutions

*** Raw data in textual form

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Alberta	Banks and Textor World Handbook I	1,139
University of Amsterdam	UN Roll Call	3,584
University of Arizona	WEIS - McClelland	24,040
Bendix Corporation**	Gurr WEIS - McClelland	59,046
University of British Columbia	Feierabend and Nesvold UN Roll Call	15,944
University of California, Berkeley	Gurr	357
University of California, Los Angeles	Banks and Textor Feierabend Gurr World Handbook I	8,533
Carleton University	Banks and Textor Feierabend and Nesvold World Handbook I	8,176
Center for Naval Analysis**	WEIS - McClelland	58,689
Colorado State University	Merged WHB Banks and Textor	987
Columbia University	Banks and Textor Gurr Russett Regionalism WEIS - McClelland World Handbook I	65,767
University of Delaware	Banks and Textor Gurr World Handbook I	1,496
Emory University	Banks and Textor Feierabend and Nesvold	7,612
University of Essex	World Handbook I	600
Fairmont State College*	Banks and Textor	575
University of Florida	Feierabend and Nesvold	7,037

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
G. E. TEMPO	WEIS - McClelland	58,689
Harvard University	Singer and Small	4,921
University of Hawaii	WEIS - McClelland	56,956
University of Houston	Feierabend and Nesvold Gurr	7,399
Indiana University	Banks and Textor Gurr Russett Regionalism	6,514
University of Iowa	Banks and Textor Feierabend and Nesvold World Handbook I	8,181
University of Kansas	Merged WHB Banks and Textor	987
University of Kentucky	WEIS - McClelland	24,040
Latin American School of Political Science*	Feierabend and Nesvold Gurr Merged WHB Banks and Textor Russett Regionalism	13,968
Lehigh University	Banks and Textor World Handbook I	1,139
Massachusetts Institute of Technology*	Gurr Merged WHB Banks and Textor	1,344
McGill University	Feierabend and Nesvold Rummel Foreign Conflict	14,409
McMaster University	Feierabend and Nesvold World Handbook I	7,601
University of Michigan	UN Roll Call WEIS - McClelland	41,345
Michigan State University	Banks and Textor World Handbook I	1,139
University of Mississippi	Gurr	***
University of Missouri, Columbia	Banks and Textor Merged WHB Banks and Textor	3,807

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Missouri, St. Louis	Merged WHB Banks and Textor	987
University of North Carolina	Merged WHB Banks and Textor WEIS - McClelland	83,461
Northwestern University	WEIS - McClelland	24,040
Oberlin College	Merged WHB Banks and Textor	987
University of Ohio	Banks and Textor Feierabend and Nesvold World Handbook I	8,176
Ohio State University	Feierabend and Nesvold Gurr Merged WHB Banks and Textor Rummel DON Study Singer and Small WEIS - McClelland	52,909
University of Oklahoma	Feierabend and Nesvold Gurr Merged WHB Banks and Textor	11,558
University of Oregon*	Feierabend and Nesvold	7,042
University of Pennsylvania	Banks and Textor Feierabend and Nesvold Merged WHB Banks and Textor	8,599
Princeton University	Banks and Textor Merged WHB Banks and Textor Russett Regionalism World Handbook I	8,313
Queens University	Banks and Textor	575
Rice University	Feierabend and Nesvold	7,037
University of Rochester	Banks and Textor World Handbook I	3,474
Rutgers University	WEIS - McClelland	38,585
San Francisco State College	Feierabend and Nesvold Merged WHB Banks and Textor Russett Regionalism UN Roll Call	15,466

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Southern California	Banks and Textor Gurr Russett Regionalism Singer and Small UN Roll Call World Handbook I	10,105
Stanford University	Russett Regionalism	959
University of Strathclyde	Gurr Feierabend and Nesvold	7,399
Swathmore College	Banks and Textor	575
Syracuse University	Feierabend and Nesvold Gurr Russett Regionalism Singer and Small UN Roll Call WEIS - McClelland	74,723
University of Texas	Banks and Textor UN Roll Call World Handbook I	4,724
Texas Technological Institute	Banks and Textor UN Roll Call World Handbook I	4,724
Vanderbilt University	Merged WHB Banks and Textor	1,974
University of Vermont	Banks and Textor Feierabend and Nesvold Gurr Merged WHB Banks and Textor World Handbook I	9,525
University of Washington	Feierabend and Nesvold	7,037
University of Waterloo	Banks and Textor Feierabend and Nesvold Gurr Merged WHB Banks and Textor Russett Regionalism World Handbook I	15,102
Wichita State University	UN Roll Call	3,585

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Williams College	Merged WHB Banks and Textor	987
University of Windsor	UN Roll Call WEIS - McClelland	61,410
University of Wisconsin, Madison	Rummel DON Study	5,074
University of Wisconsin, Milwaukee	Russett Regionalism UN Roll Call	7,442
Yale University	UN Roll Call WEIS - McClelland	60,684
York University	Banks and Textor Feierabend and Nesvold Gurr Merged WHB Banks and Textor Russett Regionalism Singer and Small WEIS - McClelland World Handbook I	80,149

STUDIES	TOTAL
Arthur Banks and Robert Testor, A Cross Polity Survey	24
Ivo and Rosalind Feierabend and Betty Nesvold, Political Event Project	23
Ted Gurr, Genesis of Civil Violence Project	18
Merged World Handbook/Banks and Textor	18
Rudolph Rummel, Foreign Conflict Behavior	1
Rudolph Rummel, Dimensionality of Nations Study	2
Bruce Russett, International Regions and the International System	12
Bruce Russett, et al, The World Handbook of Political and Social Indicators	19
J. David Singer and Melvin Small, The Wages of War	5
International Relations Archive, The United Nations Roll Call Project	12
Charles McClelland, The World Event/Interaction Survey (WEIS)	16

Institutions Receiving Data: 66 Card Images Serviced: 1,143,408

SERVICING REPORT, SURVEY RESEARCH ARCHIVE

July 1, 1969 - June 30, 1970

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Allegheny College	1 S-68, 2 A-68, 56-58-60 Panel	5,066
American University	22 A-66, 68, Eldersveld CS, Almond-Verba	32,128
University of Arizona	4 D-64, 64 Negro, 66, 68	64,856
Arizona State University	12 A-48, 52, 56, 60, 64, 68, 1 D-68	44,916
Australian National University	2 S-64, 66	
Ball State University	4 D-60, 64, 68, Almond-Verba	81,707
Bowling Green State University	3 A-Eldersveld CS, 2 D-68	90,168
Brandeis University*	1 D-68	26,768
University of British Columbia	1 D-Almond-Verba	19,564
California State College Fullerton	1 A-Lenski	656
Long Beach	2 D-68, Dahl	28,868
University of California Berkeley	2 D-68, 56-58-60 Panel	63,104
Davis	2 D-68	53,536
Los Angeles	14 D-68, Almond-Verba, 64, Dahl, 62, NORC 44 & 47, 65 County Chairman, 66, Wahlke-Eulau, 56, 60, 58, 52	233,582
Riverside	1 D-Schmidhauser	92
Santa Barbara	4 D-52, 68, Matthews-Prothro, 64 Negro, 1 A-68	63,262
Carleton University	5 D-Stouffer CS & LD, 68, 64, Almond-Verba	95,629
Case Western Reserve University	1 D-68	26,768

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Cincinnati	10 D-68, 60 Major, 60 Minor, 62, 66, 64, 56, 58, 52	179,972
Citizens' Research Foundation*	1 S-68	
Colorado State University	24 D-48, 51, Stouffer CS & LD, 56, Schmidhauser, Stanley Higher Civil Service, 60, 64, German Embassy, Radical Right, 66, 68	228,179
Columbia University	4 D-68, Illinois Lobbyist, Radical Right, Jennings Federal Employees	31,989
Congressional Quarterly*	2 S-68	
University of Connecticut	1 D-68	26,768
Cornell University	9 D-Stouffer CS & LD, 68, 56, 60, 58, 64, Almond-Verba	163,647
City University of New York, Hunter College	4 D-68, Illinois Lobbyist, Jennings Federal Employees	58,143
Dartmouth College	2 D-68, 56-58-60 Panel	63,104
University of Delaware	30 D-48, 60 Major, 60 Minor, 62, 56, 66, 62, 58, 64, Radical Right, Jennings Federal Employees, Stouffer CS & LD, Almond-Verba, Lenski, Matthews-Prothro, Stanley Higher Civil Service, Schmidhauser, Dahl, 51, 53, German Embassy, China, Kennedy, NORC 44 & 47, Eldersveld CS & LD	242,986
Denison University	3 D-65 County Chairman, Eldersveld LD, Almond-Verba	23,662
Duke University	5 D-68, Radical Right, Eldersveld CS & LD, 64 Negro	40,616
Emory University	2 D-68, Wahlke-Eulau	36,848

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Essex	1 S-56-58-60 Panel, 1 D-68, 10 OSIRIS codebooks-48, 51, 53, 54, 60, 56, Dahl, Stanley Higher Civil Service, Almond-Verba	43,225
University of Florida	25 D-68, 52, 56, 58, 60, 64, 48, 51, 53, 54, 62, China, German Embassy, Kennedy, 65 County Chairman, 64 Negro, Dahl, Schmidhauser, NORC 44 & 47, Radical Right, Stouffer CS & LD, Lenski	184,574
Florida State University	13 D-64, 66, 60, Almond-Verba, 68, 52, 62, 56	217,131
Georgetown University	1 D-Almond-Verba	19,564
Georgia State College	1 D-68	26,768
University of Goteborg	3 D-64, 66, Almond-Verba	77,652
Harvard University	6 D-Almond-Verba, Eldersveld CS & LD, Matthews-Prothro, 68, Jennings Federal Employees 1 A-68	63,576
Haverford College	1 D-68	26,768
University of Houston	2 D-51, Kennedy	7,159
University of Illinois, Chicago Circle	1 S-68	
Urbana	2 D-68	53,536
Indiana University	10 D-68, Wahlke-Eulau, 48, 62, 52, 58, 60, 58	146,131
Indiana State University	3 D-60, 64, 68	62,143
Institute of World Economy and International Relations (Moscow)*	4 S-56, 60, 64, 68	
Johns Hopkins University	10 D-52, 56, 58, 60, 64, 66, 68, 48, 60 Minor, 62	122,487

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Kansas	2 D-68, Wahlke-Eulau	36,848
Kansas State University	7 D-56, 64, 60, 58, 52, 68, Almond-Verba	127,706
Latin American School of Political Science*	4 D-60, French and German Elite, Schubert Judicial Mind, Stanley Higher Civil Service	17,729
University of Maryland	4 D-64, 68, Illinois Lobbyist, Jennings Federal Employees	55,240
University of Massachusetts	1 D-Stouffer CS	19,732
Massachusetts Institute of Technology*	1 A-Stouffer CS	4,933
McGill University	11 D-Schmidhauser, German Embassy, 53, 54, China, Radical Right, Stouffer CS & LD, Almond-Verba, 56, 60	87,136
McMaster University	3 D-Stouffer CS & LD, 68	52,500
Memphis State University	9 D-48, 51, 53, 54, 60, 66, German Embassy, French and German Elite, Lenski	28,568
Miami University	4 A-52, 56, 60, 68	10,793
Michigan State University	3 S-60, 64, 68, 13 D-48, 51, 53, 54, 60, 62, 56, Almond-Verba, Stouffer LD, Radical Right, 68, Illinois Lobbyist, Jennings Federal Employees	81,880
University of Michigan	9 D-56, 66, 68, Eldersveld CS & LD, 60, 64	150,138
University of Minnesota	1 A-68, 5 D-68, 66, 60, Matthews-Prothro, 1 S-66	70,553
University of Mississippi	4 D-68, 60, 66	109,355

