

**ICPSR**  
**Inter-university Consortium for**  
**Political and Social Research**

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**Annual Report,**  
**1979-1980**

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Inter-university Consortium for Political and Social Research

ICPSR 4006

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April 2004



*INTER-UNIVERSITY CONSORTIUM FOR  
POLITICAL AND SOCIAL RESEARCH*

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**ANNUAL REPORT**

**1979-1980**

**ISR**

**Institute for Social Research**  
Center for Political Studies  
The University of Michigan  
Box 1248  
Ann Arbor, Michigan 48106 USA



**ANNUAL REPORT**

**1979-1980**

**INTER-UNIVERSITY CONSORTIUM FOR POLITICAL  
AND SOCIAL RESEARCH**

**AN ORGANIZATION FOR COOPERATION BETWEEN**

The Center for Political Studies

The Institute for Social Research      The University of Michigan

and

The Social Science Community

Founded in 1962



**INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH**

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

TO: THE COUNCIL OF THE INTER-UNIVERSITY CONSORTIUM  
FOR POLITICAL AND SOCIAL RESEARCH

FROM: THE EXECUTIVE DIRECTOR AND STAFF OF THE INTER-  
UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL  
RESEARCH

SUBJECT: ANNUAL REPORT FOR THE EIGHTEENTH YEAR, 1979-1980





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ANNUAL REPORT, 1979-1980

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## ARCHIVAL ACTIVITIES





## ARCHIVAL PROCESSING REPORT, 1979-1980

Data processing activities during 1979-1980 were highlighted by the addition to the archive of four Eurobarometers conducted in 1977 and 1978 by Jacques-Rene Rabier and Ronald Inglehart; of the first (January-February) wave of the 1980 American National Election Study; and the first products of the 1980 Census, including the Richmond Dress Rehearsal file and the Census Software Package. The results of this year's other data processing activities are summarized below, under four categories: acquisition of new studies; addition of datasets in major series; maintenance of ongoing collections and additional processing of existing holdings.

### Acquisition of New Studies

The first products available from the 1980 Census of Population and Housing in the United States were obtained during the year. They were the 1978 Richmond Dress Rehearsal file for Summary Tape File 1A (STF1A), and the Census Software Package (CENSPAC). These files, intended to familiarize 1980 Census data users with the format of 1980 Census files and the software to manipulate them, are the first in a very large collection of files from the 1980 Census to be acquired by ICPSR over the next five years as they are released by the U.S. Census Bureau.

The archive initiated collection of data in a new substantive area in 1979-1980 with the acquisition of two studies prepared for research on leisure activities. They were the National Hunting and Fishing Survey and the Wildlife Recreation Survey, both conducted in 1975. In these surveys, samples of residents of the United States were queried about the amount and nature of their outdoor recreational activities during the prior year.

In the area of foreign affairs and comparative studies, archival holdings were expanded by the addition of two files provided by the Chicago Council on Foreign Affairs drawn from a 1979 survey on American Public Opinion and Foreign Affairs. The first file records responses to foreign affairs questions asked of a sample of the entire U.S. population. The second file contains responses to similar questions asked of a sample of national leaders. Other additions in this area include Edward Azar's Conflict and Peace Data Bank (COPDAB), 1948-1978 which includes monthly aggregations of dyadic international events and of domestic events for approximately 135 countries; and a dataset consisting of statistics on Crime in Western Societies, collected by Ted Robert Gurr and Erika Gurr for the period 1945-1974.

In other areas, two studies relating to family life were added; one a 1976 survey of family life and sexual learning in a large American city and the other a 1976 national survey about physical violence in American families. The Consortium added to its holdings in the area of historical data with the addition of Massachusetts Tax Valuation Records, 1771, collected by Bettye Pruitt, and to its collection of community studies with the Northern California Community study conducted by Claude Fischer in 1977, exploring social networks in neighborhoods.

#### Addition of Datasets in Major Series

Several major series were augmented by receipt of additional files or installments. One of the most important series to which additional files were added is the ongoing program of public opinion research sponsored by the European Community and conducted by Jacques-Rene Rabier and Ronald Inglehart. The Consortium's holdings in this series begin with the European Community Study of 1971, and with the addition this past year of Eurobarometers 7-10, extend to late fall of 1978. It is expected that Eurobarometers 10A, 11 and 12, continuing the series through late fall 1979, will be available in early 1981. One of the major foci of these studies is attitudes toward European integration, but each survey has had a special focus as well. For Eurobarometer 7, the major topic was science and technology in the European Community. Eurobarometer 8 was concerned with women and work roles, Eurobarometer 9 with causes and consequences of unemployment, and Eurobarometer 10 focused on national priorities and European political institutions.

Another important addition to an existing series was the first survey conducted as part of the 1980 American National Election Study, funded by the National Science Foundation and administered by the American National Election Study Board of Overseers. The file obtained (and processed to Class I status) was the January-February (P-1) Survey, the first of eight integrated surveys to be conducted at strategically-chosen periods in the course of the 1980 election year. This survey (P-1) was the first of a projected four-wave panel to be conducted with a nation-wide sample of voters, and was the only file from the 1980 American National Election Study to be released before election day. Two studies investigating Americans' use of time were obtained to complement an existing collection already in the archive. They were Philip E. Converse and John P. Robinson's Americans' Use of Time, 1965-1966, and Philip Converse, Thomas Juster, et al., Americans' Use of Time, 1965-1966 and Time Use in Economic and Social Accounts, 1975-1976: Merged Data.

The ICPSR holdings of individual-level data obtained from the U.S. Censuses of Population and Housing were increased by the receipt of numerous files from the 1960 and 1970 Public Use Samples. These included thirty separate files containing one-in-one-hundred samples from the 1960 census, as well as a 1970 Public Use Sample File which contained merged family and household records for persons residing in 42 SMSA's. The latter file was constructed from many separate files in the 1970 Census' one-in-one-hundred 5 % County Group Sample, and was prepared by Kimball P. Marshall of Sangamon State University.

ICPSR's collection of precinct-level election returns for the State of Michigan, already including data for 1972 and 1974, was enlarged by the addition of returns from elections held in 1978, including the primary as well as general election contests of that year.

#### Maintenance of On-Going Collections

Roll call voting records for the First Session of the Ninety-sixth Congress were processed with an on-line data entry system. Preparation of roll call voting records for the Second Session of the Ninety-sixth Congress was begun as well, with interim partially-proofed voting records for that Congress being made available on demand. Processing of county-level election returns from the 1978 national and state-wide elections in the United States (begun in the last fiscal year) was completed, and both national and state-specific files made available for distribution. Returns from the 1979 state-wide elections in the United States were received from most states. The processing of these returns was begun, using an on-line data entry system designed to produce a national-coverage file of U.S. election statistics at the county level. As a result of the additions to United States election and roll call voting data, a number of ancillary files were revised; these include datasets containing biographical characteristics of members of Congress, the roster of Congressional officeholders, and candidate name and electoral constituency totals.

#### Additional Processing of Existing Collections

Data from three election surveys conducted by the New York Times and CBS News in 1976 were fully processed during the year. These three files, components of a large systematic effort to survey voters across the 1976 presidential election campaign, contain information obtained from interviews with nation-wide samples of voters. The three surveys processed were conducted in June, after the third presidential debate in October, and on election day (November 2). The NORC General Social Survey Cumulative File for 1972-1978 was completely processed to Class

I status, in cooperation with the Roper Center for Public Opinion Research. Additional processing was also devoted to Representation and Development in Brazil, 1972-1973, originally conducted by Philip E. Converse, Peter J. McDonough, Amaury De Souza and Youssef Cohen. This processing included the addition of a sizeable number of variables obtained from open-ended probes in the original survey. The 1977 County and City Data Book, produced by the U.S. Bureau of the Census, also received substantial processing that included concentration of all data into one file, recoding of suppression indicators and preparation of new documentation.

#### Progress on Externally-Funded Projects

Work on the preparation of Macroeconomic Time Series data for the United States, France, Great Britain and Germany was nearly completed during 1979-1980. Supported by a grant from the National Science Foundation, this project is automating thousands of data series covering such topics as prices of commodities, banking, construction, and trade. The data were originally collected by the National Bureau of Economic Research, which is cooperating with ICPSR in this project. Data from eight of the sixteen categories of economic time series were completely processed and made available for use in the year. These time series, stored in eleven discrete datasets, record economic activity in the following general categories:

- Prices
- Stocks of Commodities
- Income and Employment
- Financial Status of Business
- Savings and Investment
- Security Markets
- Volume of Transactions
- Government Finance

Data processing of materials from the other seven categories of economic indicators had nearly been completed by the end of the year (a sixteenth category, Construction, was completed in the previous fiscal year). These data will be made available in the first few weeks of the coming year and this project will be concluded at that time.

Archival resources for the study of crime and criminal justice were significantly augmented during the year by a project to develop and maintain an archive of criminal justice data, funded by a grant from the Bureau of Justice Statistics (formerly part of the Law Enforcement Assistance Administration) of the U.S. Department of Justice. This project, in its third year during 1979-1980, gathered and processed additional data collected by governmental agencies and individual researchers. The Criminal Justice Archive became the original repository for the National Crime Survey Panel, and continued to release each wave as it became available. Additionally, other victimization data and data on juvenile delinquency, prisoners, criminal case

processing, and employment and expenditures in the criminal justice system were acquired. A second emphasis of this project has facilitated use of these data by academic researchers and officials in governmental agencies, by providing extensive substantive and technical consultation to those using the data. A third focus has been on training, both substantive and methodological. Training sessions were conducted, partly in conjunction with the ICPSR Summer Training Program, in accordance with terms of the grant. All three project activities (data archiving, consultation and training) will be continued into the next fiscal year.

Work continued on the third year of a project supported by a grant and cooperative agreement from the Administration on Aging of the Department of Health, Education and Welfare, and the National Institute of Aging. This grant and agreement were made jointly to the ICSPK and the Institute of Gerontology of The University of Michigan to bring together data on aging and the aged. Additional collections of data on attitudes toward aging, life style and satisfaction of the aged, economic status and expectations, as well as on health and health care utilization and facilities, have been collected, processed, and made available for use. Attention was focused on the acquisition of biomedical data related to the aging process, and collections of data in that area began to be received. Training activities also continued in the past year with workshops and seminars conducted for both academic researchers and public officials. The work on this project will continue into the 1980-1981 fiscal year.

Two additional externally-funded projects were begun in 1979-1980. The first, funded by a grant from the Administration on Aging of the U.S. Department of Health and Human Services (formerly HEW), will develop and produce resources for the effective utilization of data collected in the 1980 Census of Population and Housing in the United States. ICPSR, in cooperation with the Institute of Gerontology at the University of Michigan, will prepare a manual describing the 1980 Census data products as well as a computer program for retrieving and displaying data from computer-readable census data files. Drafting of the manuals was begun in the past year, and test reels of census data and accompanying software were acquired and evaluated. The project will continue during the coming fiscal year.

A second project undertaken by ICPSR will collect, process and disseminate a set of data files related to medical practices in the United States. Support for this project has been received from the Robert Wood Johnson Foundation. Data on medical and surgical practice arrangements in twenty-four medical specialties were obtained from the Division on Research in Medical Education of the Medical School at the University of Southern California, which had gathered the data in a survey of doctors and surgeons conducted in 1975. ICPSR will reformat and standardize both data and documentation for the more than seventy files contained in this collection, and disseminate the collection as widely as possible. All files were acquired in the past year and processing of the data has begun. This project will be concluded in the next fiscal year.

## MACHINE-READABLE DATA FILES ACQUIRED AND PROCESSED, 1979-1980

DATA FILES MADE AVAILABLE IN CLASS I FORM:

Class I datasets have been checked, corrected if necessary, and formatted to ICPSR specifications. Also, the data may have been recoded and reorganized in consultation with the investigator to maximize their utilization and accessibility. A codebook often capable of being read by a computer, is available. This codebook, fully documents the data and may include descriptive statistics such as frequencies or means. One copy of a printed codebook is supplied routinely to each Official Representative. All Class I studies are available on magnetic tape in either card-image or OSIRIS format.

1. CBS News/New York Times; CBS News/New York Times Election Surveys 1976: June Survey (ICPSR 7660)  
  
1,454 cases; 85 variables; 4,362 card-images; 250 pages of documentation
2. CBS News/New York Times; CBS News/New York Times Election Surveys 1976: Debate Three Survey (ICPSR 7660)  
  
2,025 cases; 81 variables; 6,075 card-images; 250 pages of documentation
3. CBS News/New York Times; CBS News/New York Times Election Surveys 1976: Presidential Election Day Survey (ICPSR 7660)  
  
15,300 cases; 37 variables; 45,900 card-images; 250 pages of documentation
4. Converse, Philip E., Peter J. McDonough, Amaury G. DeSouza, and Youssef Cohen; Representation and Development in Brazil, 1972-1973: Mass Sample (Open-Ended Questions) (ICPSR 7712)  
  
1,314 cases; 502 variables; 17,082 card-images; 250 pages of documentation
5. Converse, Philip E., Peter J. McDonough, Amaury G. DeSouza, and Youssef Cohen; Representation and Development in Brazil, 1972-1973: Union Sample (Open-Ended Questions) (ICPSR 7712)  
  
352 cases; 503 variables; 4,576 card-images; 250 pages of documentation
6. Inglehart, Ronald and Jacques-Rene Rabier; European Communities Study, 1973 (ICPSR 7330)  
  
13,484 cases; 123 variables; 26,968 card-images; 85 pages of documentation

7. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the Eighty-Ninth Congress, 1965-1966: House of Representatives (ICPSR 0004)

85 pages of documentation

8. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the Eighty-Ninth Congress, 1965-1966: Senate (ICPSR 0004)

100 pages of documentation

9. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the Ninety-Sixth Congress, First Session, 1979: House of Representatives (ICPSR 0004)

437 cases; 682 variables; 1,120 card-images; 140 pages of documentation

10. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the Ninety-Sixth Congress, First Session, 1979: Senate (ICPSR 0004)

100 cases; 518 variables; 1,100 card-images; 105 pages of documentation

11. Law Enforcement Assistance Administration; National Crime Surveys: Cities Sample, 1972-1975 (Person-Level File) (ICPSR 7658)

5,000 cases/dataset (average); 877 variables/dataset (average); 2,470,000 card-images; 216 pages of documentation; 26 datasets (one per city)

12. Law Enforcement Assistance Administration; National Crime Surveys: National Sample, 1973-1977 (Incident-Level File) (ICPSR 7635)

8,000 cases/dataset (average); 337 variables/dataset (average); 1,280,000 card-images; 245 pages of documentation; 20 datasets (one for each reporting quarter)

13. Law Enforcement Assistance Administration; National Crime Surveys: National Sample, 1973-1977 (Person-Level File) (ICPSR 7635)

12,500 cases/dataset (average); 925 variables/dataset (average); 4,750,000 card-images; 225 pages of documentation; 20 datasets (one for each reporting quarter)

14. Law Enforcement Assistance Administration; National Crime Surveys: National Sample, Collection Quarters 1977-3rd and 4th and 1978-1st and 2nd (ICPSR 7635)  
  
110,972 cases/dataset (average); 365 variables/dataset (average); 2,219,440 card-images; 260 pages of documentation; 4 datasets
15. Law Enforcement Assistance Administration; National Crime Surveys: National Sample, Collection Quarters 1977-3rd and 4th and 1978-1st and 2nd (Incident-Level) (ICPSR 7635)  
  
7,700 cases/dataset (average); 337 variables/dataset (average); 246,400 card-images; 260 pages of documentation
16. Law Enforcement Assistance Administration; National Crime Surveys: National Sample, Collection Quarters 1977-3rd and 4th and 1978-1st and 2nd (Person-Level) (ICPSR 7635)  
  
12,500 cases/dataset (average); 926 variables/dataset (average); 900,000 card-images; 260 pages of documentation
17. Miller, Warren E., and National Election Studies/Center for Political Studies; American National Election Study, 1980: January-February (P-1) Survey (ICPSR 7763)  
  
1,008 cases; 623 variables; 15,120 card-images; 538 pages of documentation
18. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category IV, Prices (ICPSR 7644)  
  
2,000 cases/dataset (average); 225 variables/dataset (average); 99,400 card-images; 317 pages of documentation; 2 datasets
19. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category VII, Stocks and Commodities (ICPSR 7644)  
  
1,995 cases; 142 variables; 31,097 card-images; 100 pages of documentation
20. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category VIII, Income and Employment (ICPSR 7644)  
  
1,600 cases/dataset (average); 250 variables/dataset (average); 153,388 card-images; 676 pages of documentation; 3 datasets



21. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category IX, Financial Status (ICPSR 7644)  
  
2,235 cases; 214 variables; 52,941 card-images; 150 pages of documentation
22. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category X, Savings and Investment (ICPSR 7644)  
  
1,889 cases; 276 variables; 57,921 card-images; 193 pages of documentation
23. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category XI, Security Markets (ICPSR 7644)  
  
1,753 cases; 47 variables; 8590 card-images; 35 pages of documentation
24. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category XII, Volume of Transactions (ICPSR 7644)  
  
1,864 cases; 88 variables; 17,731 card-images; 61 pages of documentation
25. National Bureau of Economic Research: Macroeconomic Time Series for the United States, United Kingdom, Germany and France: Category XV, Government Finance (ICPSR 7644)  
  
1,634 cases; 102 variables; 18,117 card-images; 71 pages of documentation
26. National Center for Health Statistics; Mortality Detail File, 1977 (ICPSR 7632)  
  
1,902,106 cases; 35 variables; 1,902,106 card-images; 75 pages of documentation
27. National Center for State Courts; Criminal Case Processing in Metropolitan Courts, 1976 (ICSPR 7750)  
  
10,476 cases; 14 variables; 10,476 card-images; 9 pages of documentation
28. Rabier, Jacques-Rene, and Ronald Inglehart; Euro-Barometer 7: Science and Technology in the European Community, April 1977 (ICPSR 7612)  
  
9,056 cases; 123 variables; 27,168 card-images; 90 pages of documentation

29. Rabier, Jacques-Rene and Ronald Inglehart; Euro-Barometer  
8: Men, Women and Work Roles in Europe, November 1977  
(ICPSR 7604)  
  
8,826 cases; 143 variables; 26,478 card-images; 100  
pages of documentation
30. Rabier, Jacques-Rene, and Ronald Inglehart; Euro-Barometer  
9: Employment and Unemployment in Europe, April 1978  
(ICPSR 7727)  
  
9,151 cases; 97 variables; 18,302 card-images; 150  
pages of documentation
31. Rabier, Jacques-Rene, and Ronald Inglehart; Euro-Barometer  
10: National Priorities and the Institutions of  
Europe, November 1978 (ICPSR 7728)  
  
8,677 cases; 119 variables; 26,031 card-images; 150  
pages of documentation

DATA FILES MADE AVAILABLE IN CLASS II FORM:

Class II studies have been checked and formatted to ICPSR standards. All non-numeric codes have been removed. The studies in this class are available on magnetic tape in either OSIRIS or card-image format. The documentation exists as either a machine-readable codebook (which may be edited and updated as required by further processing), a multilithed draft version or a Xeroxed copy of the investigator's codebook. Any peculiarities in the data will be noted when the data are requested.

32. Association of the Bar of New York City and the Drug Abuse Council; New York Drug Law Evaluation Project, 1973: Ex-Drug User File (ICPSR 7656)  
  
289 cases; 867 card-images; 169 variables
33. Association of the Bar of New York City and the Drug Abuse Council; New York Drug Law Evaluation Project, 1973: Predicate Felony File (ICPSR 7656)  
  
443 cases; 443 card-images; 39 variables
34. Association of the Bar of New York City and the Drug Abuse Council; New York Drug Law Evaluation Project, 1973: Charge Reduction Study File (ICPSR 7656)  
  
319 cases; 319 card-images; 27 variables
35. Association of the Bar of New York City and the Drug Abuse Council; New York Drug Law Evaluation Project, 1973: Criminal Court Study File (ICPSR 7656)  
  
901 cases; 1,802 card-images; 44 variables
36. Association of the Bar of New York City and the Drug Abuse Council; New York Drug Law Evaluation Project, 1973: Prison Detox Study File (ICPSR 7656)  
  
3,550 cases; 7,100 card-images; 67 variables
37. Inter-university Consortium for Political and Social Research; Candidate and Constituency Statistics of Elections in the United States, 1788-1978 (ICPSR 7757)  
  
120,000 cases; 23 variables; 240,000 card-images; 28 pages of documentation
38. Inter-university Consortium for Political and Social Research; Candidate Name and Constituency Totals, 1788-1978 [Records from the 1978 General Elections]. (ICPSR 0002)  
  
1,000 cases; 22 variables; 1,000 card-images; 20 pages of documentation

39. Inter-university Consortium for Political and Social Research; General Election Data for the United States, 1788-1978 [Returns for the 1978 Elections] (ICPSR 0013)  
  
60 cases/dataset (average); 70 variables/dataset (average); 59,000 card-images; 25 pages of documentation; 50 datasets
40. Inter-university Consortium for Political and Social Research; Referenda and Primary Election Materials: Popular Referenda for the United States, 1968-1978 (ICPSR 0006)  
  
60 cases/dataset (average); 80 variables/dataset (average); 36,000 card images; 1,000 pages of documentation; 50 datasets
41. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the 96th Congress, Second Session, 1979: House of Representatives (ICPSR 0004)  
  
437 cases; 345 variables; 3,080 card-images; 100 pages of documentation
42. Inter-university Consortium for Political and Social Research; United States Congressional Roll Call Voting Records for the 96th Congress, Second Session, 1979: Senate (ICPSR 0004)  
  
100 cases; 294 variables; 600 card-images; 90 pages of documentation
43. Law Enforcement Assistance Administration; Expenditure and Employment Data for the Criminal Justice System, 1978. (ICPSR 7618)  
  
8,161 cases; 141 variables; 155,059 card-images; 70 pages of documentation
44. Law Enforcement Assistance Administration; Expenditure and Employment Data for the Criminal Justice System: Annual Files, 1971-1977 [revised version of 1977 file] (ICPSR 7618)  
  
8,044 cases; 133 variables; 152,836 card-images; 52 pages of documentation
45. Law Enforcement Assistance Administration; Juvenile Detention and Correctional Facility Census, 1977 (ICPSR 7758)  
  
992 cases; 227 variables; 9,920 card-images; 16 pages of documentation

46. Law Enforcement Assistance Administration; National Jail Census, 1978 (ICPSR 7737)  
  
3,493 cases; 296 variables; 41,916 card-images; 141 pages of documentation
47. Law Enforcement Assistance Administration; Survey of Jail Inmates, 1978 (ICPSR 7751)  
  
5,247 cases; 600 variables; 68,211 card-images; 60 pages of documentation
48. McKibbin, Carroll L; Biographical Characteristics of Members of the United States Congress, 1789-1980. [Additions for 1979-80] (ICPSR 7428)  
  
20 cases; 119 variables; 60 card-images; 20 pages of documentation
49. Morgan, James N.; Panel Study of Income Dynamics, 1968-1978: Eleventh Wave, Family File (ICPSR 7439)  
  
6,154 cases; 5,872 variables; 851,944 card-images; 411 pages of documentation
50. Morgan, James N.; Panel Study of Income Dynamics, 1968-1978: Eleventh Wave, Family/Individual File (ICPSR 7439)  
  
19,155 cases; 5,843 variables; 2,755,926 card-images; 411 pages of documentation
51. Social Security Administration; Status of the Elderly, 1972 (ICPSR 7694)  
  
14,724 cases; 245 variables; 147,240 card-images; 98 pages of documentation
52. Social Security Administration; Survey of Newly-Entitled Social Security Beneficiaries, 1970 (ICPSR 7659)  
  
19,108 cases; 671 variables; 515,916 card-images; 87 pages of documentation
53. United States Department of Commerce: Bureau of the Census; County and City Data Book, 1977 [Version Two] (ICPSR 7697)  
  
4,658 cases; 309 variables; 204,952 card-images; 46 pages of documentation
54. Wilensky, Harold L.; Detroit Area Study, 1960; Labor and Leisure in the Urban Community: A Study of Social Order and Social Change [Revised Version] (ICSPR 7399)  
  
678 cases; 600 variables; 7,458 card-images; 262 pages of documentation

DATA FILES MADE AVAILABLE IN CLASS III FORM;

Class III studies have been checked by the ICPSR staff for the appropriate number of cards per case and accurate data locations as specified by the investigator's codebook. Often frequency checks on these data have been made. Known data discrepancies and other problems, if any, will be communicated to the user at the time the data are requested. One copy of the codebook for these data will be supplied when the data are requested. The data themselves usually exist only in card-image form.

55. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

F. Christopher Arterton and Harlan Hahn, Political Participation (Corrected Version),

1,558 cases; 66 variables; 1,558 card-images;  
[documentation available from APSA]

56. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Melissa Butler, et al., The Changing Effects of Gender on Political Attitudes and Behavior

2,010 cases; 65 variables; 2,010 card-images  
[documentation available from APSA]

57. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Stephen Frantzich; Presidential Popularity in America: Introductory Dataset

32 cases; 41 variables; 64 card-images  
[documentation available from APSA]

58. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Stephen Frantzich, Presidential Popularity in America: Advanced Dataset

32 cases; 37 variables; 64 card-images  
[documentation available from APSA]

59. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Ray A. Geigle and Peter J. Hartjens, Representation in the U.S. Congress: 1973, Senate (Corrected Version)

100 cases; 37 variables; 100 card-images  
[documentation available from APSA]

60. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Ray A. Geigle and Peter J. Hartjens, Representation in the U.S. Congress: 1973, House (Corrected Version)

435 cases; 37 variables; 435 card-images  
[documentation available from APSA]

61. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Marvin K. Hoffman, The Dynamics of Political Budgeting: A Public Policy Simulation (Corrected Version)

50 cases; 45 variables; 50 card-images  
[documentation available from APSA]

62. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Paul David Schumaker, Russell W. Getter, and Terry Nichols Clark; Policy Responsiveness and Fiscal Strain in 51 American Communities: Categorical Data

51 cases; 78 variables; 102 card-images  
[documentation available from APSA]

63. American Political Science Association; SETUPS: American Politics (ICPSR 7368)

Paul D. Schumaker, Russell W. Getter, and Terry Nichols Clark; Policy Responsiveness and Fiscal Strain in 51 American Communities: Internal-Level Data

51 cases; 78 variables; 102 card-images  
[documentation available from APSA]

64. American Political Science Association; SETUPS: Cross-National and World Politics (ICPSR 7373)

Herbert B. Asher and Bradley Richardson, Comparative Voting Behavior (Corrected Version)

2705 cases; 72 variables; 2705 card-images  
[documentation available from APSA]

65. American Political Science Association; SETUPS:  
Cross-National and World Politics (ICPSR 7373)  
  
James A. Dyer and Lee C. Fennell, Legislative  
Representation: A Cross-National Analysis (Dataset  
A-Corrected Version)  
  
478 cases; 58 variables; 478 card-images  
[documentation available from APSA]
66. American Political Science Association; SETUPS:  
Cross-National and World Politics (ICPSR 7373)  
  
Robert Harmel and Kenneth Janda, Comparing Political  
Parties (Corrected Version)  
  
147 cases; 26 variables; 147 card-images  
[documentation available from APSA]
67. American Political Science Association; SETUPS:  
Cross-National and World Politics (ICPSR 7373)  
  
Ndiva Kofele-Kale and A. J. Stevens; Comparative  
Political Culture and Socialization: Five Nation  
Study (Corrected Version)  
  
1,008 cases; 129 variables; 2,016 card-images  
[documentation available from APSA]
68. American Political Science Association; SETUPS:  
Cross-National and World Politics (ICPSR 7373)  
  
Ndiva Kofele-Kale and A. J. Stevens, Comparative  
Political Culture and Socialization: Cameroon  
(Corrected Version)  
  
291 cases; 27 variables; 582 card-images  
[documentation available from APSA]
69. American Political Science Association; SETUPS:  
Cross-National and World Politics (ICPSR 7373)  
  
Charles Lewis Taylor, Are Political Values Really  
Changing? (Corrected Version)  
  
2,277 cases; 80 variables; 2,277 card-images  
[documentation available from APSA]
70. Azar, Edward E.; Conflict and Peace Data Bank (COPDAB),  
1948-1978: Monthly Aggregations (Domestic Events)  
(ICPSR 7767)  
  
17,627 cases; 20 variables; 17,627 card-images; 20  
pages of documentation
71. Azar, Edward E.; Conflict and Peace Data Bank (COPDAB),  
1948-1978: Monthly Aggregations (Dyadic International  
Events) (ICPSR 7767)  
  