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Missouri, Columbia	20 D-68, 48, 62, China, Radical Right, Stanley Higher Civil Service, German Embassy, NORC 44 & 47, Kennedy, Dahl, 56, Schmidhauser, 60, Almond-Verba, 58, 52, 68, 64, 1 A-68	254,880
Kansas City	1 D-68	26,768
St. Louis	1 S-68, 11 D-48, Dahl, Stanley Higher Civil Service, 62, 60, 56, 52, 58, 64, 68, 66	124,313
University of New Hampshire	2 D-68, New Hampshire	30,197
New York University	1 S-68, 6 D-Dahl, Stouffer CS & LD, Eldersveld CS, Almond-Verba, Lenski	62,760
State University of New York, Binghamton	7 D-62, 66, Voter Validation, 68, 65 County Chairman, Stouffer CS & LD	66,704
Buffalo	2 D-68, Jennings Socialization	62,451
Oneonta*	2 D-65 County Chairman	1,404
University of North Carolina	9 D-Almond-Verba, Radical Right, Illinois Lobbyist, Jennings Federal Employees, 64, 60, 58, 52, 68	117,558
University of Northern Illinois	5 D-Jennings Federal Employees, Schmidhauser, 68, Almond-Verba	54,264
Northwestern University	5 D-56-58-60 Panel, 65 County Chairman, Kennedy, 64, 68	93,531
Oberlin College	12 D-German Embassy, China, 60, 62, Illinois Lobbyist, Stanley Higher Civil Service, Jennings Federal Employees, Almond-Verba, Radical Right, Stouffer CS & LD, 56-58-60 Panel	128,074
Ohio State University	1 D-68	26,768

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Ohio University	8 D-68, China, German Embassy, Dahl, Almond-Verba, 52, 56, 60	149,154
University of Oklahoma	7 D-68, 56, 60, 64, 52, Almond-Verba	198,645
Oklahoma State University	2 D-64, 68	50,333
University of Oregon*	1 S-68, 1 A-68, 1 D-68	28,456
University of Oslo*	1 D-64	23,565
University of Pennsylvania	30 D-65 County Chairman, 66, 60, 58, 56, 52, 64, 68, 62, 48, 64 Negro, Almond-Verba, NORC 44 & 47, Radical Right, China, 51, 53, 54, Schmidhauser, Stanley Higher Civil Service, Dahl, Kennedy, German Embassy, Stouffer CS & LD, Lenski, Jennings Socialization, Matthews-Prothro, 56-58-60 Panel	290,988
Pennsylvania State University	3 D-60, 64, 68	62,143
University of Pittsburgh	19 D-48, 51, 53, 54, 60, 62, 56, 66, 64, Illinois Lobbyist, Jennings Federal Employees, Stouffer CS & LD, Almond-Verba, 52, 58, 68	265,443
Princeton University	24 D-Stouffer CS & LD, 56, 64, 68, 60, 52, 58, Illinois Lobbyist, Radical Right, China, Almond-Verba, 48, 51, 53, 54, 60, 62, 66, Jennings Federal Employees, 64 Negro, Judicial Mind	217,614
Purdue University	4 D-68, 64, Almond-Verba, China	75,905
Queens University	1 D-Almond-Verba	19,564
Random House*	1 S-68	
Rice University	4 D-64, 64 Negro, 68, Almond-Verba	75,383

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Rochester	1 S-68, 13 D-48, 51, 53, 54, 60 Major, 60 Minor, 62, 56, Almond-Verba, 52, 68, 66, 64	203,011
Rutgers University	3 D-66, 68, Almond-Verba	55,369
University of Southern California	33 D-52, 58, 60 Minor, 60 Major, 64, 68, 48, 51, 53, 54, 62, Almond-Verba, 56, 66, Schmidhauser, Stanley Higher Civil Service, Dahl, NORC 44 & 47, German Embassy, Stouffer CS & LD	260,615
University of Southern Illinois	1 A-64, 3 D-Radical Right, Illinois Lobbyist, Wahlke-Eulau	12,952
Stanford University	2 S-Dahl, 60, 1 A-68, 2 D-68, 64 Negro	33,927
University of Strathclyde	7 D-Radical Right, Stanley Higher Civil Service, 60, 52, 68, 64, 64 Negro	86,460
Syracuse University	2 D-68, Schubert-Press	28,024
Temple University	4 D-68, 60, 64, Judicial Mind	64,386
University of Tennessee	4 D-Lenski, 66, 64, 64 Negro	47,195
Texas Tech University	26 D-56, 60, 66, 52, 64, 68, 58, Schmidhauser, Dahl, Stouffer CS & LD, Almond-Verba, Radical Right, Stanley Higher Civil Service, Jennings Federal Employees, Matthews-Prothro, Lenski	373,596
University of Texas	27 D-Radical Right, German Embassy, Kennedy, Dahl, Schmidhauser, Stanley Higher Civil Service, NORC 44 & 47, 60, 58, 52, 64, 68, 48, 51, 53, 54, 62, China, Stouffer CS & LD, 56, Almond-Verba, 66, Eldersveld CS & LD	210,247
Texas A & M University	3 D-Almond-Verba, 64, 66	52,166
Tulane University	1 S-Almond-Verba	

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
Vanderbilt University	2 D-68	53,536
University of Vermont	38 D-64, 64 Negro, 65 County Chairman, 66, 68, 48, 52, 56, 58, 60 Major, 60 Minor, 62, Kennedy, NORC 44 & 47, 51, 53, 54, China, German Embassy, Brookings Student, Jennings Federal Employees, Almond-Verba, French and German Elite, Illinois Lobbyist, Schmidhauser, Schubert Judicial Mind, Stanley Higher Civil Service, Wahlke-Eulau, Lenski, 56-58-60 Panel, Eldersveld CS & LD, Radical Right	307,705
Virginia Polytechnic Institute	3 D-Stanley Higher Civil Service, Illinois Lobbyist, Wahlke-Eulau	11,883
University of Virginia	7 D-68, 56-58-60 Panel, 52, 56, 60, 64	167,764
Washington University	12 D-48, 54, 56, 60, 62, 66, 52, 58, 64, 68, NORC 44 & 47	197,767
University of Washington	1 A-68, 1 S-68, 1 D-Radical Right	2,171
Washington and Lee University	4 D-Radical Right, Almond-Verba, 56, 68	59,804
University of Waterloo*	35 D-Illinois Lobbyist, Jennings Federal Employees, 48, 51, 53, 54, 60 Major, 60 Minor, 62, Radical Right, China, Stouffer CS & LD, Almond-Verba, Schmidhauser, Stanley Higher Civil Service, German Embassy, Dahl, Kennedy, 66, 56, 68, Lenski, Eldersveld CS & LD, 64, 52, 58, 64, 65 County Chairman, Judicial Mind, NORC 44 & 47, French and German Elite, 56-58-60 Panel	269,095
Wayne State University	8 D-Lenski, 60, 56, 66, 58, 52, 68, Almond-Verba	116,079
Wesleyan University	4 A-68, Almond-Verba	11,486

A=analysis deck, D=full data set, S=statistics, *=non-member

UNIVERSITY	DATA DESCRIPTION	CARD IMAGES
University of Western Ontario	1 A-Almond-Verba	963
Western Michigan University	1 D-66	9,037
Williams College	3 D-68, Wahlke-Eulau, Almond-Verba	56,412
University of Wisconsin, Madison	8 D-68, 52, 60, 64, German Embassy, Kennedy, Radical Right, Jennings Socialization	126,887
Milwaukee	4 D-Illinois Lobbyist, Radical Right, Eldersveld CS & LD	11,292
Yale University	3 D-68, Schmidhauser, Judicial Mind, 1 A-66	30,394
York University	28 D-48, 51, 53, 54, 60 Major, 60 Minor, 62, 56, 66, 52, 58, 64, Illinois Lobbyist, Jennings Federal Employees, Stouffer CS & LD, Almond-Verba, China, Radical Right, 68, Schmidhauser, Stanley Higher Civil Service, Dahl, German Embassy, Kennedy, 64 Negro, Jennings Socialization, British Election, 6 OSIRIS codebooks-Stanley Higher Civil Service, Schmidhauser, Dahl, Kennedy, German Embassy, 66	448,907

TOTALS:

117 universities	Full data sets	733	9,909,068
	Analysis decks	55	
	Statistics	21	
	OSIRIS codebooks	16	

A=analysis deck, D=full data set, S=statistics, *=non-member

IV. COMPUTING ACTIVITY

COMPUTING ASSISTANCE AVAILABLE FROM THE CONSORTIUM

The Consortium provides its members with various kinds of help and advice on the use of their local computing support. This has ranged from help with the problems of computing equipment selection and use, to the provision of programs for use on a member's computer. Programming by the Consortium staff to meet individual member needs is not undertaken; the emphasis is instead on assisting the member in making more effective use of the resources available on his campus and through others.

The Consortium makes available one specific package of computer programs, known as OSIRIS II. This package has been developed through a cooperative effort by many groups at the University of Michigan, especially at the Institute for Social Research, to serve the archival and teaching functions of the Consortium and the research needs of many different social scientists. OSIRIS II contains capabilities for data preparation, reorganization, cleaning, documentation, and retrieval. There are substantial facilities for logical and arithmetic operations on variables, both within cases and across cases. The analysis capabilities include a number of tabulation routines, the commonly needed correlation and regression techniques, as well as more advanced multivariate, non-parametric, and dimensional analysis procedures.

Considerable effort has been given to making OSIRIS II easy for the user to apply to a wide variety of tasks, from teaching, through elaborate data preparation and research. The data are accompanied by a "dictionary" describing each variable, minimizing the amount of redundant information the user must supply on each run. Most programs take advantage of a relatively natural "keyword" control language, which further simplifies their use. OSIRIS II will continue to improve considerably in the future in ease of use and in the range of data preparation, manipulation, and analysis capabilities provided, including more effective interfacing of data to other statistical packages such as SPSS.

At present OSIRIS II is distributed primarily for use on IBM 360's, in particular a model 40 with 128,000 bytes of core memory or any larger model running IBM's Operating System. Installation on this computer series is relatively straightforward. A number of members are considering or are underway with conversions of OSIRIS II to other computers. Anyone interested in these efforts should contact us for a more specific discussion of the possibilities and problems.