199,460 cases; 20 variables; 199,460 card-images;  
20 pages of documentation



72. Center for Health Administration/National Opinion Research Center; Survey of Health Services Utilization and Expenditures, 1963 (ICPSR 7741)
- 7803 cases, 149 variables; 39,015 card-images; 30 pages of documentation
73. Center for Health Administration/National Opinion Research Center; Survey of Health Services Utilization and Expenditures, 1970 (ICPSR 7740)
- 11,619 cases; 700 variables; 278,856 card-images; 114 pages of documentation
74. Choldin, Harvey and Grafton Trout; Mexican-Americans in Transition: Migration and Employment in Michigan Cities, 1968-1969 (ICPSR 7034)
- 695 cases, 571 variables; 7,645 card-images, 200 pages of documentation
75. Converse, Philip E., and John P. Robinson; American's Use of Time, 1965-1966 (ICPSR 7254)
- 2,001 cases; 589 variables; 38,019 card-images; 149 pages of documentation
76. Converse, Philip E., F. Thomas Juster, et al.; American's Use of Time, 1965-1966, and Time Use in Economic and Social Accounts, 1975-1976: Merged Data (ICPSR 7796)
- 2,053 cases; 112 variables; 12,318 card-images; 18 pages of documentation
77. Hammond, John L.; Revivals in New York and Ohio, 1825-1835: Ohio (ICPSR 7754)
- 431 cases; 8 variables; 862 card-images; 33 pages of documentation
78. Hammond, John L.; Revivals in New York and Ohio, 1825-1835: New York (ICPSR 7754)
- 1,952 cases; 8 variables; 1,952 card-images; 33 pages of documentation

79. Selim, Mohammad El-Sayed; Operational Code Belief System of President Nasser of Egypt, 1952-1970 (ICPSR 7764)  
  
3,838 cases; 68 variables; 3,838 card-images; 50 pages of documentation
80. Rothschild, Beth B.; National Hunting and Fishing Survey, 1975 (ICPSR 7772)  
  
20,211 cases; 450 variables; 464,853 card-images; 128 pages of documentation
81. Rothschild, Beth B.; Wildlife Recreation Survey, 1975 (ICPSR 7787)  
  
322,908 cases; 33 variables; 322,908 card-images; 6 pages of documentation
82. Roberts, Elizabeth J., David Kline, and John H. Gagnon; Family Life and Sexual Learning, 1976 (ICPSR 7755)  
  
1,484 cases; 500 variables; 14,840 card-images; 105 pages of documentation

DATA FILES MADE AVAILABLE IN CLASS IV FORM:

The Class IV studies are distributed in the form received by the ICPSR from the original investigator.

83. Chicago Council on Foreign Relations; American Public Opinion and U.S. Foreign Policy: General Public, 1979 (ICPSR 7748)  
  
1,546 cases; 360 variables; 10,822 card-images; 40 pages of documentation
84. Chicago Council on Foreign Relations; American Public Opinion and U.S. Foreign Policy: National Leaders, 1979 (ICPSR 7786)  
  
366 cases; 360 variables; 1,830 card-images; 24 pages of documentation
85. Fischer, Claude S.; Northern California Community Study, 1977: Name File (ICPSR 7744)  
  
19,417 cases; 86 variables; 38,834 card-images; 432 pages of documentation
86. Fischer, Claude S.; Northern California Community Study, 1977: Respondent File (ICPSR 7744)  
  
1,050 cases; 500 variables; 9,450 card-images; 432 pages of documentation
87. Fowler, Floyd J.; Residential Neighborhood Crime Control Project: Hartford, Connecticut, 1973 (ICPSR 7682)  
  
891 cases; 300 variables; 7,420 card-images; 316 pages of documentation
88. Fowler, Floyd J.; Residential Neighborhood Crime Control Project: Hartford, Connecticut, 1975 (ICPSR 7682)  
  
556 cases; 176 variables; 3,336 card-images; 316 pages of documentation
89. Gurr, Ted Robert, and Erika Gurr; Crime in Western Societies, 1945-1974 (ICPSR 7769)  
  
18 cases; 77 variables; 72 card-images; 20 pages of documentation
90. Hindus, Michael S., Theodore M. Hammett, and Barbara M. Hobson; Massachusetts Superior Court Files, 1859-1959 (ICPSR 7776)  
  
3,390 cases; 134 variables; 11,146 card-images; 100 pages of documentation

91. Inter-university Consortium for Political and Social Research; Referenda and Primary Election Materials: Primary Returns, 1978 (ICPSR 0006)

300 pages of textual material

92. James, George A., and Frank R. Holland; Land Between the Lakes Recreation Study, 1977: Exit Interviews (ICPSR 7749)

6,400 cases; 80 variables; 32,000 card-images; 35 pages of documentation

93. James, George A., and Frank R. Holland; Land Between the Lakes Recreation Study, 1977: Vehicle Counts (ICPSR 7749)

3,585 cases; 13 variables; 3,585 card-images; 35 pages of documentation

94. Law Enforcement Assistance Administration; Juvenile Detention and Correctional Facility Census, 1977 (ICPSR 7758)

992 cases; 227 variables; 9,920 card-images; 11 pages of documentation

95. Law Enforcement Assistance Administration; Survey of Jail Inmates, 1978 (ICPSR 7751)

5,247 cases; 600 variables; 62,964 card-images; 82 pages of documentation

96. Michigan Department of State; Michigan Election Returns, 1978: Precinct - Level Data from the August Primary Election (ICPSR 7771)

6,700 cases; 14 variables; 130,000 card-images; 25 pages of documentation

97. Michigan Department of State; Michigan Election Returns, 1978: Precinct- Level Data from the November General Election (ICPSR 7785)

6,700 cases; 14 variables; 130,000 card-images; 25 pages of documentation

98. Miller, Herbert S., William McDonald, and James A. Cramer; Plea Bargaining in the United States, 1978: Six-City Overview (ICPSR 7775)

3,397 cases; 63 variables; 6,800 card-images; 100 pages of documentation

99. Miller, Herbert S., William McDonald, and James A. Cramer;  
Plea Bargaining in the United States, 1978: In-Court  
Observations (ICPSR 7775)  
  
711 cases; 33 variables; 711 card-images; 100 pages  
of documentation
100. Miller, Herbert S., William McDonald, and James A.  
Cramer; Plea Bargaining in the United States, 1978:  
Simulation Game (ICPSR 7775)  
  
479 cases; 17 variables; 960 card-images; 100 pages  
of documentation
101. Pruitt, Bettye; Massachusetts Tax Valuation Records, 1771  
(ICPSR 7734)  
  
37,940 cases; 51 variables; 113,820 card-images; 9  
pages of documentation
102. Richardson, Richard, et al; Public Attitudes Toward the  
Criminal Justice System and Criminal Victimization in  
North Carolina, 1971 (ICPSR 7670)  
  
1,140 cases; 455 variables; 25,080 card-images; 269  
pages of documentation
103. Straus, Murray A., and Richard J. Gelles; Physical  
Violence in American Families, 1976: Derived Data  
(ICPSR 7733)  
  
2,143 cases; 450 variables; 60,532 card-images; 230  
pages of documentation; 2 files (includes SPSS  
control cards)
104. Straus, Murray A., and Richard J. Gelles; Physical  
Violence in American Families, 1976: Original Data  
(ICPSR 7733)  
  
2,143 cases; 481 variables; 65,473 card-images; 230  
pages of documentation; 2 files (includes SPSS  
control cards)
105. United States Arms Control and Disarmament Agency; World  
Military Expenditures and Arms Transfers, 1968-1977  
(ICPSR 7780)  
  
144 cases; 21 variables; 2,880 card-images; 3 pages  
of documentation
106. United States Department of Commerce; Bureau of the  
Census; Census of Population and Housing, 1960 Public  
Use Sample: One-In-One-Hundred Samples (ICPSR 7756)  
  
80,000 cases/file (average); 124 variables/file;  
4,800,000 card-images; 136 pages of documentation;  
30 files

107. United States Department of Commerce; Bureau of the Census; Census of Population and Housing, 1970 Public Use Sample: Merged Family Household Data Records for 42 SMSA's (ICPSR 7759)  
  
50,000 cases; 294 variables; 309,375 card-images; 65 pages of documentation
108. United States Department of Commerce; Bureau of the Census; Census of Population and Housing, 1970 Public Use Sample: One-In-One-Hundred Samples (ICPSR 0018)  
  
330,000 cases/file (average); 100 variables/file (average); 6,600,000 card-images; 200 pages of documentation
109. United States Department of Commerce; Bureau of the Census; Census of Population and Housing, 1980 (United States)--Summary Tape File 1A; 1978 Richmond Dress Rehearsal (ICPSR 7781)  
  
733 cases; 350 variables; 30,016 card-images; 160 pages of documentation
110. United States Department of Commerce; Bureau of the Census; Census of Population and Housing, 1980 (United States): Census Software Package (CENSPAC) (ICPSR 7789)  
  
10 files; 297,783 card-images; 118 pages of documentation
111. United States Department of Justice; Federal Bureau of Investigation; Uniform Crime Reports, 1966-1976: Data Aggregated by Standard Metropolitan Statistical Areas (ICPSR 7743)  
  
2,609 cases; 160 variables; 52,180 card-images; 20 pages of documentation
112. United States General Accounting Office; Study of the Well-Being of Older People in Cleveland, Ohio, 1975-1976 (ICPSR 7773)  
  
1,834 cases; 674 variables; 44,016 card-images; 311 pages of documentation
113. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974: House City Wide (ICPSR 7774)  
  
800 cases; 60 variables; 1,600 card-images; 10 pages of documentation

114. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974; House PD 1 (ICPSR 7774)
- 662 cases; 60 variables; 1,324 card-images; 10 pages of documentation
115. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974; Person City Wide (ICPSR 7774)
- 1,685 cases; 35 variables; 1,685 card-images; 10 pages of documentation
116. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974; Person PD 1 (ICPSR 7774)
- 1,147 cases; 35 variables; 1,147 card-images; 10 pages of documentation
117. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974; Incident City Wide (ICPSR 7774)
- 765 cases; 106 variables; 1,530 card-images; 10 pages of documentation
118. University of Cincinnati: Behavioral Sciences Laboratory and the Police Foundation; Criminal Victimization Random Digit Dialing Study: Cincinnati, Ohio, 1974; Incident PD 1 (ICPSR 7774)
- 460 cases; 106 variables; 920 card-images; 10 pages of documentation

## ICPSR DATA SERVICES PROVIDED

JULY 1, 1979 TO JUNE 30, 1980

The following pages list all requests for data and related services answered by the ICPSR archive for the fiscal year July 1, 1979 to June 30, 1980. Summary figures for the period are presented below.

Three hundred thirty-five different institutions, organizations or individuals requested 7,446 datasets, totaling 438,331,732 card-images. The total for fiscal year 1978-1979 was 341,026,620 card-images. The increase between the two years was twenty-eight percent. There has been a 323 percent increase in card-image distribution over the five year period 1975-1976 and 1979-1980.

Of the non-members requesting services, forty-nine received SETUPS material under the distribution arrangement with the American Political Science Association. Non-member SETUPS card-images totaled 698,000. Ninety non-member individuals or organizations (including libraries and bookstores) received only textual material in the form of photo-duplicated materials and codebooks at established prices. Fifty-seven requestors received machine-readable data totaling about 33 million card-images (7.6 percent of total) at charges established for non-member services. Of these, twenty-four were from non-academic organizations and thirty-three requests were from academic institutions.

Non-members requesting data services from the archive pay an amount equal to the cost of generating the material, plus an added increment to compensate for academic and development costs borne by member institutions. In addition, individuals from non-member academic institutions hold the data "on loan" for a specified period of time, and individuals at non-academic institutions are restricted from any form of redissemination of the data.

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NOTE: On the following pages, requests for datasets with zero card-images indicate textual material was supplied.



	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Acadia University	13	24,820
M	University of Akron	11	302,733
M	University of Alberta	5	197,086
NM	Alfred University	14	23,718
M	Allegheny College	9	673,320
NM	American Association of Retired Persons, Washington D.C.	1	-0-
NM	American Blood Commission Arlington, VA	1	-0-
NM	American Enterprise Institute, Washington, D.C.	1	-0-
M	American University	19	475,932
NM	Arizona State Justice Planning Agency	1	-0-
M	Arizona State University	36	688,440
M	University of Arkansas at Little Rock	11	1,603,483
NM	Armstrong Cork Company Lancaster, PA	2	27,707
NM	Arthur Young & Company Washington, D.C.	9	23,045
M	Associated Colleges of the Midwest	44	2,197,198
M	Auburn University at Auburn	64	3,395,730
NM	Aurora College	1	-0-
M	Australian Consortium for Social & Political Research, Inc.	104	3,111,964
NM	Baker & Taylor Companies, Commack, NY	1	-0-
NM	Ball State University	3	2,273
NM	University of Baltimore	1	-0-
NM	Bates College	1	-0-

M=Member

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Blackwell North America, Inc. Blackwood, NJ	8	-0-
NM	The Book House Jonesville, MI	1	-0-
NM	Boston College	1	-0-
NM	Boston University	2	5,009
M	Bowling Green State University	46	7,746,376
NM	Brigham Young University	2	10,340
M	University of British Columbia	14	2,008,044
M	British National Federation	69	3,108,027
NM	Brodart, Inc. Williamsport, PA	2	-0-
NM	The Brookings Institution	1	857,817
M	Brown University	25	6,317,662
NM	Randy Budros San Jose, CA	1	-0-
M	California Institute of Technology	4	51,105
NM	The California State Legislature	1	-0-
M	California State University and Colleges	56	5,758,070
M	University of California at Berkeley	40	2,886,063
M	University of California at Davis	14	548,021
NM	University of California at Irvine	2	77,797
M	University of California at Los Angeles	158	12,887,072
NM	University of California at Riverside	1	145,152
NM	University of California at San Francisco	1	-0-

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	University of California at Santa Barbara	26	110,639
NM	University of California at Santa Cruz	1	669,818
NM	Canada Information and Research Analysis, Ottawa, Ontario	1	-0-
M	Carleton University	13	837,507
NM	Carnegie-Mellon University	10	895,953
NM	CBS News	1	-0-
NM	Center for Responsive Government Washington, D.C.	1	-0-
NM	Central College	14	23,718
NM	Central Intelligence Agency	13	255,818
M	Central Michigan University	3	100,327
NM	Chadron State College	4	5,559
M	University of Chicago	127	8,821,036
M	University of Cincinnati	42	11,416,099
M	The Claremont Colleges	2	40,807
M	Cleveland State University	6	334,868
NM	Colorado Division of Criminal Justice	23	206,255
NM	Colorado State University	1	857,817
NM	University of Colorado at Colorado Springs	1	4,496
M	Columbia University	41	5,215,037
NM	Concord College	1	-0-
NM	Concordia University	1	79,798
NM	Congressional Information Service	1	-0-
M	University of Connecticut	33	1,599,197