The distribution of OSIRIS II for IBM 360's has been set by the ICPR Council as a partially self-sustaining operation. Thus, a charge of $300 is made for the initial distribution to a member, with a subsequent yearly charge of $150 for updates and extensions of the package. For academic non-members the corresponding charges are $950 and $475.

Those interested in more detailed information on OSIRIS II or advice on computing needs more generally, should feel free to get in touch with either Gregory Marks or Stewart Robinovitz. (313-764-6554.)

A Brief Synopsis of Programs in OSIRIS II

The following pages contain a very brief description of the programs in the OSIRIS II package. These programs have been grouped into three categories: (1) data manipulation and listing programs; (2) statistical analysis programs; and (3) data description programs for system use and for transferring to other programs.

More detailed descriptions of the programs and use of the OSIRIS II package can be found in the OSIRIS II User's Manual.

1. Data Manipulation and Listing Programs.

AGGREGATION

This program aggregates data collected at one level, or unit of analysis, to a different level. Variables can be aggregated using any or all of the following statistics: sum, mean, variance, and standard deviation. The 'N' used in calculating each statistic can also be outputted. There is control for how many missing data cases can be ignored before the output variable is set to missing data. Input is a standard OSIRIS dataset. Output is also an OSIRIS dataset made up of the aggregated variables.

COPY OSIRIS FILES

This program copies a standard OSIRIS file from tape or disk to tape or disk.

DATASET LISTING

A program for printing all or a subset of a standard OSIRIS data file.

INDEX CONSTRUCTION & RECODING

This is a general purpose index construction and data management program which allows virtually any type of variable recoding and transformation. Output is a new OSIRIS dataset generated from the user-supplied operations. Operations available fall into four general categories: 1) transferring variables to the new dataset with no alteration, 2) recoding and bracketing, 3) performing arithmetic computations, and 4) writing an output record. The user may specify 'logical' instructions to direct program flow.

LAG

The LAG program can lag or lead variables by a specific offset factor to produce an OSIRIS dataset that can be used in time series analysis.

MATCH MERGE

A general purpose program for the match-merging of two standard files. Both files are assumed to be pre-sorted. The output will be a standard file with a merged OSIRIS dictionary. The user specifies the variables on which the files are to be matched, and he also specifies the variables from each file which are to be transferred to the output file, thus allowing for deletion of redundant variables and rearrangement of order. There are several options for action whenever a mis-match occurs, including padding missing records with missing data or deleting the case. An additional feature allows for duplicating variables from one record in a file into several records of the other file.

SORT/MERGE

These catalogued procedures use the IBM SORT/MERGE program to sort and/or merge data stored on cards, tape files, or disk files.

MATRIX SUBSETTING

This program will accept as input any matrix created within the OSIRIS system (e.g. as produced by the missing data correlation program). Matrices need not be square. The output is a matrix compatible with the OSIRIS system, consisting of specified rows and columns of the input matrix. Another important feature of this program is that it will take any rectangular or symmetric (square or upper or lower triangle) matrix not produced by OSIRIS and "build" it into a standard OSIRIS matrix.

DATA SUBSETTING & EDITING

This program will: (1) write all, or a selected portion of the records in a sequential dataset onto any output device, (2) list these records, (3) supply a count of the records in any selected portion of the dataset. The program can also output an edited version of the dataset.

NON-STANDARD TAPE CORRECTION

Non-standard tape correct makes additions, deletions, and/or corrections to non-standard datasets.

FILE CORRECTION

TCOR is a program for correcting standard OSIRIS datasets. It allows for correction, deletion, and listing of specific records.

FILE UPDATING

UDAT is a general purpose program for the updating of a standard OSIRIS data file. The routine allows for the simultaneous addition and deletion of entire data cases. The addition-deletion facility offers, in addition, a "replacement" facility. The user can specify the comparisons with up to twenty control variables. Deletion can occur either by exact match of cases or the deletion of cases within a contiguous range. Deleted cases can be printed if desired. Matching errors are documented.

WILD CODE CHECK

The wild code checking program scans variables in an OSIRIS dataset for each variable. These codes may be either user-specified or automatically retrieved from an OSIRIS machine-readable codebook, if present.

MERGE CHECKING

The program checks merged and sorted card image data for missing and/or extraneous cards. The program deletes invalid cards and/or cases and pads in cases for which cards are missing. The input is cards or card image tape. The output is a corrected file on tape or disk and a printout which documents the merge errors in the data. This program is usually run prior to the file build program.

CARD LIST/REPRODUCE

This program will list and reproduce cards or card image files, optionally translating characters from BCD to EBCDIC (026 punch to 029 punch).

2. Statistical Analysis Programs

AUTOMATIC INTERACTION DETECTOR (AID)

A program which uses the proportion of explained variance in a dependent variable to construct a tree of independent variables, by successive splitting of subsamples. Each such choice of independent variable and its split point is based on the criterion that it provides the maximum possible reduction of variance in the dependent variable.

CLUSTER ANALYSIS

CLUSTER selects clusters or groups of items from a correlation matrix of up to 100 variables. When appropriate correlation coefficients are used, this procedure essentially yields Guttman Scales. The solution provided is a uni-dimensional one since an item can enter only one cluster. Input is a correlation matrix as produced by one of the correlation programs in the OSIRIS package.

CORRELATION STATISTICS ON TRICHOTOMOUS OR DICHOTOMOUS VARIABLES

A program which produces correlation statistics on trichotomous or dichotomous variables. Any of a wide variety of common measures of association for 3 x 3 or 2 x 2 tables may be selected. Among the statistics which can be computed are eta, phi, tetrachoric r, product-moment correlation, Kendall's tau-b and Goodman-Kruskal's gamma. Input is an OSIRIS dataset. Output may be a printout and/or a file containing correlation matrices for use in other routines.

DATA SIMULATION

This program generates contrived data for use in statistical analysis. These data are derived recursively from one or more initial

random variables by a specified sequence of variable transformations or combination of steps. The initial random variables are generated according to user-supplied probability distributions. The initial variables can be used to construct new variables by such operations as exponentiation, grouping, addition, subtraction, multiplication or division. The program generates an OSIRIS dataset.

FACTOR ANALYSIS

FACTAN provides a general Factor Analysis package which includes numerous options as to treatment of data and various factor analytic tools currently in use. Options include interactive communality estimation or orthogonal (varimax) and/or oblique (biquartimin, covarimin or any value between zero and one) rotation as well as plotting of the factor scores. The program can process either an OSIRIS dataset with no missing data or a correlation matrix.

FREQUENCY COUNT

FREQS tabulates the occurrence of codes for specified one, two, three and four column variables in a dataset, primarily when in card-image form.

ONE WAY ANALYSIS OF VARIANCE

A one-way analysis of variance program with a control variable range of 0 to 99 which computes means and standard deviations on the dependent variable for each control cell and an analysis of variance across cells.

BIVARIATE FREQUENCY TABLES

This program generates bivariate tables and selected summary descriptive statistics such as TAU B, GAMMA, or CHI-SQUARE. The options requested for each table are independent of the options in the other tables. It is possible to mass generate tables, using the same options by supplying lists of row and column variables.

MULTIVARIATE ANALYSIS OF VARIANCE

A multivariate analysis of variance program for up to eight-way analysis of variance computation with no assumptions as to equal cell counts. The program also has extensive analysis of covariance capabilities.

MEANS AND MARGINALS

A program which produces case counts, sums of weights, a number of missing data cases, ranges, means, standard deviations, skewness, and kurtosis for a user supplied list of variables from a standard OSIRIS dataset. In addition, the program accumulates marginal distributions for the same variables, and optionally computes percentages on the marginals.

MULTIPLE CLASSIFICATION ANALYSIS (MCA)

A program for multiple regression using categorical predictors, i.e., the independent variables may be nominal scales. Input is an OSIRIS dataset. Output includes a multiple correlation coefficient and sums of squares.

MISSING DATA CORRELATION

The missing data correlation program computes a matrix of product-moment correlations between all pairs of variables in a user-supplied list. The program allows for missing data by calculating the coefficient for each pair of variables separately on the basis of the subsample of cases with valid scores on both variables. The correlation matrix is input to some of the other OSIRIS programs.

MULTIDIMENSIONAL SCALING

The multidimensional scaling program is designed for analysis of similarities. This is a version of J.B. Kruskal's program. The program operates on a matrix of similarity or dissimilarity measures and yields a representation of the data in a space of the smallest number of dimensions. Though its use will often be similar to factor analysis, it has the advantage of not requiring any metric assumptions beyond an ordinal level of measurement. Input may be a matrix dataset or any other square or triangular matrix.

NON-PARAMETRIC STATISTICS

A program which has, as a base, the production of ranks on dependent variables across controlled groups. Extensions to this program are the computations of Mann-Whitney U tests, Spearman's rho, and other statistics based on rank computations.

PARTIAL CORRELATIONS

The partial correlation program generates matrices of partial correlation coefficients for selected variables in a dataset. The user may specify as many subsets as desired. It also computes, for each subset: the multiple correlation for each variable in the subset using all of the remaining variables, and the standardized regression coefficients. Input is a correlation matrix.

POINT BISERIAL CORRELATIONS

PBSCOR is a program for computing biserial or point biserial correlation coefficients between dichotomous and continuous data.

LINEAR REGRESSION

The regression program performs either standard or stepwise multiple linear regression. Input can be a standard OSIRIS dataset with no missing data on desired variables or a correlation matrix. The program also has a residual and two-stage capability.

SCATTERPLOT

The scatterplot program produces a bivariate frequency scatter-

plot on a rectangular coordinate system indicating the frequencies with which joint values of two variables are observed. A number of summary statistics are also produced.

TRIVARIATE T-TEST

The Trivariate T-Test program is an integration of the computation of T's between means and the T's on the means of the differences between variables.

3. Data Description For System Use And For Transferring To Other Programs.

FILE BUILD

The file build program creates the standard OSIRIS dataset (self-described dictionary and data) which is required for most OSIRIS II programs. Input is match-merged card image data and a setup containing descriptive information about every output variable. The program can optionally rearrange and delete redundant or unwanted data as the file is built. In addition, numeric variables are edited for legitimate values; amps and dashes are recoded to user supplied numeric values. Also, a codebook describing the variables can be added to the dictionary.

CODEBOOK LIST

A program to list an OSIRIS II dictionary in the ICPR "custom" codebook format.

CODEBOOK FREQUENCY MERGE

This routine will permit the insertion of frequency distributions of variables into an OSIRIS II codebook.

DICTIONARY LISTING

A program to list in readable format an OSIRIS dictionary.

TAPE TO CARD OR TAPE

A "tape-to'card" program which accepts as input a standard OSIRIS data file and outputs match-merged card decks either as punched cards or as a card image tape, with or without a header label. This program is generally used to format data to be accessible outside the OSIRIS II system. The program allows for the subsetting of variables and the insertion of constants (e.g. study number, deck number). Complete documentation of the new decks is printed, or TCOT2 can output a dictionary on tape which can then be listed by the codebook list program to produce a custom codebook.