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	Cornell University	51	4,822,609
NM	Council for a Competitive Economy Washington, D.C.	2	27,707
NM	Coutts Library Services Lewiston, NY	1	-0-
M	City University of New York	43	5,111,827
NM	Dalhousie University	1	-0-
M	Dartmouth College	1	-0-
M	University of Dayton	5	857,817
M	University of Delaware	18	10,623,709
NM	Delta College	2	113
M	University of Denver	139	834,855
NM	DePaul University	1	4,707
M	Doshisha University	102	2,195,063
M	Duke University	87	8,121,307
M	Dutch National Membership	3	534,880
M	East Carolina University	179	4,441,536
NM	East Texas State University	4	534,388
M	Eastern Kentucky University	7	243,666
NM	Eastern Michigan University	8	171,806
NM	Eastern Washington University	1	-0-
NM	Eckerd College	1	-0-
NM	M. El Azhari Washington, D.C.	1	-0-
NM	Elizabethtown College	1	-0-
M	Emory University	8	388,145
NM	European Communities Information Service	1	-0-

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Faculty Associates Inc. Facerville, CA	1	-0-
NM	Federal Reserve Bank, New York	1	-0-
NM	Federal Trade Commission	1	30,492
M	Florida Consortium for Political Research	83	3,774,857
NM	Florida Department of Law Enforcement	1	-0-
NM	Follett's Davis Bookstore Davis, CA	1	-0-
M	Fordham University	121	6,201,522
NM	Frostburg State College	1	-0-
NM	General Motors Warren, MI	6	720,595
NM	George Mason University	14	23,718
M	George Washington University	30	2,236,053
M	Georgetown University	40	2,499,731
NM	Georgia Southern College	2	6,769
M	Georgia State University	5	1,077,604
M	University of Georgia	122	1,056,614
M	German National Federation	46	888,459
NM	Germany Medizinische Hochschule Hannover	1	-0-
NM	Guilford College	1	-0-
NM	Hampton Institute	1	-0-
NM	Harris Trust and Savings Bank Chicago, IL	1	-0-
NM	Hartwick College	3	1,125
M	Harvard University	111	1,866,431
NM	University of Hawaii	3	857,857
NM	Howard University	2	47,478

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	Illinois State Colleges and Universities	48	1,400,100
M	University of Illinois, Chicago Circle	50	16,402,031
M	University of Illinois at Urbana	41	8,919,583
NM	Illinois State University at Normal	2	4,849
NM	Indiana State University at Terre Haute	17	24,062
M	Indiana University	150	6,807,627
NM	Institute Universidade Catolica do Rio de Janfirc, Brazil	15	118,364
NM	Institute de Recherches Centre France	1	-0-
NM	Iowa Office of Planning and Programming	8	29,693
M	Iowa State University	37	79,614
M	University of Iowa	33	1,113,310
M	Johns Hopkins University	54	5,336,255
M	Kansas State University	19	561,194
M	University of Kansas	11	414,770
NM	Kentucky Department of Commerce	1	-0-
M	University of Kentucky	95	1,034,054
NM	Key Book Service, Inc. Bridgeport, CT	1	-0-
NM	Kyoto University	1	857,817
NM	Lansing Community College	3	7,111
M	Lehigh University	50	375,378
NM	Librairie Unitec	1	-0-
O	Library of Congress	86	-0-
NM	Steve Linsey, Sarasota, FL	2	-0-

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Los Angeles Times	1	-0-
NM	Louis Harris & Associates, Inc. Washington, D.C.	1	-0-
M	Louisiana State University	73	6,412,988
M	University of Louisville	5	217,261
NM	Loyola Marymount University	5	7,181
M	Loyola University of Chicago	28	1,906,703
NM	Loyola University of New Orleans	14	23,718
NM	Manhattan College	1	1,644
NM	Mankato State University	20	214,194
NM	Market Opinion Research Detroit, MI	1	83,337
NM	Marquette University	15	65,362
NM	Maryland State College Information Center	3	4,849
M	University of Maryland	70	1,709,301
NM	Massachusetts Hebrew Rehabilitation Center	1	-0-
M	Massachusetts Federation	12	917,608
M	McGill University	22	845,447
M	McMaster University	12	273,424
M	Memorial University of Newfoundland	1	-0-
M	Memphis State University	25	1,213,870
NM	Merrill-Palmer Institute Detroit, MI	1	-0-
M	Miami University	11	2,682,557
NM	University of Miami	14	23,718
NM	Michigan Department of Management and Planning	1	9,353

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Michigan Department of Labor	5	4,911,280
M	Michigan State University	123	4,803,960
M	University of Michigan	202	4,805,274
NM	Midwest Library Service Bridgeton, MO	1	-0-
NM	Mills College	14	23,718
NM	Minimum Wage Study Commission Washington, D.C.	5	5,194,172
M	University of Minnesota	48	1,495,254
M	Mississippi State University	14	1,021,233
NM	University of Mississippi	1	-0-
M	University of Missouri at Columbia	13	550,530
M	University of Missouri at St. Louis	26	1,001,320
NM	Morehouse College	15	25,716
NM	Morgan State University	1	-0-
NM	Mount Holyoke College	2	-0-
NM	Daniel P. Moynihan, Washington, D.C.	1	-0-
NM	Sr. Pat Murphy, Santa Monica, CA	1	-0-
NM	Deborah Namm, Pittsburgh, PA	1	-0-
NM	National Academy of Science	1	-0-
NM	National Assessment of Educational Progress, Denver, CO	2	-0-
NM	National Council on Crime and Delinquency, San Francisco, CA	1	-0-
NM	National Institute of Justice	2	1,689
NM	National Institutes of Mental Health	4	207,636

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NM=Non-Member



	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	National Taxpayers Union, Washington, D.C.	2	27,707
NM	National Urban League	1	-0-
NM	NBC News	2	-0-
M	University of Nebraska at Lincoln	6	761,660
NM	University of Nebraska at Omaha	1	-0-
NM	Nebraska Crime Commission	1	-0-
NM	University of Nevada at Reno	1	-0-
NM	University of New Hampshire	6	10,376
NM	New Jersey Association on Correction	1	-0-
M	University of New Mexico	60	1,481,410
M	University of New Orleans	25	786,977
NM	New York Criminal Justice Research Center	4	629,834
NM	New York Law School	1	-0-
M	New York University	22	632,202
NM	New Zealand Department of Education	10	212,344
M	University of North Carolina at Chapel Hill	57	1,173,457
NM	University of North Carolina at Charlotte	1	-0-
NM	University of North Dakota	2	14,816
M	North Texas State University	81	2,594,174
NM	Northeast Louisiana University	7	185,437
NM	Northeastern University	3	2,590
M	Northern Arizona University	30	272,007
M	Northern Illinois University	26	357,742
NM	Northern Kentucky University	14	23,718

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	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
NM	Northern Michigan University	2	6,837
NM	University of Northern Colorado	1	87,687
M	Northwestern University	63	8,982,545
M	Norwegian Social Science Data Services	19	242,294
M	University of Notre Dame	15	1,155,717
NM	Oakland University	1	4,707
M	Oberlin College	12	340,719
NM	Ohio University	1	113,820
M	Ohio State University	39	2,325,101
M	Ohio Wesleyan University	28	404,538
M	Oklahoma State University	30	1,651,722
M	University of Oklahoma	10	560,006
M	Old Dominion University	2	43,077
M	University of Oregon	157	1,158,825
NM	Other Book Store, Mystic, CT	1	-0-
NM	Paradigm Books, Austin, TX	1	-0-
NM	Pattern Analysis and Recognition Corporation, Rome, NY	1	588,258
M	Pennsylvania State University	28	3,521,426
M	Philadelphia Federation	56	5,483,865
NM	Philadelphia Geriatric Center	2	-0-
NM	Philadelphia Health Management Corporation	1	-0-
M	University of Pittsburgh	30	2,306,405
NM	City of Portland	1	-0-
NM	Portland State University	3	1,440,038
NM	Potomac State College of West Virginia	2	4,707

M=Member

NM=Non-Member

	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	Princeton University	74	5,003,762
M	Purdue University	101	2,858,718
NM	Rand Corporation	2	2,761,769
NM	Randolph Macon College	7	20,582
NM	Reed College	1	602
NM	Regis College	3	4,880
NM	Research & Forecasts, Inc. New York, NY	3	30,564
NM	Rhode Island College	16	32,826
NM	University of Richmond	1	-0-
NM	Roanoke College	3	1,758
M	University of Rochester	42	1,138,169
NM	Rosemont College	1	-0-
M	Rutgers University	57	1,464,421
M	Southern Illinois University at Carbondale	128	2,866,802
NM	Salisbury State College	2	-0-
NM	Sam Houston State University	1	41,645
NM	University of San Diego	1	-0-
M	Sangamon State University	28	6,687,824
NM	Scholarly Book Center, Waukegan, IL	2	-0-
NM	Seton Hall University	1	4,274
NM	Simmons College	10	984,935
M	University of South Carolina at Columbia	82	11,139,571
NM	University of the South	14	21,918
NM	Southeastern Massachusetts University	1	4,707

M=Member

NM=Non-Member

	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	University of Southern California	26	1,953,029
NM	Southern Methodist University	14	23,718
NM	Sperry Univac, Denville, NJ	1	-0-
NM	St. Andrew's Presbyterian College	14	23,718
NM	St. Joseph's University	2	9,414
NM	St. Louis University	6	886,173
NM	St. Vincent College	17	26,932
M	Stanford University	69	8,976,460
NM	State University College at Potsdam	15	101,200
M	State University of New York at Albany	23	3,230,485
M	State University of New York at Binghamton	64	1,966,077
M	State University of New York at Buffalo	28	270,747
M	State University of New York at Geneseo	9	56,374
NM	State University of New York at Oswego	1	-0-
M	State University of New York at Stony Brook	67	5,486,983
NM	Stockton State College	14	21,918
NM	Sweet Briar College	27	48,538
M	Swiss National Membership	41	749,270
M	Tel-Aviv University	24	864,190
M	Temple University	107	9,085,434
NM	University of Tennessee at Chattanooga	1	4,707

M=Member

NM=Non-Member

	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	University of Tennessee at Knoxville	15	991,758
M	Texas Federation	212	15,060,297
M	University of Texas at Arlington	57	1,426,299
M	University of Texas at Dallas	17	6,494,398
M	University of Texas at El Paso	25	2,582,629
NM	University of Texas at San Antonio	1	-0-
M	University of Toledo	8	97,238
NM	Tougaloo College	1	-0-
NM	Trenton State College	6	55,461
NM	Trinity University	3	160,485
M	Tulane University	3	664,179
M	University of Tulsa	2	77,797
NM	United States Air Force Academy	4	7,893
NM	United States Department of Health, Education and Welfare	1	-0-
NM	United States Department of Housing and Urban Development	1	-0-
NM	United States General Accounting Office	2	2,755,926
NM	United States Naval Academy	1	4,707
M	Union College	33	1,435,504
NM	The Urban Institute	2	2,755,926
M	University of Utah	9	426,691
M	Vanderbilt University	14	23,718
NM	Vassar College	14	23,718
M	University of Vermont	13	523,148
NM	Virginia Commonwealth University	1	2,062

M=Member

NM=Non-Member

	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	Virginia Federation	151	1,599,920
NM	Virginia Military Institute	1	-0-
M	Virginia Polytechnic Institute and State University	98	10,118,514
NM	John Vrooman, Austin, TX	2	43,503
NM	Wabash College	1	4,707
NM	Wake Forest University	14	21,918
NM	Walter H. Sobel, Faia & Associates Chicago, IL	1	-0-
M	Washington and Lee University	9	426,796
M	Washington State University	61	1,422,444
M	Washington University	72	9,982,438
M	University of Washington	41	672,416
NM	Wayne Community College	1	-0-
M	Wayne State University	40	5,353,646
NM	Wellesley College	5	513,289
M	Wesleyan University	3	801,506
M	West Virginia University	59	5,406,421
M	Western Kentucky University	20	794,644
M	University of Western Ontario	19	592,481
M	Wichita State University	2	47,961
NM	Williams College	3	18,912
NM	Wilmington College	2	8,494
M	University of Windsor	1	-0-
NM	Wisconsin Police Foundation, Middleton, WI	2	89,365
M	University of Wisconsin at Madison	171	11,531,437

M=Member

NM=Non-Member

	<u>Recipient</u>	<u>Number of Data Sets</u>	<u>Number of Card-Images</u>
M	University of Wisconsin at Milwaukee	88	6,475,390
NM	University of Witwatersrand	1	-0-
NM	College of Wooster	1	-0-
NM	Wright State University	15	23,949
M	University of Wyoming	12	758,819
NM	Yale Co-operative Corporation New Haven, CT	1	-0-
M	Yale University	92	6,582,787
NM	Yankee Book Peddler, Cantoocock, NH	1	-0-
NM	Yankelovich, Skelly and White, Inc., New York, NY	3	-0-
M	York University	1	-0-
NM	Young Nam University	1	-0-

## TOTALS:

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Total Number of Institutions:	335
Total Number of Datasets:	7,446
Total Number of Card-images:	438,331,732

M=Member

NM=Non-Member

## ICPSR DATA SERVICES PROVIDED

July 1, 1979 to June 30, 1980

	Number of Datasets	Number of Card Images
Total Member Data Services Provided:	6,623	405,004,129
Total Non-Member Data Services Provided:	823	33,327,603
Non-Member Data Services Provided:		
(Academic	149	10,360,155)
(Non-Academic	95	22,269,448)
(SETUPS	383	698,000)
(Text only	196	0)
 TOTAL DATA SERVICES PROVIDED:	 7,446	 438,331,732



## FIVE-YEAR DATA SERVICING SUMMARY:

1975-1976 to 1979-1980

Fiscal Year	Data Sets	Card Images
1979-1980	7,446	438,331,732
1978-1979	6,653	341,026,620
1977-1978	6,659	171,769,678
1976-1977	6,772	120,457,248
1975-1976	8,901	103,443,394

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% Change 1978-1979 to 1979-1980:	12.0	28.5
% Change 1975-1976 to 1979-1980:	-16.4	323.7

## ICPSR BIBLIOGRAPHY

1979

The bibliography represents publications, professional papers, and articles found in various social science journals whose authors indicated that they had relied in whole or in part upon data supplied by the Inter-university Consortium for Political and Social Research. Many authors continue to omit any citation of the data used in their work and/or neglect to inform the Consortium of their published materials. Therefore, this bibliography underreports utilization of ICPSR data and should only be viewed as a partial statement of the impact of the archive on social science research.