OSIRIS II Distribution Policy

The OSIRIS II package is a major revision of our previously distributed OSIRIS, level 3, package. It has been updated to correct all known errors and modified to use free format keyword setups. Large statistical programs previously available only at the University of Michigan are included, along with extra programs to enable users to adequately work with the Consortium's machine readable codebooks. The package also includes improved user documentation and sample data, setups, and output to assist in the use of the programs and in checking their results.

The ICPR Council has decided that the OSIRIS II package distribution must be at least a partially self sustaining operation, since the Consortium operating budget is now extremely tight. Therefore, the following charge policy has been established, which is intended to defray part of our costs for these services:

SERVICE--(First year)	CHARGE--(Payable on Shipment)
OSIRIS II Source code, load modules, procedures, manuals, and test data; update service until the next fiscal year (the July following your order)	$ 300 ICPR Members $ 950 Non-members (academics) $1900 Non-members (non-academics)
SERVICE--(Each additional year)	**CHARGE--(Payable on yearly basis)**
Updates, modifications, and ICPR Newsletter. This ongoing service is essential for effective use of the package	$ 150 ICPR Members $ 475 Non-members (academics) $ 950 Non-members (non-academics)

Standard updates include such things as debugs and minor revisions to programs. Major revisions and expansion to include new programs constitute a new level of OSIRIS II. Each new level is distributed as an update under the terms of the update service, and subsequent standard updates are made to this most current level of OSIRIS II.

For those members needing detailed information, we will send one copy each of the OSIRIS II User's Manual, the Subroutine Manual, and the OSIRIS II Implementor's Guide free of charge. These documents cost $6.00, $2.50, and $1.00, respectively, to non-members. An additional publication, "Notes on the Use of OSIRIS II for Students", is also available at a cost of $2.50.

If your institution would like to obtain OSIRIS II, send a 2400 foot tape and an order blank or a written request, signed by your ICPR

Official Representative, to:

Mrs. Donna Rocheleau
ICPR OSIRIS II Distribution
Box 1248
Ann Arbor, Michigan 48106

Area code: 313 Phone: 764-8396

If you are not certain whether you can use OSIRIS II with your computing facilities, please contact:

Mr. Stewart Robinovitz
ICPR OSIRIS II Distribution
Box 1248
Ann Arbor, Michigan 48106

Area Code: 313 Phone: 764-8396

Mr. Robinovitz will review whether you can use OSIRIS II and, if not, he may be able to offer suggestions as to other possible software that can meet your needs.

At the simplest level, the computer hardware requirements for OSIRIS II are:

1. At least 101,000 bytes of core storage available for program use. (Two or three of the larger analysis programs will require between 150k and 200k, but the bulk of the package needs less than 101k)

2. Either two 2311 disk drives or one 2314 (i.e. normal residence for OS plus OSIRIS II libraries)

3. At least three 2400 series tape drives (unless you have enough disk space to use disk rather than tape data files)

4. A line printer

5. A card reader (with binary read option if you have any multiple punched data)

6. A card punch

The package also assumes that you have a machine with Operating System (OS) 360 of at least G level, with PL/I F, FORTRAN IV G, ASSEMBLER E, and the standard IBM OS utilities.

Our experience with previous levels of OSIRIS indicates that the documentation and supplied procedures make the implementation of the package relatively straightforward. Any problems you might have can best be handled by individual phone or letter queries.

Distribution of the OSIRIS Package

The following institutions have received the OSIRIS package of programs.

1. Those with OSIRIS II, Level 1

   A. Consortium Member Institutions

Institution	Comments
Alberta, University of	For MTS
Amsterdam, Technisch Centrum	
Australian National University	
Ball State University	
Bowling Green State University	
British Columbia, University of	For MTS
California, University of, Santa Barbara	
Case Western Reserve University	Converting for Univac
Cincinnati, University of	
City University of New York	
Columbia University	
Connecticut, University of	
Cornell University	
Essex, University of	Converting for ICL and PDP10
Florida, University of	
Georgia, University of	
Goteborg, University of	
Harvard University	
Iowa, University of	
Johns Hopkins University	
Kentucky, University of	
Louisiana State University	
Mannheim University	Being converted for Siemens
McGill University	
Memphis State University	
Mississippi, University of	
Missouri, University of, Columbia	
New Hampshire, University of	
North Carolina, University of	
Ohio State University	
Oklahoma, University of	
Pittsburgh, University of	
Rochester, University of	
Strathclyde, University of	Being converted to ICL
State University of New York, Binghamton	
Texas Tech University	
Washington University	
Windsor, University of	
Wisconsin, University of, Madison	
York University	

1. B. Non-Member Institutions

Institution	Comments
Bendix Corporation	
Bergen, University of	
Centre D'Etudes Sociologiques	
Hebrew University	
Koln, University of	
Kyoto University	Being converted

2. Members and Non-Members With Old Versions - OSIRIS-40, Levels 2 and 3.

Institution	Level	Comments
The American University	2	Probably not working
California, University of, Berkeley	2	Probably using Shanks' hybrid
DATUM	2	Probably using adaptation
Georgetown University	2	Probably not using
Hawaii, University of	3	Probably limited use
Illinois, University of	3	In use
Princeton University	3	Probably not in use
Queen's University	3	Probably not in use
Temple University	2	Probably not working (CDC)
Vanderbilt University	2	Converted to Sigma-7
Washington State University	2	Probably not working

COMPUTERS AT CONSORTIUM MEMBER INSTITUTIONS

as of March, 1970

The entries are as identified by the official representative as available for use, except for computers listed in parentheses, which have been determined by the staff in alternate ways since some replies have not been received.

Institution	Computer (s)
Alabama, University of	IBM 360/50
Alberta, University of	(IBM 360/67)
Allegheny College	IBM 1620
The American University	(IBM 360/30)
Amsterdam, University of	(IBM 360/75)
Arizona, University of	(CDC 6400)
Arizona State University	(CDC 3400)
Australian National University	(IBM 360/50)
Ball State University	IBM 360/40
Bowling Green State University	IBM 360/50
British Columbia, University of	IBM 360/67
California, University of (Berkeley)	CDC 6400, IBM 360/40
(Davis)	Burroughs B6500, IBM 7044
(Riverside)	IBM 360/50
(Santa Barbara)	IBM 360/75, IBM 360/20
(Los Angeles)	IBM 1130, IBM 360/91, IBM 360/20
California State College (Fullerton)	
(Long Beach)	
Carleton University	XDS Sigma 7, CDC 3300, IBM 360/91
Carnegie Endowment for International Peace	GE 415
Case Western Reserve University	
Cincinnati, University of	(UNIVAC 1108)
City University of New York	IBM 360/65
Colorado State University	(IBM 360/50)
Columbia University	CDC 6400, IBM 1401
Connecticut, University of	(IBM 360/75)
Cornell University	IBM 360/65, IBM 1620
Dartmouth College	(IBM 360/65)
DATUM (Bad Godesberg, Germany)	GE 635
Delaware, University of	(IBM 360/40)
	CDS 9300, IBM 1620, IBM 1130, IBM 1401, may add Burroughs B5500
Denison University	(IBM 1130)
Duke University	IBM 360/75
Emory University	RCA 70/55, RCA 70/46
Essex, University of	ICL 1909
Florida Atlantic University	IBM 360/40 (64k bytes, will be 128k)
Florida, University of	(IBM 360/50)
Florida State University	CDC 6400, IBM 1401
Georgetown University	IBM 360/40

Georgia, University of	(IBM 360/65)
Georgia State College	IBM 7040, IBM 1401, RCA 70/46,
	IBM 1800
Gothenburg, University of	IBM 360/65
Harvard University	IBM 360/65, IBM 7094 (Leaving),
	XDS Sigma 7
Hawaii, University of	(IBM 360/50)
Houston, University of	(XDS) Sigma 7)
Illinois, University of (at Chicago Circle)	IBM 360/50, IBM 1800
Illinois, University of (Urbana)	(IBM 360/50 plus others)
Illinois State University	IBM 360/40, IBM 1130
Indiana University	(CDC 3000 series)
Indiana State University	(360/30)
Iowa, University of	IBM 360/65
Johns Hopkins University	(IBM 360/65)
Kansas, University of	(GE 625)
Kansas State University	(Burroughs B5500)
Kentucky, University of	IBM 360/50, IBM 360/65
Lehigh University	CDC 6400
Louisiana State University	IBM 360/65
Louisville, University of	IBM 360/30, may change to 40
Loyola University	(IBM 1401, Northwestern's
	CDC 6400)
McGill University (Montreal, Canada)	(IBM 360/50)
McMaster University (Hamilton, Ontario)	CDC 6400, IBM 7040-44
Mannheim University (Germany)	Siemens 4004/45
Maryland, University of	IBM 7094, UNIVAC 1108
Massachusetts, University of	(CDC 3600)
Memphis State University	IBM 360/40
Miami University	IBM 360/40
Michigan, University of (Ann Arbor)	IBM 360/67, IBM 360/40
Michigan State University	(CDC 6500)
Minnesota, University of	(CDC 6400)
Mississippi, University of	(IBM 360/40)
Missouri, University of (Columbia)	(IBM 360/65)
(Kansas City)	(IBM 360/30, may add IBM 360/50
(St. Louis)	(IBM 360/50)
New Hampshire, University of	(IBM 360/40)
New York University	(CDC 6000 series, may get
	UNIVAC 1108)
North Carolina, University of	IBM 360/40, IBM 360/75,
	IBM 1130
Northern Illinois University	IBM 360/50
North Texas State University	(IBM 1620, may get IBM 360/50
Northwestern University	CDC 6400
Notre Dame, University of	(UNIVAC 1107)
Nuffield College (England)	
Oberlin College	IBM 360/44
Ohio State University	IBM 360/75, IBM 7094,
	IBM 360/50
Ohio University	(IBM 360/44)
Oklahoma, University of	IBM 360/50, IBM 1130, IBM 1401
Oklahoma State University	(IBM 360/50)

Oregon, University of	IBM 360/50
Pennsylvania, University of	IBM 360/75
Pennsylvania State University	(IBM 360/67)
Pittsburgh, University of	IBM 7090, IBM 360/50 getting IBM 360/65
Princeton University	IBM 360/91, IBM 360/67
Purdue University	(CDC 6400)
Queen's University	(IBM 360/50)
Rice University	(Burroughs B5500)
Rochester, University of	IBM 360/65
Rutgers University	(IBM 360/67)
San Diego State College	IBM 360/50, IBM 1130, PDP 8
San Francisco State College	IBM 360/67
Southern California, University of	IBM 360/65
Southern Illinois University	IBM 7044, IBM 1620, IBM 1401, may add IBM 360/50
Stanford University	IBM 360/67
State University of New York	
(Albany)	(UNIVAC 1108)
(Binghamton)	IBM 360/40
(Buffalo)	CDC 6400
(Stony Brook)	IBM 360/67
Strathclyde, University of	ICL 1905, UNIVAC 1108, Ferranti Atlas
Swarthmore College	IBM 1130, IBM 360/44
Syracuse University	(IBM 360/50)
Temple University	CDC 6400, IBM 7040
Tennessee, University of	IBM 360/40, IBM 7040
Texas A & M University	(IBM 360/65)
Texas, University of	CDC 6600
Texas Technological College	(IBM 360/50, CDC 1604, IBM 1401)
Tulane University	IBM 7044
Vanderbilt University	XDS Sigma 7
Vermont, University of	IBM 360/44
Virginia, University of	(Burroughs B5500)
Virginia Polytechnic Institute	(IBM 360/50)
Washington, University of	(CDC 6400, Burroughs B5500)
Washington and Lee University	IBM 1130
Washington State University	(IBM 360/50)
Washington University	IBM 360/50
Waterloo, University of	IBM 360/75
Wayne State University	IBM 360/67
Wesleyan University	(IBM 1130)
Western Michigan University	(IBM 1620)
Western Ontario, University of	IBM 7040, PDP 10
Wichita State University	IBM 1130, IBM 1620, may add IBM 360/44
Williams College	IBM 1130, RCA 301
Windsor, University of	(IBM 360/40)
Wisconsin, University of (Madison)	UNIVAC 1108, CDC 3600 (leaving), Burroughs B5500, IBM 360/40
(Milwaukee)	UNIVAC 1108

Wisconsin State University	Burroughs 3500
Yale University	IBM 7094-7040, IBM 360/50, IBM 1401
York University	IBM 360/50

OSIRIS For Non-IBM Computers

OSIRIS was designed and developed on the IBM 360 series of computers and the majority of the institutions requesting OSIRIS have been universities with IBM 360 computers. However, since the beginning of 1969, there has been increasing interest in an OSIRIS for the CDC 6000 series of computers. Approximately 10% of our ICPR members now have CDC hardware and, in view of this fact, the ICPR began to investigate the feasibility of a CDC OSIRIS in the spring of 1969.