Articles	86
Professional Papers	5
Books	4
Dissertations	4

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EXTERNAL FUNDING FOR THE DEVELOPMENT OF ICPSR DATA RESOURCES,  
CONTINUING PROJECTS  
1979-1980

Listed below are projects which received external funding and were in progress during 1979-1980.

Summaries for the following projects appeared in the 1976-77 Annual Report, pp. 57-64:

Title: Data Archiving, Training, and Consultation Services in the Field of Aging  
Source: Department of Health, Education and Welfare, Administration on Aging  
Grant Number: 90-A-1279(01)  
Duration: October 1, 1977-September 30, 1979  
Amount: \$152,000

Title: Macro-Economic Time Series for the United States, France, Germany and the United Kingdom  
Source: National Science Foundation  
Grant Number: SOC77-16045  
Duration: October 1, 1977-September 30, 1979  
Amount: \$131,200

Summaries for the following projects appeared in the 1977-78 Annual Report, pp. 43-48, 56-58.

Title: Data Archiving, Training, and Consultation Services in the Field of Aging  
Source: Department of Health, Education, and Welfare, Administration on Aging  
Grant Number: 90-A-1279(02)  
Duration: October 1, 1978-September 30, 1979  
Amount: \$158,035

Title: Conference on Archival Management of Machine-Readable Records  
Source: National Endowment for the Humanities  
Grant Number: RD-30574-78-571  
Duration: January 1, 1979-December 31, 1979  
Amount: \$14,083

Title: Micro-Computer for Social Science System Implementation  
Source: National Science Foundation  
Grant Number: NSF-SOC-7824791  
Duration: December 1, 1979-May 31, 1980  
Amount: \$9,630

Summaries of the following projects appeared in the 1978-79 Annual Report, pp. 57-66:

Title: Continuation of Technical Support and Training Activities  
Related to a National Criminal Justice Data Archive  
Source: Law Enforcement Assistance Administration  
Grant Number: 79-SS-AX--0006  
Duration: March 1, 1979-February 29, 1980  
Amount: \$422,385

Title: A Proposal To Facilitate Academic Use of Data Produced  
by the CBS/New York Times National and Statewide Surveys  
of the 1980 Elections  
Source: Russell Sage Foundation  
Duration: September 1, 1979 to February 28, 1981  
Amount: \$43,967

Title: Cataloguing Machine-Readable Data Files Held by the  
Inter-university Consortium for Political and Social  
Research  
Source: Natinal Endowment for the Humanities  
Grant Number: RC0058  
Duration: October 15, 1979 to April 15, 1981  
Amount: \$35,812

EXTERNAL FUNDING: PROJECTS FUNDED FOR IMPLEMENTATION IN 1979-1980  
AND CONTINUING INTO 1980-1981

Descriptions of externally funded projects which were initiated during 1979-1980 or 1980-1981 are presented on the following pages.

Title: Development of the Capabilities of the Inter-university Consortium for Political and Social Research: Equipment Acquisition  
Source: National Science Foundation  
Grant Number: SES 79-19156  
Duration: April 1, 1980 to March 31, 1981  
Amount: \$473,945

Title: Supporting Facilities for Research and Policy Development and Evaluation in the Field of Aging  
Source: Administration on Aging  
Department of Health and Human Services  
Grant Number: 90-A-1279/03  
Duration: April 15, 1980 to April 14, 1981  
Amount: \$170,416

Title: Continuation of Technical Support and Training Activities Related to a National Criminal Justice Data Archive  
Source: Bureau of Justice Statistics  
Grant Number: 80-BJ-CS-K005  
Duration: May 1, 1980 to April 30, 1981  
Amount: \$399,890

Title: A Guide to Data Preparation and Documentation  
Source: Department of the Interior  
Grant Number: PO-A-4027  
Duration: September 1, 1979 to August 31, 1980  
Amount: \$4,000

Title: Question Retrieval from Machine-Readable Codebooks  
Source: Department of Agriculture  
Grant Number: 23-429  
Duration: April 1, 1980 to March 31, 1981  
Amount: \$5,000

Title: Dissemination and Utilization: Census Data as a Planning Tool  
Source: Administration on Aging  
Grant Number: 90-AR-0015/01  
Duration: April 1, 1980 to March 31, 1981  
Amount: \$40,027

Title: Archiving Machine-Readable Data and Provide Documentation  
for Data from Thirteen Electric Utility Rate Demonstrations  
Source: Department of Energy  
Grant Number: 01-80RG  
Duration: September 1, 1980 to August 31, 1981  
Amount: \$105,000

Title: Archiving and Dissemination of Medical and Surgical  
Specialities Data  
Source: Robert Wood Johnson Foundation  
Grant Number: 5431  
Duration: April 1, 1980 to June 30, 1981  
Amount: \$24,343

DEVELOPMENT OF THE CAPABILITIES OF THE  
INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND  
SOCIAL RESEARCH: EQUIPMENT ACQUISITION

A Proposal Supported by the  
National Science Foundation

The Inter-university Consortium for Political and Social Research has before it major opportunities and challenges. In large measure these result from sharp increase in available research data, from the proliferation of very large data collections, from the possibility of new social scientific applications of computer technology, from expansion of the population of social scientific researchers, and from the increased diversity of their needs and interests. These developments reflect progress of the social sciences toward improved knowledge of social phenomena, and they mark, as well, radical increase in the capacities of social scientists to pursue that knowledge. These new opportunities and challenges impose major strain upon Consortium resources. They come, moreover, at a time of straitened monetary circumstances within the academic community which the Consortium serves and upon which it depends for its primary support.

It is this general situation which creates the current need for developmental support. The Consortium has begun a major and long term facilities development program on the basis of its own resources. Initial investments of Consortium resources in basic computational equipment and its implementation have been made and experience to date demonstrates both the practicality and the benefits of the larger program. By drawing more fully upon the advantages of contemporary technology this program will allow the Consortium to more effectively meet the opportunities and challenges that lie before it and, at the same time, both expand the resources which it provides and extend the availability of those resources to a larger segment of the social scientific community.

This proposal requests support for acquisition of the computational equipment required for effective pursuit and completion of this facilities developmental program. Access to the proposed equipment will allow immediate automation of the basic work of the Consortium through full-scale implementation of capabilities that have already been developed. The result will be increase in the range and quality of the services and resources which the Consortium provides and immediate operational cost savings. As a consequence of cost savings, organizational resources will be freed to allow further expansion, diversification and development of Consortium services and facilities. While the Consortium facilities development program is both continuing and open ended, support is requested here only for the direct costs of equipment acquisition.

The present proposal describes the developmental program that is now underway, explains the current need for developmental support, and describes the equipment projected for acquisition and its immediate and longer term applications and advantages.

## THE NEED FOR DEVELOPMENTAL SUPPORT

The Consortium now has before it new needs and demands which are substantially larger than those confronted in the past. These result from change in the magnitude and character of available social scientific data, from radical and continuing change in computer technology, and from growth and change in the institutional distribution of the population of active social scientists. These developments reflect major change in the social sciences, and they constitute opportunities and challenges to which the Consortium is well suited and obligated to respond. Using present capabilities, however, that response involves a substantial increase in operating costs and imposes major strain upon the financial resources available to the Consortium. It is to allow effective response to these new needs and demands that support for equipment acquisition is requested.

### SOCIAL SCIENTIFIC DATA: OPPORTUNITIES AND NEEDS

In part these new opportunities and challenges result from what might be termed the current "data explosion" within the social sciences. One component of that explosion is simply the consequence of some three decades of systematic data collection by social scientists, government and other data collection agencies. The cumulative effect of these efforts is to afford social scientists new opportunities to measure and analyze social phenomena across a substantial period of time and to lend new and major significance to data collections of the past. The series of Surveys of Consumer Attitudes and Behavior conducted quarterly since 1953 by the Survey Research Center of the Institute of Social Research is a case in point. Taken individually the component surveys that comprise this series may be of limited interest for secondary analysis. Because of its consistency of design, content continuity and temporal reach, on the other hand, the series provides cumulatively an unparalleled opportunity to examine change, and the correlates of change, in individual assessments of their own economic and social condition, their prospects for the future, their job satisfaction, and their assessments of the state of the economy and society across an extended period of time.

Using presently available capabilities such series involve high processing and dissemination costs in part because of their very size. Where data collections of this type are concerned even the costs of simple copying of data for dissemination are high. Effective research use of such series requires, however, a significantly larger processing effort than in the case of individual cross-sectional surveys. Improved documentation is required to aid potential users in identifying comparable elements across individual surveys. Capacity is also needed to allow inexpensive location and selective retrieval from computer-readable files of the specific data required for particular research applications.

A second component of the ongoing data explosion is the recent proliferation of very large, continuing and substantively and technically complex data collections which combine panel with cross-sectional elements and which include data at multiple levels of analysis. The Parnes National Longitudinal Surveys of Labor Market Experience, 1966-1977, and the Morgan Survey of Family Income Dynamics are examples of such data collections, as are the continuing National Election Studies conducted by the Center for Political Studies. Data collections such as these afford new research opportunities; indeed, they hold the promise of long awaited breakthrough in the social sciences; and they represent public investments in social scientific research that have few precedents. Realization of these opportunities presents, however, major challenges and heavy cost burdens.



The National Election Studies are cases in point. These studies include both cross-sectional and multiple panel components as well as diverse contextual elements. Because of their size and complexity, processing to detect and correct errors and to achieve standard and usable form requires, with present capabilities, very large investments of costly human and machine time. Extensive, elaborate and costly documentation is required to inform researchers of the content and technical characteristics of these collections, to identify comparable and non-comparable elements, and to facilitate effective use and prevent misapplications. Thus the cost to the Consortium for processing and documenting the 1978 National Election Study will exceed \$60,000. If only present capabilities are available, the costs of the larger and even more complex 1980 study will be in excess of \$100,000. These amounts, of course, constitute significant proportions of Consortium annual financial resources and very large proportions, indeed, of the segment of those resources that can be allocated to archival work. What is needed is lower cost approaches to data cleaning, processing and documentation.

Nor are the heavy cost burdens associated with such studies limited to processing and documentation. Under present conditions, dissemination of these data collections also involved high costs. Here again, the costs of simply copying data for dissemination are high. Facilitation of effective research use requires, however, different and more complex approaches to dissemination. In growing numbers social scientists have the substantive and methodological expertise required to work with data collections of this sort and to capitalize upon their research advantages. At all but a few very well developed institutions, however, requisite computational software and hardware are lacking. What is needed are capabilities of two sorts. Capabilities are needed, particularly to meet the needs of social scientists at less well-equipped institutions, that will allow the Consortium staff to inexpensively locate, retrieve and supply the specific subsets of complexly structured data collections that are required for specific research applications in restructured forms compatible with the requirements and limitations of particular computational installations. Also required is fully transportable software to allow social scientists to work effectively at their local installations with large and complexly structured data files and which would interface directly with currently available and widely used analytical software systems. In fact, significant progress has been made by the Consortium in both of these directions. To complete the needed capabilities will require a further developmental investment.

Data produced by the agencies of the federal government present special and even larger opportunities and challenges. The federal government has already attained a measure of preeminence as a source of social scientific data and there can be little doubt that its preeminence will increase substantially in the future. The social scientist who attempts to employ federally produced data, however, confronts significant obstacles. The most important of these data collections are both large and structurally complex. As examples, the recent Survey of Income and Education is both very large and logically hierarchical in structure, and the data from the decennial (now quinquennial) Censuses of the United States constitute perhaps the outstanding example of these characteristics. Federally produced data, in short, are frequently marked by all of the difficulties, often in extreme form, of the data collections discussed above.

In seeking to employ federally produced data still other obstacles are confronted. Because of the storage formats employed, the researcher must frequently over-purchase and acquire at higher cost substantially more data than are actually required. The costly and time consuming tasks of subsetting to extract the specifically required data, and of reformatting and reprocessing

are then still to be faced. Needless to say, these factors frequently constrain use of such data and tend to restrict use to the few well-funded or highly determined researchers. To cope with this situation, the Consortium is often asked to serve in the role of a "buyer's cooperative." A single copy of a costly federal data collection is purchased, processing and subsetting are carried out by the Consortium staff, and users at affiliated institutions are then supplied the specific data required for their particular applications. The economic advantages of this approach are obvious. Unfortunately, the cost burdens for the Consortium, at least in terms of present capabilities, are equally obvious. Here again, what is needed is lower cost approaches to data cleaning, processing, documentation and dissemination.

The proliferation of social science data collections has a further implication. The research value of existing data collections is far from realized. These collections and current data development efforts also create combinational possibilities that hold rich research opportunities. As yet, however, nothing approaching effective reference control over available social science data collections has been achieved. Aside from limited areas, even well-developed data repositories in the United States and other nations are often unable to provide, except on an essentially ad hoc basis, systematic and fully effective aid to social scientists who seek to locate data pertinent to particular research or instructional applications. The consequences are, of course, underutilization of social scientific data resources, foregone research and instructional opportunities, and waste of intellectual energy. The equipment acquisition proposed here would allow at least a beginning effort to attain the basic reference control that would facilitate more complete realization of the research and instructional potentialities of existing data collections and of those now being created.

#### COMPUTATIONAL NEEDS

New and pressing needs and opportunities also result from the continuing and increasingly rapid development of computer technology, and, particularly, the availability of mini- and microcomputers. The latter equipment has opened low-cost options for social science computing, and it holds the potential for new and diverse computational applications in social research and instruction. For smaller and less affluent academic institutions that are now effectively without computational facilities for research and instruction, mini- and micro-computer technology opens the possibility of access to basic computational power. Low cost data and instructional laboratory, departmental, and even individual computational facilities are now becoming fully feasible. Such facilities would provide basic research and instructional capacity. They would reduce burdens on mainframe equipment and in this way also reduce the burden of continuous upgrading of large-scale mainframe equipment which colleges and universities now bear. The low cost of this equipment makes practical, as well, a variety of social scientific applications that would not be feasible in cost terms if only mainframe equipment could be employed.

These new technological developments and the opportunities that result from them have created as yet unmet needs. There is need for an integrated approach to the use of this new equipment, for software to support social scientific research and instructional applications, and for capacity to supply Consortium data in forms specifically tailored to the requirements and limitations of the new equipment. Once again, these are needs and demands to which the Consortium could effectively respond given adequate resources.

Still other needs and demands result from growth in the population of active social scientists and from the institutional redistribution of that population. As a consequence of change in demand factors, highly sophisticated and well-trained social scientists are located in steadily growing numbers at smaller and less affluent colleges and universities where supporting facilities are limited and in some cases non-existent. The needs of these social scientists place heavy emphasis upon instructional support, although their needs and interests are by no means limited to instructional materials nor is interest in instructional materials in any sense confined to smaller and less affluent institutions.

These social scientists constitute a new source of demand for supporting resources--and for supporting resources in new forms--which their own institutions often cannot provide. Without those resources, their capacity to contribute to the advancement of social knowledge and to introduce their students to the data and methods of the social sciences will be curtailed. It is worth noting parenthetically that the demand factors alluded to above have resulted in employment of an increasing number of well-trained social scientists by governmental and private agencies. This development has also created new demand for Consortium resources and, once again, for resources and services of new kinds.

#### CONSORTIUM RESOURCES

The developments described above reflect major needs and opportunities within the social sciences. They also reflect new demands upon the Consortium, and they produce sharply increased cost pressures. It is fully possible for the Consortium to respond to these opportunities, meet new demands, and at the same time offset rising cost pressures. To do so, however, will require facilities that allow more effective and less costly cleaning, processing and documentation of data collections, that provide capacity to supply data less expensively and in more diverse forms, and that permit more efficient performance of necessary administrative functions. These facilities, in turn, will allow the Consortium to move directly to such needed work as development of exportable computational capabilities to allow social scientists to capitalize upon the advantages of mini- and microcomputers and to work effectively with large and structurally complex data files, and to creation of basic referencing and indexing capabilities that will permit social scientists to more effectively identify and locate data pertinent to particular research and instructional needs. As is discussed more fully below, the Consortium has begun to implement a facilities development program aimed at accomplishing these goals. Completion of that program will require a substantially larger capital investment in computational equipment than the monetary resources now available to the Consortium will permit.

In the past it was possible for the Consortium to meet new demands and cope with rising costs in several ways. A constant effort to achieve internal operating economies served to restrain cost increases. Periodic awards from governmental and private funding agencies for specific projects facilitated expansion and diversification of archival and related resources. Steady growth in the number of institutional affiliates allowed new demands to be met and also worked to compensate for rising costs, while periodic increases in affiliation fees still further expanded financial resources.

These remedies, however, have now become less feasible than in the past, and given the magnitude of new needs and demands they promise at best to be less adequate. Further operational economies can be achieved, but without the full-scale implementation of new approaches to data cleaning,

documentation and dissemination which the proposed equipment acquisition would permit, these cannot be of the magnitude required to offset new demands and rising costs. It is hoped that periodic awards from funding agencies to support special projects can continue to be obtained in the future as in the past. But these will be earmarked for particular projects and will not serve to adequately meet the need for development of basic Consortium facilities.

Consortium institutional membership is already large in relation to the number of more affluent, well equipped and larger institutions, and it is also large in relation to the active academic research community. As an indication of the latter fact, almost ninety percent of all new doctorates in the social sciences in 1976 were awarded by institutions affiliated with the Consortium. Thus growth in institutional affiliations must come for the future disproportionately from among less affluent, less well equipped and smaller institutions. To achieve growth in this area will require development of capabilities that will allow more effective use of Consortium resources by scholars located at such institutions. It will require new resources which are more suited to the needs of these institutions and which will also contribute to the improvement of their facilities.

At least for the immediate future, further increase in Consortium affiliation fees appears undesirable. The financial situation of many, if not most, of the current Consortium affiliates is strained, and capacity to absorb a substantial fee increase is limited. Such an increase, moreover, would in all likelihood work to hinder growth in affiliations among smaller and less affluent institutions and would tend to constrain rather than improve access to Consortium resources by social scientists at those institutions.

For the present and at least the immediate future, in short, Consortium financial resources are relatively stable. At the same time the Consortium is faced with a broad and diverse range of new needs and demands which bring with them increased cost pressures. This is not to say that a state of crisis has been reached. Remedies for the current situation are available which would allow the Consortium to meet new demands, perform its mission more effectively, and cope with rising costs. A developmental program to implement these remedies has begun. Completion of that program in anything approaching expeditious and optimum or even adequate fashion will require, however, a capital investment for equipment acquisition which, though relatively modest in absolute terms, would be large indeed in terms of the financial resources currently available to the Consortium. Without such an investment this developmental program can continue, albeit in gradual and piecemeal fashion. The proposed equipment will allow the Consortium to move directly to effective implementation of the larger program.

#### FACILITIES DEVELOPMENT

As indicated above, the Consortium has begun a major facilities development program on the basis of its own resources. Through this program the range and effectiveness of the services and resources provided by the Consortium will be extended and major operating economies will be achieved. By achieving operating economies, resources will be freed to support developmental work required to further expand and diversify Consortium services and resources and to gain added operating economies. By expanding and diversifying resources and services, the Consortium will be better able to meet the needs of social scientists including those located at less well-developed institutions. Operational economies will allow the Consortium to continue to provide both current and new and extended services--and, indeed, continue to expand its services and resources--on the basis of predictably available income. While this

facilities development program is of considerable magnitude and is continuing in nature, this proposal requests support for only acquisition of the basic computational equipment required for its effective pursuit.

The facilities development program now underway involves a number of interrelated elements. These include:

1. Acquisition of computational equipment to allow reduction of the human and machine costs of Consortium work and to support development of capabilities to facilitate social scientific applications of mini- and microcomputer technology.
2. Complete automation of data cleaning, processing and documentation to reduce the costs of these activities, produce data in improved and more standard forms, and to allow effective management and processing of large and structurally complex data collections.
3. Complete automation of Consortium data dissemination activities in order to both reduce costs and to permit provision of data resources as specially tailored and restructured subsets suited to specific research and instructional applications and to the requirements of diverse hardware and software systems.
4. Automation of Consortium administration, including fullscale implementation of word processing capabilities in order to gain efficiency and reduce operating costs.
5. Development of capacities to supply data on storage media currently in use for microcomputers and to carry out limited exploration of newer and more promising storage media for these machines.
6. Development of basic data management and analytical capabilities for research and instructional application of mini- and microcomputers,
7. Development of a basic and exportable automated reference and indexing system to aid in the identification and location of specific required data included in Consortium and, potentially, other data collections.
8. Extension and generalization--in terms of machine compatibility--of hierarchical file handling capabilities and development of direct interfaces between these capabilities and widely employed analytical systems both for use by the Consortium staff and for implementation at other installations.
9. Development of instructional materials, including both data based materials and computer aided instructional packages, for use both in Consortium training programs and at other institutions.
10. Design of an integrated system of multiple microcomputers to provide added computational power for Consortium operations, for implementation at smaller institutions, and for use in data or instructional laboratory facilities.

The developmental program outlined here, it should be noted, reflects present operational needs of the Consortium and needs expressed by numerous working social scientists; it in no sense reflects simple "blue-sky" ambitions. It is also not an experimental program. Requisite technology now exists, and in many of the areas listed above developmental work has been carried out and

basic software is operational. What is needed in these areas is the machine capacity required to realize the full advantages of operational capabilities.

A few examples may serve to illustrate the point. Basic automated data cleaning and processing capabilities are now operational on a Prime 350 mini-computer (recently upgraded from the 300 level) which is linked by a leased line to the University of Michigan's mainframe equipment and which was purchased, with a generous subvention from the Center for Political Studies, by the Consortium in 1977. The cost advantages of these capabilities and their utility have already been well demonstrated. What is needed is capitalization to acquire the equipment necessary for comprehensive employment of these capabilities in order to realize their full advantages, automated data dissemination capabilities have been designed; their utility and cost advantages have been demonstrated; and the basic software will be operational within the next four months. What is needed is machine capacity to allow full scale employment of these capabilities. Basic software for working effectively with large and structurally complex data files is now operational on the University of Michigan's mainframe equipment. What is needed is cost savings in other areas to free Consortium resources for extension of this software and for its generalization to allow export to other institutions.

Given the initial equipment support requested in this proposal, the projected developmental program will be carried out across a three-year period. In other respects, the program is intended to be continuing. The initial equipment investment will, of course, produce immediate and clearly defined capabilities. Given this initial investment, however, the Consortium will be able to continue to expand and develop its capacities and services on the basis of its own financial resources, although it is anticipated that in certain areas modest additional support from funding agencies would substantially enhance the value of specific longer term developmental activities. The equipment to be purchased and the capabilities to be developed will be such that low cost expansion can occur as additional computational capacity is needed in the future. Thus an initial equipment investment will greatly strengthen the Consortium's long-term capacity to meet growing and changing needs of social scientists on the basis of its own resources.

## EQUIPMENT ACQUISITION

The computational equipment for which support is requested is critical to the development of Consortium facilities. For several reasons, mini- and micro-computer equipment is emphasized. As suggested above, the low cost of this equipment allows applications that would otherwise be impractical; appropriately implemented, this equipment can be operated in essentially unattended mode thus reducing or eliminating the need for operators and other supporting personnel; and this equipment allows acquisition of multiple machines for production use which minimizes the hazards of work stoppages resulting from machine failure. Emphasis upon mini- and microcomputers will also facilitate development by the Consortium of software and related resources to aid social scientists and their institutions in utilizing similar equipment.

It should be clear that there is here no intent to develop a stand alone computational facility. To attempt to do so would needlessly and wastefully duplicate University of Michigan equipment; entail the continuing large-scale costs of a supporting infrastructure in the form of operators, systems specialists and the like; and involve substantially larger equipment costs. The approach to be followed will capitalize upon all three categories of computational machinery from microcomputers to mainframe equipment utilizing each category for tasks and applications to which it is most appropriate. For occasional very large-scale and highly complex archival data processing and for the actual tasks of copying, subsetting, and reformatting data for dissemination (aside from provision of specialized data forms for use on microcomputers) reliance will continue to be placed upon University of Michigan equipment. In this way the costs of acquiring multiple tape drives--and supporting the required operating staff--to meet the diverse technical requirements of member institutions will be avoided. This approach also looks more directly toward provision, in the longer term, of remote access to Consortium resources using University of Michigan equipment and capabilities through the Telenet system to which the University is connected.

The basic equipment to be acquired is a Prime 750 mini-computer with associated terminals, printers and storage devices. The 750 will be connected directly to the current Consortium minicomputer, a Prime 350. The interconnection will be via Primenet which provides a one million byte per second link between the systems and also provides such user capabilities as transparent access to files on either system. The network of computing systems will be further extended to four microcomputers, to be acquired, which will provide augmented support for critical areas of Consortium activity.

The Prime 750 will constitute the central focus of the local network. Disk space totalling 900 million bytes will reside on this machine and will provide a common point for referencing and sharing of on-line data, software, directories, and staff assistance and training materials. Disk capacity of this magnitude is also necessary to allow effective processing of the very large data files alluded to above. The storage limitations of these devices will be augmented as required by ready access to the central storage of the 750.

The Prime 350 and 750 are essentially software-compatible computing systems. All programs running on the 350 can be moved directly to the 750 without modification. The 750 Central Processing Unit, however, also includes instructions which the 350 does not provide. These features will allow low cost expansion of the system in the future and mitigate problems of system obsolescence. The 750 offers approximately four times the CPU power of the 350 and is the top of Prime's recently announced new line of systems. The 750 is configured to support twenty CRT terminals in addition to the microcomputers. These are in addition to the eight terminals presently supported by the current 350.

The Prime 750 appears at this point to be the optimum equipment for the projected applications. Requirements of the University of Michigan dictate, however, that equipment acquisitions of this magnitude be submitted for competitive bid. This process, of course, provides additional assurance that optimum equipment will indeed be ultimately selected. The bid specifications will include performance assessment by running selected benchmark tests and will also assess issues of ease of conversion of existing software and compatibility with the Prime 350.

While the Prime 750, or a rival machine of equivalent characteristics, will be the basic device for the work of the Consortium staff, other levels of computing systems are of critical importance to the total configuration. As was noted above, the Consortium will continue to employ the University of Michigan's central computing facility for occasional very large-scale or highly complex archival processing tasks and for much of the actual work of data copying, re-formatting and subsetting for dissemination. To facilitate transportation of data files to and from The University of Michigan Computer Center and to allow low cost receipt of data from suppliers, a single 6250 bpi tape drive will be acquired.

The Consortium's present Prime minicomputer already has a 4800 baud link to University of Michigan equipment to facilitate direct access to that equipment for purposes of job submission, receiving printout, and movement of small files. To facilitate more rapid and lower cost access, this link will be upgraded to 19,200 baud and standard HDLC communications protocols adopted with later adoption of the X.25 protocol when University Computing Center support is made available.

Microcomputers constitute a third level of computing system to be employed in the projected configuration. Four such systems are projected for acquisition. Two of these machines will serve as preprocessors to the Primes to prepare setups for data requests, to copy subsets of data in formats and on media required for dissemination for use on microcomputers at other institutions, and for record keeping. A third system will provide word processing and records management capabilities for Consortium administrative needs. The fourth microcomputer system will be used for archival applications, to support the referencing and indexing system described in a following section to provide backup capabilities. In addition to these specific applications, the microcomputers will support development by the Consortium staff of exportable capabilities to facilitate more general use of microcomputers in social scientific research and instruction.

The equipment acquisition proposed above will yield immediate benefits for the conduct of Consortium work. As a consequence of software development work already completed, or shortly to be completed, very significant cost reductions will be achieved in the conduct of basic Consortium activities and the quality of the products of those activities will be improved. Cost reductions in those areas will free resources for application to longer term developmental work which will yield further major benefits. Areas of immediate benefit include archival data processing, data dissemination, and the various aspects of organizational administration.

Archival Data Processing. Acquisition, cleaning, processing, and documentation of data collections constitute critical Consortium activities. Expenditures for this work amount annually to over one-third of the total proceeds from Consortium affiliation fees. The number of data collections recommended by advisory committees has rapidly increased in recent years and the costs of processing data collections has grown as a consequence of increased emphasis upon



very large and complex data collections. To meet these demands capacity to carry out archival processing more rapidly and effectively at lower cost is obviously of critical importance. The capabilities required to meet these imperatives have been partially implemented. Additional machine capacity is required to fully realize their benefits.