An initial CDC meeting was held in conjunction with the 1969 Annual Meeting of the Official Representatives of the ICPR. A representative group consisting of ICPR Official Representatives and computing center personnel from the CDC universities conferred. Several software packages, either already running or implementable on CDC hardware, were discussed, including OSIRIS and SPSS. A representative of the CDC systems group was contacted and expressed some interest, but he declined to involve CDC in an actual conversion effort. It was decided that ICPR should look toward a technical session at a later date, and Michigan State University volunteered to host such a meeting.

A more substantive meeting was held at Michigan State University in June 1969. The purpose of this meeting was to determine what specific differences between the CDC 6000's and IBM 360's might cause trouble when a conversion of OSIRIS was attempted. The consensus of Michigan State's Computing Center personnel and the ICPR representatives was that there are no insurmountable obstacles to the conversion of OSIRIS, but compatibility among the various CDC schools might be a problem. It was recommended that a meeting be held to set some guidelines and to assess interest in the project.

The first general conference to discuss the feasibility of converting the ICPR's OSIRIS II software package for use on the CDC 6000 series was held in Ann Arbor, Michigan on January 9-10, 1970. The following universities participated: McMaster University, Michigan State University, Northwestern University, Purdue University, Temple University, State University of New York at Buffalo, and of course, the University of Michigan.

No specific commitments were made by the participating universities, but there was considerable interest in the project and various program and subroutine listings have been requested by the participants.

William Klecka of Northwestern University and Joseph Osiecki of Purdue University volunteered to take the OSIRIS tape, to make it CDC readable, and to coordinate any work until the next meeting.

The ICPR staff contacted the National Science Foundation regarding support of the efforts of Purdue and Northwestern. The response was that NSF would only consider such a proposal if there was a strong need for facilities of OSIRIS on CDC and such capabilities did not exist in other forms on CDC 6000 machines.

Meanwhile, work has been progressing at Northwestern and Purdue Universities in the conversion of OSIRIS II for use on CDC 6000 series computers. In the process, an effort has been made to keep the new version machine-independent by writing it almost exclusively in CDC FORTRAN Extended (FTN) and by documenting those portions which are incompatible with other computers. It is hoped that this will facilitate future efforts to convert OSIRIS for use on other machines, such as the CDC 3000 series and UNIVAC 1108 computers.

Although substantial progress has been achieved, work is being hampered by the lack of financial support. So far, Northwestern and Purdue have been generous in providing computer time, released time from other activities, and a graduate assistant. A proposal is being prepared for a grant from the National Science Foundation, in light of NSF's response to the ICPR query, but individuals who can contribute programming skills and computer time at their own installations are encouraged to join the conversion project.

To obtain further information about OSIRIS II for CDC 6000 series computers, write to:

William Klecka
Northwestern University
1818 Sheridan Road
Evanston, Illinois 60201

Phone: 312-492-3589

Joseph Osiecki
Purdue University
Mathematical Sciences Building
West Lafayette, Indiana 47905

Phone: 317-493-9407

The staff has received an increasing number of questions regarding OSIRIS implementation on UNIVAC 1108, RCA SPECTRA 70 and XDS Sigma-7 computers in the United States, as well as on ICL, Siemens and PDP-10 computers outside of the United States. We will continue to attempt to provide these various installations with information and whatever limited help our resources will permit. We have also received inquiries about OSIRIS from several member institutions with small computing equipment. We have not been able to do more than to try to inform them of other member institutions with similar equipment in hopes that they could exchange software.

PROPOSAL TO NATIONAL SCIENCE FOUNDATION FOR SUPPORT OF DOCUMENTATION TO ASSIST USERS OF OSIRIS II: A SOCIAL SCIENCE SOFTWARE PACKAGE

I. Introduction

We propose a major effort to improve the documentation of a relatively powerful and complex computer software package for social science. The software which the documentation would support is called OSIRIS II, a large-scale system distributed by the Inter-university Consortium for Political Research. We are convinced that present documentation is inadequate for users who are not located at the University of Michigan and who cannot consult directly with the people who designed, implemented and maintain this complex array of programs. The requested funding would produce documentation for these users of a caliber well above that currently available for any similar system, and would help insure that the substantial capitalization which has been (and will be) put into the OSIRIS II software will benefit the largest possible community.

II. Background on OSIRIS II

OSIRIS II is a software package developed by the programming staffs of the Consortium and the Computer Services Facility at the Institute for Social Research. Much of the data preparation and manipulation software in OSIRIS II has been developed under National Science Foundation grants GS-1435, GS-1435-A1, and GS-2473 for archival development. Significant improvement of analysis software within OSIRIS II has been done under the curricular development grant GJ-68. This software has received extensive use by the ISR research units, the Consortium archival processing and servicing staffs, students on the Michigan campus, including participants in the Consortium's Advanced Science Seminars, and a number of Consortium member schools. Well over 100,000 separate jobs have been run using this system. The error rate, based on defects in the programs rather than user mistakes, is now under one per two hundred runs, averaged across all programs.

OSIRIS II is characterized by a large variety of data management capabilities in addition to most of the common statistical programs. To add to the ease and accuracy of individual use, the system utilizes dictionaries to describe the variables in each data set. The programs share an integrated overall design philosophy which facilitates understanding their use and insures maximum flexibility in combining the programs to accomplish particular tasks.

Over the past six years there has been a steady increase in the number of Consortium schools who have requested computer software support from our staff, and this has increased further as OSIRIS II has become available to them. These member schools generally have found that even small sets of programs, let alone an integrated package as large as OSIRIS II, have been very difficult to develop and maintain on their own. It has been easier, and better in most cases, to import software. The BMD programs from UCLA have been installed on many campuses, but they are cumbersome to use, especially for beginners. This shortcoming, in particular, has led many installations to acquire SPSS, first developed at Stanford and now supported by NORC at Chicago. However, SPSS is restricted in the variety of analysis programs available and in the size of the datasets it will accept. It is also difficult to augment SPSS with new programs developed at a local installation. Early users of OSIRIS (the name OSIRIS II is used only for the most recent Consortium version) selected it because it was easier to run than BMD, had many more data management programs than either BMD or SPSS, and because new programs could be readily added to it. Other packages have also been available, such as PSTAT from Princeton, TSAR/IVAN from Duke, and IBM's SSP, but the three already mentioned seem to have received the most active attention. In the future, Harvard's DATATEXT system will be converted to Fortran and will probably be of interest to many present SPSS users since many of the design features of SPSS can be found in earlier versions of DATATEXT.

OSIRIS II will continue to evolve and expand so that for many potential users it is very likely to be the best choice among these packages. For example, with better documentation to complement recent changes in OSIRIS II, it would now be about as easy to use as SPSS, and it has a much larger variety of analysis capabilities. Moreover, OSIRIS II will inevitably grow through the addition of a substantial number of new programs in the future. The expansion, refinement, and maintenance of the system is assured inasmuch as the Consortium staff relies on OSIRIS II because of its unique capabilities for archival processing, for servicing data and analysis requests, and for handling student analysis projects in the summer seminars. In addition to this necessary use by the Consortium, others at the Institute for Social Research and the University of Michigan's Department of Political Science require, as a part of their research work, the continued development of relevant software, which subsequently gives the Consortium staff additional possibilities for augmenting OSIRIS II.

III. Distribution of OSIRIS II by the Consortium

Over a year ago, with the above perspectives in mind, we cautiously began distribution of OSIRIS upon request by member schools. We started this with considerable trepidation because of our own past difficulties with moving from one computing environment to another. We tried to limit use of the OSIRIS system to those institutions whom we judged were prepared to cope with possible problems. Predictably, even with the relatively great compatibilitiy between IBM 360 Operating System installations, problems of

many kinds occurred when OSIRIS was first exported. Subsequent revisions and additions to the programs in the package, and to the mode in which it is distributed, have been most fruitful, and users can now implement the full system with, at most, a few days efforts.

Our main effort has been directed at schools using IBM 360's, since OSIRIS II is written for this computer and over 70 Consortium schools have 360's large enough to use the current OSIRIS II package. In addition, Vanderbilt converted an early version of OSIRIS for use on XDS Sigma 7 computers. We are presently working with a group of schools to get OSIRIS II running on CDC 6000 installations. About 14 Consortium members have one or the other of the large CDC computers. Other possibilities for extending use beyond IBM 360 users are being explored, although the additional problems are not easily resolved.

We have just reached the point at which the distributed system really has a full range of statistical programs and is relatively easy to establish and use in a particular computing environment. Initial response to these improvements in OSIRIS II is so positive that we fully expect that within this next year at least another ten to twenty schools will be added to the list of users, which presently numbers twenty-five.

The Consortium presently has assigned one experience programmer half-time to the distribution of OSIRIS II. Other programming staff members are called in whenever problems develop in the use of their specific programs on other computers. Because the Consortium's Operating Budget, which is supported by the membership fees, has been strained in meeting rapidly rising costs in all areas--even forcing some reduction in the Consortium's survey data archiving effort--it has been impossible for us to distribute OSIRIS II free of charge. We ask three hundred dollars for the initial shipment of the system, and one hundred fifty dollars for each subsequent year if updates, newsletters, and new releases are desired. At present this covers only a portion of the costs of distribution, with the balance covered primarily by the Consortium Operating Budget.