As suggested above, a basic automated data processing system has been designed and implemented on the Prime 350 owned by the Consortium. Using this system, setups to carry out wild code and contingency checks, produce marginals and related diagnostic information, as well as other data cleaning operations, are automatically produced as codebooks and entered via a computer terminal. The system prompts the individual data processor and assures that required information, is entered in appropriate form. The setups so created are executed in batch mode during the night time hours to avoid excessive load on the machine during prime time. The results of these operations are then available for examination using a video display device on the following morning. In this way much of the cumbersome, detailed and time consuming work of data cleaning is eliminated, a complete computer-readable codebook is produced, and necessary records are created and maintained all in what amounts to a single operation. The savings in staff time are substantial, less well trained staff can be employed, and the result is superior and more consistent than that produced through other approaches. Indeed, even the savings in computer paper are significant.

The utility of this system has been well demonstrated, but use has exceeded the capacity of the Prime 350. The system can be implemented, however, without cost on the Prime 750 to be acquired. The 750 will also allow needed extensions of the system. These extensions will add the capacity to create alternative codebook forms compatible with the requirements of additional software systems, for automatic creation of files formatted for computer output microfiche (COM) codebook production and for entry of cataloging information. The costs of these extensions can be easily supported through the cost reductions that will be gained from full scale implementation of the system.

Data Dissemination. Dissemination and facilitation of data use is a second primary Consortium activity. Accomplishment of this work consumes each year a very significant portion of the Consortium budget. Given growing demand for Consortium data, growth of archival holdings, proliferation of very large data collections and increasing need to subset and restructure data files for dissemination, costs in this area must inevitably rise sharply if present approaches and capabilities continue to be used. Thus implementation of new capabilities and approaches are of central importance both to allow dissemination of data in forms fully suitable to diverse needs and to realize cost advantages. These advantages can be gained through full scale automation of dissemination work.

Here again, basic development has been carried out. The needed capabilities have been designed, and tests assure both their practicality and cost advantages. The programming required for their implementation will be completed within the next four months. This capability involves storage in machine-readable form of records of the technical requirements of all member institutions (now maintained and used by the Consortium staff in non-machine readable form), storage in machine-readable form of technical information on all Consortium data collections, and capabilities to automatically create setups for copying, re-formatting, and subsetting data files on the basis of this stored information and a few simple commands. Thus the staff member will be able to fill most data requests simply by entering highly abbreviated setup information using a micro-computer or the Prime minicomputers. The actual setup will be created and transmitted, automatically, to The University of Michigan Computing Center for

execution. A record of the transaction will be created, user correspondence completed, and even a mailing label printed.

In this way the staff time required to fill data requests and maintain records will be very significantly reduced; less well-trained staff can be employed at lower cost; data can be supplied more rapidly; the incidence of human error in supplying data will be reduced; and even reduction of the cost of utilizing University of Michigan facilities will be realized. In short, supplying data will be carried out more expeditiously and with greater accuracy, and increased demand for data services can be met while simultaneously reducing costs. The equipment outlined above will provide the machine capacity required for realization of these advantages.

The projected microcomputers will yield additional data dissemination advantages. Access to these devices will allow the Consortium to develop capacity to supply data in the forms and on the storage media required for their use. In this way, application of this equipment to the purposes of social science research and instruction will be encouraged and facilitated.

Administrative Support. Necessary administrative activities--maintenance and use of records, communication with member institutions and other data users, governance, and the like--constitute a visible and significant component of Consortium expenditures. Through automation, these costs can be reduced and the conduct of administrative procedures improved. As suggested above, comprehensive word processing capabilities have been developed for the Consortium's Prime 350. These capabilities can be readily implemented on the Prime 750 and, with modest additional programming costs, on the projected microcomputers. In this way, comprehensive organizational use of these capabilities will be possible with manifest operational advantages and significant cost reductions. A very limited additional investment of Consortium resources will be required to develop basic record keeping capabilities for the projected equipment. The advantages of these capabilities in terms of management and control of membership transactions, financial information, mailing lists, records of summer program attendance, and other organizational information will well repay the required investment.

#### LONGER TERM DEVELOPMENT

The equipment configuration outlined above will serve immediate computational needs of the Consortium. It will support automated study processing, provide comprehensive word-processing capabilities, support automated preparation of setups for data dissemination (which would then be transmitted directly to the University's mainframe equipment for execution), and automatically maintain records of data disseminated. It will eliminate all costs to the Consortium associated with use of University of Michigan computational equipment aside from those directly associated with data dissemination and occasional very large-scale or highly complicated archival data processing tasks. The cost savings in this area alone will amount to \$50,000 to \$60,000 annually while reduction in the staff required for organizational work and capacity to effectively employ less well trained staff will yield further cost savings of equal or greater magnitude. These cost savings will be realized while simultaneously extending the range and quality of the Consortium's capacity to meet the needs of the social scientific community.

As a consequence of developmental work already completed, or to be completed in the near future, realization of these advantages can begin immediately upon receipt of the projected equipment. The proposed equipment configuration also has other and longer term advantages. The configuration

provides important system reliability through multiple machines, and it affords at least modest reserve computational capacity. Because of the use of microcomputers as integral elements of the system, low cost expansion will be possible as additional capacity is required in the future.

The proposed configuration will also provide a basis for additional developmental work to further expand and diversify Consortium services and resources. The configuration will provide required machine capacity while the reductions in operating costs described above will free resources to allow the Consortium to move more directly toward pursuit of this work. A few examples of this longer-term work can be briefly noted.

Complex File Structures. As noted above, a growing number of data collections are both very large in size and structurally complex. These characteristics seriously complicate research use. The Consortium does have an effective hierarchical file capability. That capability, however, is IBM compatible only, it is specific to the OSIRIS software system, and it lacks several needed elements. Thus extension and modification of this capability are matters of high priority. The capacity to automatically create custom codebooks for subsets of data will be added and the capability will be extended to allow management and use of other complex file structures such as those of network form. The capability will also be modified to attain compatibility with the equipment of the major computer vendors and to allow implementation on machines of relatively limited size. Interfaces to widely used software systems as SAS, SPSS, and BMDP will be written. This work will further extend the capacity of the Consortium to work effectively and inexpensively with large and complexly structured files. The capability will be fully exportable and, because of its reduced machine requirements and extended capacities, it will be of value to a wide range of installations.

Instructional Resources. One of the primary areas of need confronting the Consortium is for instructional resources. These needs are particularly expressed by, but are not confined to, social scientists at smaller and less affluent institutions where heavy emphasis is placed upon the quality and range of undergraduate instruction. Two developmental areas are of high priority for the immediate future.

The first of these is completion of a basic data analysis system for small machines. With support provided by the Center for Political Studies the design of this system has been completed and some of the preliminary implementation on the Prime 350 has been carried out. The system is primarily designed for instructional support but also provides basic capabilities for research applications. The elements of the system include recoding and index construction, cross tabulation and basic measures of association, bivariate and multiple regression, and simple analysis of variance. The system is modular in design to allow implementation on microcomputers, although implementation on larger machines, including mainframe equipment, is obviously also fully feasible. The system is designed for maximum ease of use; the beginning user will be able to employ the system with very minimal initial instruction; and an optional system of "prompts" guides the user through the various analytical applications. Because of its modular design, expansion of the system to add additional capabilities will be fully feasible.

The second development area focuses upon the need for other forms of instructional support materials. In the past, the Consortium has devoted considerable and continuing effort, both independently and in collaboration with other organizations, to the development and dissemination of data-based teaching packages. This work can continue but heavier emphasis will be placed upon development of programmed learning materials and computer aided instructional

resources. These materials will be developed primarily in the context of the Consortium training programs. While these materials will also be designed for use at other institutions and will be compatible with diverse equipment from microcomputers through mainframe machines, they will also meet immediate needs of the training programs. In developing these materials, initial emphasis will be placed upon introductory statistics, causal analysis, and linear models, presently core elements of the training programs. In this way, "self-teaching" by students themselves would be facilitated--aided, of course, by appropriate tutorial guidance and assistance--and instructional resources will be freed for application in more advanced areas. Obviously, these materials will be valuable supplements to course offerings at other institutions, and will allow students and others to gain beginning or refresher training through independent study.

Reference and Search Capabilities. The past two or more decades have witnessed rapid proliferation of collections of research data. As yet, however, little in the way of systematic reference control over these materials has been achieved. As a consequence, data collections are underexploited, substantial scholarly energy is invested in frustrating searches for needed data, and it is likely that data collecting efforts are needlessly duplicated. As a step toward correcting this situation the Consortium has begun the process of cataloguing its data holdings in conformity with the rules and standards for machine-readable data files provided by the Anglo-American Cataloguing Rules (second edition).

This work looks toward achieving what amounts to library control over collections of research data and is a necessary and important forward step. It does not, however, provide effective reference control or search capacity where the content of data collections is concerned. Thus a high priority is development of a basic search capability for Consortium and, potentially, other data. It should be stressed that there is no intent to create an information retrieval system, at least as such systems are often conceived. The approach to be followed will be more simple, less costly and, we believe, significantly more practical. A machine-readable file of the full question text and variable descriptions for Consortium data collections will be created using the existing machine-readable codebooks for those collections with each entry coded in terms of such gross categories as data type, nation to which relevant, temporal period, and the like. These selection categories will be employed by users to locate relevant subsets of the total file. A simple program will then carry out a full-text search of the subset seeking matches on user-supplied keywords and phrases, and the full question or variable description text will be retrieved when successful matches are made.

Such an approach is cumbersome and could not be practically used on main-frame equipment. It would be practical, however, using low-cost microcomputers. The projected capability will be of considerable value in facilitating and reducing the cost of the consulting and data identification services which the Consortium staff is increasingly called upon to perform. The question file, however, will be continuously updated, and both the file and the search program will be exportable for use at other installations.

Microcomputer Systems. Microcomputers provide a low cost avenue to substantial computational power. The Consortium staff has carried out preliminary work to design a general data handling microcomputer system, dubbed for convenience a "data micro." Access to the microcomputers for which support is requested would allow further progress in this area. The projected system would link together two or more microcomputers to support archival applications. For these purposes the system would be augmented by equipment to be acquired in the future including a tape cartridge mechanism for transmission of data and a single-platter

non-removable hard disk for intermediate work storage. While this micro-computer system so augmented would be employed for Consortium tasks, the design would also be suitable for implementation at other institutions to support basic data management, research and instructional applications. The basic system would provide significant computational power at costs in the range of \$10,000 to \$15,000. The augmented system would provide added capacity in a cost range of \$20,000 to \$25,000. Thus the system would be of value to smaller institutions and for such applications as data laboratories either as a stand alone device or linked to larger equipment.

A potentially revolutionary development that is expected to occur during the next three years is the availability of video disks suitable for use as storage devices for computers. These low-cost read-only devices would be of considerable utility for the Consortium in disseminating very large data files. Attachment of a video disk drive to the "Data Micro" described above would create a powerful facility for managing virtually any of the Consortium archival data collections foreseen for the future including the very largest. Only a very modest investment of Consortium resources will be required to remain abreast of this emerging technology and to capitalize upon its advantages should it become fully practical.

This longer term developmental activity holds important potential advantages for the Consortium. It would provide increased computational capacity, greater system reliability, facilitate low cost expansion of capacity in the future, and capitalize more fully upon advanced technology. It would also allow development and dissemination of capabilities and resources which would be of major value for less affluent institutions and for such applications as data laboratories or departmental installations.

#### PROJECT SUMMARY

The Consortium has begun a major facilities development program on the basis of its own resources. Through "modernization" of its facilities to more fully realize the advantages of advanced computer technology the Consortium will be able to perform more effectively its current services, expand the services which it provides, increase its archival activities to cope with the increased, and increasing, volume of data of social scientific value that is now available, and provide resources and services that will allow social scientists to more fully realize the advantages of low cost mini- and micro-computer technology. An initial investment of Consortium resources in this developmental program has been made. A Prime 300 minicomputer, with associated terminals and related devices, was acquired in 1977 and more recently upgraded to the 350 level. A further investment has been made in the programming required for the implementation of this equipment. Experience to date well demonstrate the practicality of the larger developmental program.

The present proposal requests support for acquisition of the equipment required to capitalize on development work already completed. The projected equipment will allow the Consortium to fully automate its current work, with attendant major cost reductions and improvement of services; provide increased system reliability for production purposes; and also provide modest reserve computational power for the future. A relatively modest capital investment in equipment acquisition will yield immediate benefits for the Consortium and for the community of social scientists which it serves. The equipment to be acquired, moreover, will provide a basis for longer-term developmental work which will further expand the resources and services which the Consortium provides. This capital investment, in short, will place the Consortium on a more reliably self-sustaining basis while at the same time expanding its resources and services.

The present proposal requests support only for the direct costs of equipment acquisition. No support for programming or other developmental work is requested. All costs for maintenance of the projected equipment will be borne by the Consortium.

Title: Development of the Capabilities of the ICPSR:  
Equipment Acquisition  
Source: National Science Foundation  
Grant Number: SES 79-19156  
Duration: April 1, 1980 to March 31, 1981  
Amount: \$473,945

SUPPORTING FACILITIES FOR RESEARCH AND POLICY DEVELOPMENT  
AND EVALUATION IN THE FIELD OF AGING

A Proposal Supported by the Administration on Aging  
Department of Health and Human Services

The program described in this proposal is of wide-ranging social importance and is designed to serve the multiple goals and priorities of the Administration on Aging and the National Institute on Aging. The proposal requests support for continuation and elaboration of a major national facility that will provide, on a continuing basis, resources and services of central importance to research, to the formation and evaluation of public policies and programs and to the organization and delivery of services in the field of aging. More specifically, the Institute of Gerontology (IoG) of The University of Michigan and the Inter-university Consortium for Political and Social Research (ICPSR) requests support to expand and improve the following activities:

I. Resource Development

- a) the identification and acquisition of data collections of national significance for research and planning in the field of aging;
- b) the cleaning and documentation of the data collections;

II. Training

- c) the methodological training of scholars active and/or interested in the field of aging;
- d) the training of agency administrators and practitioners in the utilization and management of data;

III. Access, Utilization and Dissemination

- e) the provision of technical assistance to agency personnel in the identification and utilization of data that will assist in the design and delivery of services for the elderly;
- f) the provision of customized forms of data for public agencies, including state units in aging area agencies, and community mental health centers;
- g) the provision of customized forms of data for researchers, and
- h) the optimization of accessibility to the data by researchers, practitioners, and policymakers.