IV. Project Objectives

One very large problem has bothered us throughout the entire (if brief) history of our software distribution effort: inadequate documentation for the user has been a major obstacle confronting and limiting full use of the system. Although OSIRIS II is now easy to use for many common tasks, it is a large package of programs (48 programs now with at least another ten to be added in the next year) and contains many powerful but sometimes subtle features in its implementation. We find that the existing documentation. We find that the existing documentation leaves us with a large volume of face-to-face discussion and consultation with our University of Michigan users. The present documentation is reasonably thorough in describing how to run specific programs, but in most cases it is still

too demanding for anyone other than a very experienced user. For the beginner, too much information is presented. Indeed, this problem is so critical that we have just completed assembling a selection of existing introductory material for this audience. More experienced users can read the present documentation and learn what particular programs do, yet not understand how to use several of them together to get a job done. A user who wants to know the details of the statistical procedures used in a program must all too often check with a skilled programmer. We find the total volume of local consultation so large that, with our present documentation, it is hard to imagine that any of the other installations using OSIRIS II can be tapping more than a small fraction of its capabilities.

In general, it is clear that users of virtually all present social science software suffer from incredibly inadequate documentation. The inadequacy is accentuated when the results of past documentation efforts are compared with the manuals which users require from a manufacturer such as IBM. The need for better documentation becomes especially acute with complex systems such as OSIRIS II, and will undoubtedly intensify in the future as social scientists seek to exploit more and more of the power of the computer. At present it is certainly true, at least for the non-Michigan users of OSIRIS II, that appropriate returns are not being realized on the capitalization of sophisticated software. Although user frustration is the most obvious indicator of inadequate documentation, the larger costs which must be minimized result from the less than optimal, inefficient use (or misuse) of existing capabilities.

V. The Particular Projects Proposed

The documentation projects for which we now request funding are described in detail on the following pages. All of the tasks are defined with the assumption that the cost of continued development, maintenance, and distribution of the OSIRIS II software will be covered through other resources available to the Consortium, its members, and other users of the system. As a part of this, we expect to provide improved test data, sample setups and corresponding sample output for all of the programs. This will help ensure that each user has a functioning system after installation and will provide at least one easy way to check the basic operation of any particular program after any re-programming that might take place at a particular installation.

Upon completion of the documentation specified in this proposal, we will send two full sets to each Consortium member. (This will be done whether they use OSIRIS II or not, since many of the topics covered in the documentation will be useful for social science computer users in general.) The costs of this basic distribution are included in the proposal. Additional copies will be available to any interested parties on a cost basis. For the machine-readable portions of the documents, we will also make tapes

available so that others can handle their own modification and reproduction tasks if they so desire. Past experience indicates that the best method for handling updates will be to have the manuals in loose-leaf form, and provide entire pages containing revisions or additions for insertion. With each set of updates we will also provide a new table of contents and a page listing all current updates which are relevant to users' needs. Updates will also be made available at cost through subscriptions to individuals upon request. These are basically the same procedures we have established with our data documentation.

All of the work covered by this proposal will be done in the context of continual review of the effectiveness of the documents produced for the intended type of user. Through the teaching of students on the Michigan campus and in the Consortium Advanced Science Seminars, and in the course of training new members of the analysis, processing, and programming staffs, we have learned a good deal about proper style and organization in documentation. To verify and augment what we have already learned, it is essential that we test the new documents we produce as early as possible (and often in partially completed form) on many different groups of individuals. Fortunately, we will continue to have an environment suitably populated with a variety of types of computer users, so that early "manuscript" review can be very easily handled as a part of our normal work. We will also distribute draft versions of the documents to active users of OSIRIS II during the project and request detailed feedback.

With these overall comments in mind, it is appropriate to turn to the descriptions of the documents.

A Beginner's Manual

OSIRIS II is so large, and contains so many options, that it is very difficult for most beginners, especially those with no prior experience with such systems, to grasp and use the basic capabilities effectively. A beginner's manual oriented toward this group is essential, and will require about three man-months of additional writing and editing, with a like amount of clerical work. The Manual will make it possible for an instructor in a course using data analysis to have his students use OSIRIS II without investing substantial class time in technical explanation or requiring that a separate course has been taken on the use of the system. The instructor can therefore focus on the substance of his course and not be hampered by the need for extended discussions of computing problems. Introductory material on general computing concepts as well as OSIRIS II will be provided, with some attention given to telling the user how to work with the complete program manual described below. There will be a focus on the most important features of the basic programs, such as those involved in creating a data file, recoding variables and calculating various indices, cross tabulation capabilities, scatterplot routines,

correlations programs, and regression programs. We plan, under this proposal, to produce a document which can be read through in no more than a few hours to facilitate first contact with OSIRIS II. Much of the presentation must take advantage of graphics to improve comprehension. The shaping of these materials will build upon experience gained from recent Consortium efforts to provide member users with an introductory manual produced by gathering together existing but scattered materials.

Detailed Program-by-Program Documentation

This is a task which will take our existing OSIRIS II Users Manual and reorganize, expand, and augment it. The present manual is both extensive and quite accurate, so that it forms a very good basis from which to work. This manual is already machine-readable and clearly needs to be kept primarily in that form. Where appropriate, additional pages of illustrations or tables which cannot effectively be made machine-readable will be prepared for insertion in the manual. Although this documentation is discussed here as an integrated body of materials, it will almost certainly have to be issued in several volumes because of its sheer bulk (the present manual is already over 400 pages). Most probably, the first volume will cover the overall description of each data preparation or manipulation program, its uses, and its control parameters, with a second volume covering these same topics for the analysis programs. Third and fourth volumes will cover the sample setups for these respective programs, descriptions of error comments they produce, and system-specific information such as the IBM Job Control Language needed to run the programs. Keeping this latter material separate may also make it easier to tailor volumes to different computer installations. It seems certain that with the variety of material to be included a master index to all the documentation must be prepared.

Work is needed on reorganizing the description of some specific programs so that the user can more readily understand what they do. Most of this work must go into expanding the descriptions of the programs to include new types of information. Detail about the algorithms used needs to be added, including exposition of the factors which affect execution times. For the statistical programs, it is essential that the specific equations used be given so that an interested user can ascertain whether each statistic is calculated in the fashion which he expects and finds acceptable. The conditions under which numerical accuracy may be degraded during calculation must also be discussed in the documentation.

For most of the programs, a section is needed describing the most common uses of that program, particularly for programs designed for data preparation or manipulation since there are few alternate sources of information. Some attention must also be given to the unusual uses of each program. Another section will cover interrelationships among programs, including the specification of which programs can be used in combination with others

to complete large and complex tasks, which programs can substitute for others, and factors to consider when passing data between programs. This domain of proposed activity should also include references to the use of other software, such as utilities for file copying, and (at the other extreme) a discussion of some of the considerations involved in writing programs to be used with OSIRIS II.

The above material in combination with the appropriate portions of the existing OSIRIS II manual would form the projected volumes covering descriptions of the programs, their uses, and their control parameters. The production of this material is the largest task proposed, requiring an estimated ten man-months of preparation and writing, along with seven man-months of clerical support.

The topics covered in the third and fourth volumes will include sample setups for each program, with detailed explanations of key points. Several examples for each program will often be desirable to make critical variations clear. Similar attention will be given to illustrating cases where programs are used in combination.

We will include a description of the techniques involved in debugging a job and checking that it has run properly. A great deal of user time and consultation time is spent simply teaching people what things they need to check in trying to get a computing job run correctly. It is our impression that an explanation of the process to be followed in debugging can be relatively simple and effective in helping users.

An element which should be a part of the documentation for each program is a complete listing of all error comments printed by the program. This should contain additional explanations whenever the printed comment is at all abbreviated. For each error comment there should also be an explicit statement as to the phase of the program's execution during which that check is made. Such additional documentation would make it much easier to figure out what many of the stated errors mean. In addition, it may help the person whose job has aborted to examine the list of error comments for the others which were not printed and often in that way further decipher the nature of the problem encountered. We will also include a summary of how to deal with the more common completion codes produced by IBM's Operating System. Special attention would be given to the handling of input or output errors, particularly with magnetic tapes.

These tasks primarily involve the collection and editing of existing but scattered types of information, with significant time going into careful proof-reading to ensure that the final copies have accurate examples. This workload is estimated at four man-months of intermediate staff work and four man-months of clerical work.

VI. Budget

The documentation projects described will absorb a total of severteen man-months of work in planning and writing the material, and fourteen man-months of typing or entering them into machine-readable form. The budget also includes general costs for project administration, communication, reproduction, supplies, keypunch and computer terminal rental, and computer time to handle final editing of the machine-readable document. Since the projects can succeed only if the work is in large part done by people who are already highly experienced with the details of the real possibilities and problems involved in the use of OSIRIS II, we will draw very heavily upon existing staff from our programming and archival operations. The bulk of the work should be done within the first nine months of the project period, with the balance used for proof-reading, reproduction, and distribution of the final documents.

V. ICPR ADMINISTRATION

ROSTER OF MEMBER INSTITUTIONS AND OFFICIAL REPRESENTATIVES

Institution	Official Representative
Alabama, University of	Dr. Robert B. Highsaw
Alberta, University of	Professor J. Paul Johnston
Allegheny College	Professor Kenneth Greene
The American University	Professor Alonzo Mackelprang
	Dr. Linda L. Greenberg
Amsterdam, University of	Dr. Rob Mokken
Arizona, University of	Professor Roger Harned
Arizona State University	Professor Leo D. Vichules
Auburn University	Professor Raymond B. Wells
Australian National University	Dr. R. S. Parker
Ball State University	Professor W. L. Gruenewald
Bowling Green State University	Professor James Q. Graham
British Columbia, University of	Professor J. A. Laponce
California Institute of Technology	Professor Robert H. Bates
California, University of (Berkeley)	Professor William Bicker
(Davis)	Professor Abraham Miller
(Los Angeles)	Professor Carl Hensler
(Riverside)	Professor Barbara Deckard
(Santa Barbara)	Professor Carl Hetrick
California State College (Fullerton)	Professor Charles G. Bell
(Long Beach)	Professor Jerry L. Weaver
(Los Angeles)	Professor Kenneth A. Wagner
Carleton University	Professor John deVries
Carnegie Endowment for International Peace	Miss Anne Winslow
Case Western Reserve University	Dr. Don R. Bowen
Chicago, University of	Professor Norman Nie
Cincinnati, University of	Professor Steve Bennett
City University of New York	Professor Kenneth Sherrill
Colorado State University	Dr. Duane W. Hill
Columbia University	Professor Robert S. Gilmour
Connecticut, University of	Professor Everett C. Ladd
Cornell University	Professor Howard Aldrich
Dartmouth College	Professor Denis G. Sullivan
DATUM (Bad Godesberg, Germany)	Dr. Klaus Liepelt
Delaware, University of	Professor Henry T. Reynolds

Institution	Official Representative
Denison University	Professor Emmett Buell
Duke University	Professor Richard Trilling
Emory University	Professor Guy Peters
Essex, University of	Professor Keith Ovenden
Florida Atlantic University	Professor Everett Cataldo
Florida, University of	Professor Richard L. Sutton
Florida State University	Professor Norman R. Luttbeg
Georgia, University of	Professor Keith R. Billingsley
Georgia State College	Professor Jerry D. Perkins
Georgetown University	Professor Robert A. Hitlin
Gothenburg, University of	Mr. Bo Sarlvik
Harvard University	Professor William Schneider
Hawaii, University of	Dr. Earl Babbie
Houston, University of	Professor Hugh W. Stephens
Idaho State University	Dr. R. John Eyre
Illinois, University of (at Chicago Circle)	Professor David Leege
(Urbana)	Professor Fred Coombs
Illinois State University	Dr. Joel G. Verner
Indiana University	Professor Leroy N. Rieselbach
Indiana State University	Professor John Crittenden
Iowa, University of	Professor George R. Boynton
Johns Hopkins University	Professor Steve Stephens
Kansas, University of	Professor Robert T. Aangeenbrug
Kansas State University	Professor Frederick D. Herzon
Kent State University	Professor John Gargin
Kentucky, University of	Professor Michael Baer
Lehigh University	Professor Stephen D. Bryen
Louisiana State University	Professor Paul E. Grosser
Louisville, University of	Mrs. Adele K. Ferdows
Loyola University	Dr. Herman Smith
McGill University (Montreal, Canada)	Professor Harold M. Waller
McMaster University (Hamilton, Canada)	Professor H. J. Jacek
Maine, University of (Orono)	Professor Kenneth P. Hayes
Mannheim University (Germany)	Dr. Max Kaase
Mankato State College	Professor Daniel L. Klassen
Maryland, University of	Dr. M. Margaret Conway

Institution	Official Representative
Massachusetts, University of	Professor Stanley Bach
Memphis State University	Dr. H. R. Mahood
Miami University	Professor Douglas W. Frisbie
Michigan, The University of (Ann Arbor)	Professor Bruce Bowen
Michigan State University	Professor Paul Conn
Minnesota, University of	Professor William H. Flanigan
Mississippi, University of	Professor F. Glenn Abney
Missouri, University of (Columbia)	Professor David Leuthold
(Kansas City)	Professor Dale A. Neuman
(St. Louis)	Professor Edward C. Dreyer
New Hampshire, University of	Professor Robert Craig
New York University	Professor Robert Burrowes
North Carolina, University of	Professor James W. Prothro
North Texas State University	Professor C. Neal Tate
Northern Illinois University	Professor Kevin L. McKeough
Northwestern University	Mrs. Lorraine Borman
Nuffield College (England)	Paul Duncan-Jones, Esq.
Oberlin College	Professor Paul A. Dawson
Ohio State University	Professor Richard Hofstetter
Ohio University	Professor David Dabelko
Oklahoma, University of	Professor Samuel A. Kirkpatrick
Oklahoma State University	Professor Charles M. Dollar
Pennsylvania, University of	Professor Neal Cutler
Pennsylvania State University	Professor Michael King
Pittsburgh, University of	Professor Michael Margolis
Princeton University	Professor Judith Rowe
Purdue University	Professor William Shaffer
Queen's University	Professor N. H. Chi
Rice University	Professor Joseph Cooper
Rochester, University of	Professor Richard Niemi
Rutgers University	Professor Stephen Salmore
San Diego State College	Professor Betty A. Nesvold
San Francisco State College	Professor R. Gene Geisler
South Carolina, University of	Professor J. A. Kuhlman
Southern California, University of	Professor Kenneth H. Thompson
Southern Illinois University	Dr. David Kenney

Institution	Official Representative
Stanford University	Professor Paul M. Sniderman
State University of New York (Albany)	Dr. Leon Cohen
(Binghamton)	Professor Eduard Ziegenhagen
(Brockport)	Professor Frank Feigert
(Buffalo)	Professor James P. Zais
(Stony Brook)	Professor John A. Gagnon
Strathclyde, University of	Professor Richard Rose
Swarthmore College	Professor Marc Ross (at Bryn Mawr)
Syracuse University	Professor Robert McClure
Temple University	Professor Stephen Whitaker
Tennessee, University of	Professor Charles E. Patterson, Jr.
Texas Tech University	Dr. Gordon Henderson
Texas, University of	Professor Allen M. Shinn
Tulane University	Professor Robert S. Robins
Vanderbilt University	Professor Richard Pride
Vermont, University of	Professor Lyman J. Gould
Virginia, University of	Professor Paul T. David
Virginia Polytechnic Institute	Professor Charles L. Taylor
Washington and Lee University	Professor William Buchanan
Washington University	Professor W. Dean Burnham
Washington State University	Professor Evan Rogers
Washington, University of	Professor Wayne Francis
Wayne State University	Professor Saadia Greenberg
Wesleyan University	Professor Richard Boyd
Western Kentucky University	Professor Thomas Madron
Western Michigan University	Professor David Hanson
Western Ontario, University of	Professor Wallace Gagne
West Florida, University of	Professor Donald M. Freeman
Wichita State University	Professor Richard E. Zody
Williams College	Professor Charles Baer
Windsor, University of	Professor Larry LeDuc
Wisconsin, University of (Madison)	Professor Jack Dennis
(Milwaukee)	Professor Ronald Hedlund
Wisconsin State University	Mr. Morton Sipress
Wright State University	Professor Robert W. Adams
Yale University	Dr. Jeffrey Milstein
York University	Professor Tom Atkinson

ICPR COUNCIL MEMBERSHIP

1962-63
James W. Prothro, University of North Carolina, Chairman
David Easton, University of Chicago
Robert E. Lane, Yale University
Austin Ranney, University of Wisconsin
William H. Riker, University of Rochester

1963-64
Austin Ranney, University of Wisconsin, Chairman
Robert E. Agger, University of Oregon
Robert E. Lane, Yale University
Robert H. Salisbury, Washington University
John C. Wahlke, State University of New York at Buffalo

1964-65
John C. Wahlke, State University of New York at Buffalo, Chairman
William Buchanan, University of Tennessee
John H. Kessel, University of Washington (one year, filling out Agger's term)
Robert H. Salisbury, Washington University
Joseph Tanenhaus, New York University

1965-66
Joseph Tanenhaus, University of Iowa, Chairman
Carl Beck, University of Pittsburgh
William Buchanan, University of Tennessee and Washington and Lee University
Kenneth Janda, Northwestern University
Dwaine Marvick, UCLA

1966-67
Dwaine Marvick, UCLA, Chairman
Kenneth Janda, Northwestern University
Carl Beck, University of Pittsburgh
John Meisel, Queen's University
Sidney Ulmer, University of Kentucky

1967-68
Sidney Ulmer, University of Kentucky, Chairman
Christian Bay, University of Alberta
Charles Cnudde, University of California
Heinz Eulau, Stanford University
Richard I. Hofferbert, Cornell University
John H. Kessel, Allegheny College
David Leege, University of Missouri
John Meisel, Queen's University
Stephen Whitaker, Temple University

1968-69 Heinz Eulau, Stanford University, Chairman
Christian Bay, University of Alberta
Charles Cnudde, University of Wisconsin, Madison
William H. Flanigan, University of Minnesota
Richard I. Hofferbert, Cornell University
Joseph LaPalombara, Yale University
David Leege, State University of New York at Buffalo
Donald Matthews, University of North Carolina
Stephen Whitaker, Temple University

1969-70 Heinz Eulau, Stanford University, Chairman
Charles Cnudde, University of Wisconsin
Fred Greenstein, Wesleyan University
William H. Flanigan, University of Minnesota
Jean A. Laponce, University of British Columbia
David Leege, State University of New York at Buffalo
Donald Matthews, University of North Carolina
James Rosenau, Rutgers University
Charles Tilly, University of Michigan

1970-71 Donald Matthews, Brookings Institute, Chairman
Allan G. Bogue, University of Wisconsin
Fred Greenstein, Wesleyan University
William H. Flanigan, University of Minnesota
Wayne L. Francis, University of Washington
Charles O. Jones, University of Pittsburgh
Jean Laponce, University of British Columbia
James Rosenau, The Ohio State University
Charles Tilly, The University of Michigan

STANDING COMMITTEES OF THE ICPR COUNCIL

Data Acquisition and Repository Activity

Professor Heinz Eulau, Organizational Data
Professor Jean Laponce, Comparative Politics
Professor Donald Matthews, American Politics
Professor James Rosenau, International Relations
Professor Charles Tilly, Historical Data

Decentralization of Summer Training

Professor Heinz Eulau
Professor William Flanigan
Professor Donald Matthews

Membership Committee

Professor David Leege
Professor Charles Cnudde
Professor William Flanigan

Summer Admissions

Professor Charles Cnudde
Professor William Flanigan
Professor Fred Greenstein

ARCHIVAL ADVISORY COMMITTEES

American Politics

Donald Matthews, Chairman, The Brookings Institution
Fred Greenstein, Wesleyan University
John Grumm, Wesleyan University
Michael Lipsky, Massachusetts Institute of Technology
Robert Salisbury, Washington University, St. Louis
Ira Sharkansky, University of Wisconsin
John Wahlke, University of Iowa

Comparative Politics

Jean Laponce, Chairman, University of British Columbia
Jean Blondel, University of Essex
Kenneth Janda, Northwestern
Dwaine Marvick, UCLA
Kenneth Prewitt, University of Chicago
Stein Rokkan, University of Bergen
Kenneth Thompson, University of Southern California

Historical Data

Charles Tilly, Chairman, The University of Michigan
Allan Bogue, The University of Wisconsin
W. Dean Burnham, Washington University, St. Louis
Emmanuel Le Roy Ladurie, University of Paris
G. William Skinner, Stanford University
Lawrence Stone, Princeton University

International Relations

James Rosenau, Chairman, The Ohio State University
Phillip Burgess, The Ohio State University
Ernst Haas, University of California, Berkeley
Charles Hermann, The Ohio State University
Ole Holsti, University of British Columbia
Charles McClelland, University of Southern California
Mancur Olson, University of Maryland
Rudolph Rummel, University of Hawaii
Paul Smoker, University of Lancaster, England

Organizational Data

Heinz Eulau, Chairman, Stanford University
Peter Blau, Columbia University
Robert Kahn, The University of Michigan

ICPR STAFF

Administrative

Executive Director - Dr. Richard I. Hofferbert
Associate Director - Dr. Philip E. Converse
Associate Director - Dr. Donald E. Stokes
Assistant Director - Mr. Gregory A. Marks
Assistant to the Director - Mr. Raburn L. Howland
Senior Administrative Assistant - Miss Ann Robinson
Administrative Assistant - Miss Evelyn R. Kromer
Secretary - Miss Christine Fiore
Secretary - Mrs. Linda Sobkowski

Curricular Development

Director - Dr. Donald E. Stokes
Research Associate - Dr. Gudmund R. Iversen
Research Associate - Mr. Lutz Erbring
Assistant Study Director - Mr. Larry Boyd
Assistant Study Director - Mr. John Deegan
Assistant Study Director - Mr. Helmut Norpoth
Assistant Study Director - Mr. George Rabinowitz
Assistant Study Director - Mrs. Stuart Rabinowitz
Assistant Study Director - Mr. Paul Robertson
Secretary - Mrs. Stella Moyser

Historical Archive

Director - Dr. Jerome M. Clubb
Assistant Director - Mr. Michael Traugott
Assistant Study Director - Mr. Erik Austin
Assistant Study Director - Miss Charlotte Goodman
Assistant Study Director - Mrs. Santa Traugott
Supervisor, Servicing Section - Miss Janet Vavra
Assistant in Research - Mr. Michael McCrory
Keypunch Supervisor - Mrs. Arlyn Champagne
Keypunch Operator - Miss Christine Bellair
Keypunch Operator - Mrs. Scarlett Bennett
Keypunch Operator - Mrs. Bok Soon Hoag
Secretary - Miss Joan Getsinger
Secretary - Mrs. Louise Huppert

International Relations Archive

Director - Dr. Raymond Tanter
Assistant Director - Mr. Robert Beattie
Supervisor, Servicing Section - Miss Janet Vavra
Assistant in Research - Mr. Anthony Banash
Assistant in Research - Mr. Thad Brown
Assistant in Research - Mrs. Susan Cowart
Assistant in Research - Mrs. Robin Katz
Assistant in Research - Mr. Jacek Kugler
Assistant in Research - Mrs. Cheryl Olsen
Assistant in Research - Mrs. Kathleen Sabrosky
Secretary - Miss Emily Turner

Computing Support Group

Director - Mr. Gregory A. Marks
Systems Supervisor - Mr. Stewart Robinovitz
Staff Supervisor - Mrs. Tina Bixby
Research Associate - Mr. David Beckles
Programmer Analyst - Mrs. Carol Cassidy
Programmer Analyst - Mrs. Donna Rocheleau
Systems Analyst - Miss Sylvia Barge
Programmer Analyst - Mrs. Jennifer Campbell
Programmer - Mrs. Carol Damroze
Secretary - Mrs. Magdelena Eureste

Survey Archive

Director - Dr. M. Kent Jennings
Assistant Director - Miss Carolyn Geda
Substantive Coordinator - Mrs. Maria E.M. Sanchez
Technical Supervisor - Miss Susanne Marshall
Supervisor, Servicing Section - Mrs. Maxene Perlmutter
Data Librarian - Mrs. Suzy Weisman
Assistant in Research - Mr. Harlan Himel
Assistant in Research - Miss Wendy Hoag
Assistant in Research - Mr. Edward J. Schneider
Assistant in Research - Miss Karen Sidney
Assistant in Research - Mrs. Mary Starkweather
Secretary - Mrs. June Stuart
Secretary - Mrs. Jane Willer

ICPR SUMMER INSTRUCTIONAL STAFF, 1970

Lectures

Research design	Dr. Samuel Kirkpatrick, University of Oklahoma
Topics in statistics	Dr. Gudmund Iversen, University of Michigan
Mathematics in political science	Dr. Bruce Bowen, University of Michigan
Dynamic analysis	Dr. Philip Converse, University of Michigan
Basic statistics I	Mr. Bruce Campbell, University of Michigan
Data analysis	Dr. Kirkpatrick
Causal inference	Mr. Herbert Asher, University of Michigan
Dimensional analysis	Dr. Bowen
Probability models	Dr. Herbert Weisberg, University of Michigan
Basic statistics II	Mr. Campbell, Mr. Helmut Norpoth, University of Michigan

Seminars

Methodological Workshops
6 seminars

Michael Denny
Peter Joftis
Dr. George Kent,
San Francisco State College
Arthur Miller, Coordinator
George Moyser
Lee Muhlenkort
Carl Stone

Statistical Techniques
3 seminars

Larry Boyd
Dr. Gudmund Iversen
Lawrence Mayer,
Ohio State University
Helmut Norpoth

Causal Inference
3 seminars

Herbert Asher
Andrew Cowart
David Karns,
Cornell University
Stuart Macdonald
Thomas Sanders

Dimensional Analysis
2 seminars

Lutz Erbring
Burton Leathers,
Cornell University

Dynamic Analysis
1 seminar

Paul Beck
Dan Fox

Historical Analysis
1 seminar

Dr. Jerome Clubb
Michael Traugott

Computer Simulation
1 seminar

Dr. John P. Crecine
Steven Coombs
John Deegan
George Rabinowitz

Computer Group

Judd Conway
Sue Hart
Yoshio Hida
Edward Schneider
Carl Shaner
John Stucker,
Coordinator

	Final Budget 1969-70	Projected Budget 1970-71
I. TECHNICAL SERVICES TO MEMBERS		
A. Historical Archive Servicing		
Professional and technical staff salaries and fringe benefits	$ 21,000	$ 25,000
Supplies, postage and communications	5,500	8,300
Computer time and machine rental	18,000	16,700
SUBTOTAL	$ 44,500	$ 50,000
B. Survey Archive Servicing		
Professional and technical staff salaries and fringe benefits	$ 30,700	$ 33,800
Supplies, postage and communications	6,000	5,000
Printing and Duplicating	12,000	13,000
Computer time and machine rental	11,500	20,000
SUBTOTAL	$ 60,200	$ 71,800
C. International Relations Archive Servicing		
Professional and technical staff salaries and fringe benefits	$ 10,000	$ 15,000
Supplies, Postage and communications	2,000	6,000
Computer time and machine rental	4,500	9,000
SUBTOTAL	$ 16,500	$ 30,000
D. OSIRIS II Distribution		
Professional and technical staff salaries and fringe benefits	$ 14,200	$ 8,600
Supplies, Postage and communications	2,100	1,400
Computer time and machine rental	7,000	6,000
SUBTOTAL	$ 23,300	$ 16,000
Overhead	$ 16,600	$ 28,500
TOTAL	$161,100	$196,300

	Final Budget 1969-70	Projected Budget 1970-71
FUNDING FOR SERVICING:		
ICPR Operating Budget	$123,800	$142,200
CRCR Contract	21,800	-----
ONR Contract	------	37,900
Miscellaneous income from non-members/members	9,000	6,000
OSIRIS distribution cost sharing	6,500	10,200
TOTAL	$161,100	$196,300
II. SURVEY ARCHIVE DEVELOPMENT		
Professional and technical staff salaries and fringe benefits	$ 71,000	$ 80,000
Supplies, postage and communications	3,600	5,300
Computer time and machine rental	44,500	37,000
Overhead	11,600	18,400
TOTAL	$130,700	$140,700
FUNDING:		
ICPR Operating Budget	$130,700	$140,700
III. HISTORICAL ARCHIVE DEVELOPMENT		
Professional and technical staff salaries and fringe benefits	$127,000	$ 79,300
Supplies, postage and communications	9,800	6,000
Computer time and machine rental	57,000	24,000
Overhead	36,700	30,000
TOTAL	$230,500	$139,300
FUNDING:		
Ford Foundation Project #45509	$125,500	--------
NSF Project #45550	$105,000	$121,700
NSF Cornell sub-contract	-------	17,600
TOTAL	$230,500	$139,300

	Final Budget 1969-70	Projected Budget 1970-71
IV. SUMMER PROGRAM		
Participant support	$ 66,000	$105,800
Teaching and staff salaries	83,000	80,800
Duplicating and supplies	8,000	15,000
Data processing and computer time	27,000	40,300
Overhead	5,300	7,300
TOTAL	$189,300	$249,200
FUNDING:		
NSF Summer Seminar Project	$ 93,000	$ 93,000
NSF Social Sciences Division	------	15,100
Mathematical Social Science Board	------	7,300
University of Michigan	73,000	85,800
ICPR Operating Budget	23,300	48,000
TOTAL	$189,300	$249,200
V. CURRICULAR DEVELOPMENT		
Professional and technical staff salaries and fringe benefits	$ 60,000	$ 55,000
Computer time and machine rental	8,000	14,000
Administrative costs and supplies	2,000	9,500
Overhead	9,200	10,900
TOTAL	$ 79,200	$ 99,400
FUNDING:		
NSF Grant for Curricular Development	$ 79,200	$ 99,400
VI. IR/IO ARCHIVE DEVELOPMENT		
Professional and technical staff salaries and fringe benefits	$ 98,000	$100,000
Computer time and machine rental	26,000	32,500
Supplies and administrative costs	20,100	25,000
Overhead	51,500	52,500
	$195,600	$210,000

FUNDING:	Final Budget 1969-70	Projected Budget 1970-71
FUNDING:		
Contract with Center for Research on Conflict Resolution	$195,600	-------
Office of Naval Research, Group Psychology Program	------	$210,000
TOTAL	$195,600	$210,000

VII. CONSORTIUM ADMINISTRATION

Salaries and Fringe Benefits	$ 68,000	$ 71,400
Supplies, duplicating, postage & communications	13,000	8,800
Annual meeting costs	22,000	24,000
Council meeting costs	6,000	4,500
Archival Inventory & Annual Report Preparation	2,000	2,400
Staff and Administrative Travel	11,900	5,200
Overhead	12,200	17,400
	$135,200	$133,700
FUNDING:		
ICPR Operating Budget	$135,200	$133,700

VIII. OSIRIS II DOCUMENTATION PROJECT

Professional and Technical Staff		
Salaries and Fringe Benefits	------	$ 27,000
Supplies and Communication	------	1,500
Duplicating and Publications	------	7,000
Computer Time and Machine Rental	------	5,600
Overhead		14,200
TOTAL		$ 55,300
FUNDING:		
NSF Grant for OSIRIS II Documentation		$ 55,300

IX. SUMMARY - FISCAL YEAR 69-70

A. Income Sources: Fiscal Year 69-70

1.	ICPR Operating Budget	
	(a) 90 Category "A" members @ $3,500	$315,000
	(b) 41 Category "B" members @ $2,000	82,000
	(c) 8 Category "C" members @ $2,000	16,000
		$413,000
2.	National Science Foundation	
	(a) Project Grants	$277,200
3.	Ford Foundation	
	(a) Project Grants	$125,500
4.	University of Michigan	
	(a) Staff salaries	$ 49,000
	(b) Computer time	25,000
		$ 74,000
5.	Center for Research on Conflict Resolution	$217,400
6.	Miscellaneous Income	
	(a) Archive Services to Members and Non Members	$ 9,000
	(b) OSIRIS Distribution Cost Reimbursements	6,500
		$ 15,500
	TOTAL	$1,122,600

B. Total Expenditures $1,122,600

X. PROJECTION - FISCAL YEAR 70-71

A. Income Sources:

1. ICPR Operating Budget

(a) 88 Category "A" members @ $4,000	$352,000
(b) 42 Category "B" members @ $2,300	96,600
(c) 8 Category "C" members @ $2,000	16,000
	$464,600

2. National Science Foundation

(a) Project Grants	$391,800
(b) Cornell Subcontract	17,600
	$409,400

3. Office of Naval Research, Group Psychology Program $247,900

4. University of Michigan

(a) Staff Salaries	$ 50,800
(b) Computer time	35,000
	$ 85,800

5. Miscellaneous Income

(a) Archival Services to Members and Non-Members	$ 6,000
(b) OSIRIS distribution Cost Reimbursements	$ 10,200
	$ 16,200
TOTAL	$1,223,300

B. Total Projected Expenditures $1,223,300