Continuation and further development of the National Archive of Computerized Data on Aging (NACDA) will allow and encourage researchers, agency personnel and others concerned with aging to bring empirical data and advanced analytical tools efficiently and effectively to bear in research, policy and

program development, and evaluation. The consequences will be improved knowledge, enhanced capacity to apply that knowledge to practical needs and to the solution of concrete problems, and improved ability to develop and implement effective policies and programs.

In its extension and development, the program will draw upon the resources, facilities and personnel of ICPSR and the IoG. ICPSR with an institutional membership of over 240 colleges and universities, serves social scientists around the world by providing: a) a central repository and dissemination service for machine-readable social science data; b) training facilities in basic and advanced techniques of quantitative social analysis; and c) resources for facilitating the use by social scientists of advanced computer technology. The IoG, in keeping with its legislative mandate has developed programs with a three-fold approach: a) instructional programs to increase the quantity and quality of manpower for research, teaching and service provision in the field of gerontology; b) research to find solutions to specific problems of the later years and to contribute to social policy; and c) service components to support and strengthen the capabilities of public and voluntary agencies to serve the aged more effectively. Through these programs the IoG has developed a worldwide network of relationship with professionals in the field of aging.

Thus NACDA extends the availability of the substantial resources of these two organizations to an expanded community of researchers, practitioners and agency personnel. The continuation and enhancement of the NACDA program will build upon accomplishments to date, extend program resources, and make those resources fully and readily available to a broad community of agency personnel, administrators and researchers.

The initial phase of this project was described in the 1976-1977 Annual Report, pp. 60-62, and the second phase was described in the 1977-1978 Annual Report, pp. 43-45.

The central purpose of the project proposed here is to optimize effective and efficient use of empirical data for the purposes of research and of policy and program formation and assessment in the field of aging. The project will contribute to improvement of the standards of data collection and analytical methodology in the field of aging, to more systematic data collection efforts, and to reduction of redundant and wasteful investments in such efforts. At the same time, the project will also make the potential benefits of the very large investments of government and private agencies in collection of empirical data more fully realizable.

Drawing upon such resources as sample surveys, the United States Census, biomedical and health services data, and administrative and case records, the utility of empirical data for applied and basic research into social processes is widely and generally recognized. Empirical data combined with the analytical tools of statistics, mathematics and computational machinery have provided a basis for greatly improved knowledge and understanding of social phenomena. As yet, however, the study of aging and the aged, particularly in relation to broader social processes and institutions and to biomedical factors, has not profited from these resources to the same degree as numerous other fields of social inquiry. The reasons for this situation



are many. Chief among them are the relative lack of effective access on the part of researchers involved in the study of aging to advanced tools of analytical inquiry, and the coincidental lack of access to needed empirical data resources. The latter consideration has also worked to slow movement of researchers from other fields to the study of aging.

The Inter-university Consortium for Political and Social Research and the Institute of Gerontology have begun a major program which directly addresses and will substantially reduce these interrelated problems. With support provided by the Administration on Aging, supplemented by financial and other resources provided by the two organizations themselves, this program has several core elements. These are development of an archive of basic empirical data, dissemination of data and facilitation of their use, provision of training in analytical skills and of access to requisite technical facilities, and assistance in the use of these resources. This proposal requests support for a three year period to allow extension, broadening and development of the program. Current data development and training activities will be continued, but with increasing emphasis upon direct assistance to policymakers, agency personnel, and researchers.

The National Archive of Computerized Data on Aging (NACDA) is organized around three concrete areas of service provision--archival resource development; training; and facilitation of access, utilization, and dissemination of the resources, including the provision of consultation services. These three elements, represent an integrated program designed to aid both researchers in the field of aging and policymakers and planners in the aging network. While actual project activities are carried out through the collaborative efforts of ICPSR and IoG staffs, appropriate guidance and assistance are provided by members of a national committee, an expert panel, and an agency liaison group.

The central element of the project, and the initial building block upon which the other two tasks are based, is the acquisition and processing of data files which will expand and enhance the resource base of NACDA holdings beyond standard demographic data files. Attention will be given to acquiring data relating to the delivery of long-term care and biomedical processes involved in aging, and to special files to be released as part of the 1980 Censuses of Population and Housing.

The need for extending the range of NACDA data holdings has been suggested by a number of individuals, most importantly by members of the National Advisory Committee and informed researchers and practitioners. Selection of the proposed acquisitions has been guided by an awareness that a variety of social scientific, biomedical and health care data can be appropriately applied to solving problems in the field of aging and that greater advantage must be taken of underutilized original data collections, in which substantial investments have already been made.

Of course, there must also be a well-trained cadre of researchers, policymakers, and planners who are familiar with the availability and applicability of the archival holdings. The second element in the proposed project will be the continuation and expansion of the training program of workshops

and seminars. At the same time, the consultation service will be expanded to include more direct contacts with personnel in state and local agencies on aging. Particular emphasis will be placed upon extending services to members of the aging network by increasing the number of workshops and by disseminating information about the availability of the consultation service more widely. The consultation and training activities will be apportioned to the staffs of the two collaborating institutions in accord with their special skills. ICPSR will provide technical consultation on the availability of appropriate data resources and how they might be applied to the solution of specific problems, particularly for agency personnel and planners.

The third element of the project is to facilitate access to and utilization and dissemination of archival resources. NACDA, by nature, is a dynamic project characterized by expanding holdings in the archive, changing needs of aging network personnel, and changing computer and analytic technology. For this reason there must be on-going dissemination of updated information on archival holdings and project activities. In support of the consultative services it will also be necessary to make relevant data and documentation resources readily available to potential users in a form compatible with their skills and computational facilities.

The purpose of this final task is to reach as wide an audience of potential users for the archive as possible. Every effort will be made to ensure that they are aware of the archival resources and that they can have readily-usable data or other services delivered to them in a timely fashion.

Title:            Supporting Facilities for Research and Policy  
                 Development and Evaluation in the Field of Aging  
Source:          Administration on Aging  
                 Department of Health and Human Services  
Grant Number:   90-A-1279/03  
Duration:        April 15, 1980 - April 14, 1981  
Amount:          \$170,416

CONTINUATION OF TECHNICAL SUPPORT AND TRAINING ACTIVITIES  
RELATED TO A NATIONAL CRIMINAL JUSTICE DATA ARCHIVE

A Proposal Supported by the  
Bureau of Justice Statistics

This proposal requests support for continuation of a project to assist the Statistics Division of the Bureau of Justice Statistics (BJS) in the development and maintenance of a national criminal justice data archive and associated support facilities. The Criminal Justice Archive and Information Network (CJAIN) has been successfully developed and data services and training activities have been provided for twenty-seven months with support from the National Criminal Justice Information and Statistics Service (NCJISS) of the Law Enforcement Assistance Administration (LEAA). The initial phase of this project was described in the 1976-1977 Annual Report, pp. 57-59, and the second phase was described in the 1978-1979 Annual Report, pp. 57-58. The proposed continuation of the project will extend the archival holdings of computer-readable criminal justice datasets and the technical support services and training functions in order to enhance the utility of available data and to expand the number of individuals who utilize the services of the resource base. The project will be focused upon an integrated program of activities designed to stimulate the extended analysis of a wide variety of computer readable data files relating to crime, criminal justice, and their impact on society.

The program incorporates elements designed to assist the entire community of potential users of such services, including public policymakers and administrators at all levels of government, criminal justice and law enforcement practitioners, analysts at public and private research centers, and academic researchers at colleges and universities throughout the United States. The project will continue to make use of the technical skills and facilities of the Inter-university Consortium for Political and Social Research (ICPSR) and its well-developed techniques and network for data dissemination.

The CJAIN project is needed to increase the availability of quantitative resources for researches and policymakers in the criminal justice field and, at the same time, to increase the return on the substantial investment which the federal government and other sources have made in the generation of computer-readable data bases in the criminal justice area. The project is based upon an integrated program of activities designed to stimulate the extended analysis of a wide variety of computer-readable data files relating to crime, criminal justice, and their impacts upon society. The program will consist of continued development of archival resources, the provision of a variety of technical support and assistance activities, and a series of training programs and exhibits.

During the past year, the number of datasets in the archive were increased substantially, and there are now over forty-five separate collections of data, involving many times that number of individual datasets, listed in the holdings. The archiving of

data represents only part of the project, however, as the dissemination of data to individual researchers is of equal importance. During the past year, almost 200 requests for services were filled, involving the distribution of either data, documentation, or both. More than 31,000,000 card-image equivalents of data were distributed in response to these requests. There were innumerable other requests for information, advice, or other forms of consultation, which were also answered by the CJAIN staff.

In the continuation period, the support for CJAIN will be converted to a cooperative agreement between the Bureau of Justice Statistics and the Inter-university Consortium for Political and Social Research. Through closer interaction between the staffs of these two organizations, further progress will be made in accumulating data resources and facilitating their use by criminal justice researchers, analysts, and policymakers. Surveys of user needs and satisfaction with services will be conducted to increase the effectiveness and responsiveness of project activities.

The project will consist of three separate tasks, each of which bears an integral relation to the others. The first task will include extension of the base of computer-readable data and expansion of dissemination services. The archival staff will continue to acquire data files which are longitudinal extensions of present holdings as well as acquire other recent criminal justice datasets of major substantive significance to researchers and policymakers. As part of this activity, the archive has become the regular repository and disseminator of the National Crime Survey data and the data series on Employment and Expenditure in the Criminal Justice System as they are released by the relevant divisions of the Bureau of the Census. The archive in turn makes these public data files available in a wide variety of technical conditions that facilitates their use.

The second project task will consist of the provision of technical assistance and support to users of the archival data files. These activities are designed to facilitate access to and utilization of the archival data resources. The task will include maintenance of a computer conference utilizing the telecommunications capabilities of a national computer network among criminal justice researchers and planners. As an extension of the consultation service, and in conjunction with expanded archival resources, the project staff will provide technical assistance and consultation to members of the analysis staff of the Center for Demographic Studies at the Bureau of the Census who have the responsibility for preparing published reports of findings from BJS-supported data collection efforts.

The third project task will include a variety of training and research support activities. As a continuation of past successful efforts, the project will again conduct, as part of the 1980 ICPSR Summer Training Program, a four-week seminar related to the use of computer-readable data in the criminal justice field. The Seminar in the Quantitative Analysis of Crime and the Criminal Justice System will expose participants to various social scientific approaches to the study of criminal justice policies and their impact on society. This seminar will be open to individuals with a substantive interest in the area who have had prior training in quantitative methods and experience with computers and machine-readable data bases.

The proposed project will require twelve months for completion and will be conducted by the staff of the ICPSR. The data archiving activity will continue to be guided by a Steering Committee composed of BJS and National Institute of Justice (NIJ) staff members, practicing criminal justice professionals, researchers in the field, and members of the ICPSR staff. Each task will have an associated evaluation component to assist in the modification and development of project activities, and a final report will be prepared to summarize project activities and accomplishments.

Title: Continuation of Technical Support and Training  
Activities Related to a National Criminal Justice  
Data Archive  
Source: Bureau of Justice Statistics  
Grant Number: 80-BJ-CX-K005  
Duration: May 1, 1980 - April 30, 1981  
Amount: \$399,890

## A GUIDE TO DATA PREPARATION AND DOCUMENTATION

A Project Supported by the Department of Interior

The Department of the Interior awarded a contract to ICPSR in the amount of \$4,000 to support the writing of a basic guide to data preparation and documentation for use by agencies of the Department of Interior and potentially other government agencies, in collecting and processing survey data. With this support Carolyn Geda has completed a Data Preparation Manual which is now being published. The Manual will shortly be available to Official Representatives and other interested individuals and organizations.

Title: A Guide to Data Preparation and Documentation  
Source: Department of the Interior  
Grant Number: POA-4027  
Amount: \$4,000  
Duration: September 1, 1979 to August 31, 1980

## QUESTION RETRIEVAL FROM MACHINE-READABLE CODEBOOKS

A Project supported by the Department of Agriculture

ICPSR has been awarded a contract from the Department of Agriculture in the amount of \$5,000 to support an experimental and demonstration project involving item-level retrieval from machine-readable survey data codebooks. With this support, two small survey codebooks will be converted to a machine form suited to the Stanford Public Information Retrieval Systems (SPIRES). The utility of SPIRES as a means to search machine-readable codebook text and identify and retrieve specific items on the basis of content will then be tested.

Title: Question Retrieval from Machine-Readable  
Codebooks  
Source: Department of Agriculture  
Grant Number: 23-429  
Duration: April 1, 1980 to March 31, 1981  
Amount: \$5,000

## DISSEMINATION AND UTILIZATION: CENSUS DATA AS A PLANNING TOOL

A Proposal Supported by the Administration on Aging,  
Department of Health and Human Services

The United States Bureau of the Census is the largest and most important data collection agency of the nation. The tabulations from their decennial efforts provide the nation with the basic geo-political statistics about the elderly population to be served and the size and characteristics of the full range of age cohorts in the population, as well as data on basic employment and occupation patterns.

Yet the vast amount of data regarding age-related population and housing characteristics contained in the United States Census is virtually untapped by personnel in the aging network. As released by the Bureau, the computer-readable data were in idiosyncratic technical formats and poorly organized for many uses. Furthermore, service planners have hesitated to base decisions on data which were up to ten years old and did not accurately reflect the changes which were rapidly occurring in the elderly population. Public Law 94-521 has, however, amended the Census Code (Title 13) to provide for a mid-decade, or quinquennial, Census. Thus, beginning with the 1980 Census, new data will be become available every five years. This will provide an important resource of routinely collected replicable data useful to geographically small planning areas. This will, at the same time, complicate the data management problems planners will have because of the increased frequency of data releases. Most planning agencies will still require technical assistance in the utilization of these materials.

The decision of the Bureau of the Census to release almost its entire 1970 data product in computer-readable form was a great benefit to social scientists. This action also presented a major challenge to those who sought access to the data, as over 2,000 reels of magnetic tape were in the original Bureau format. The Bureau has already made a substantial investment in planning for the release of computer-readable products from the 1980 Census which will be even more extensive than those from the 1970 Census.

There are a number of reasons why Census data are underutilized by social scientists and planners in agencies on aging. These include the size and intrinsic complexity of the data, costs of acquisition and access, the complexity and idiosyncracies of the technical forms in which they are made available by the Bureau, and the advanced computational machinery and capabilities required for their effective use.

Although printed Census reports are widely distributed to libraries and governmental planning offices, the tabulations contained therein are limited in their applicability for local planning. Culling through a large volume of material and finding only a limited number of useful facts is an inefficient use of a planner's time. Other data formats which are found on magnetic computer tape could be much more useful; however, many planners do not have access to the computer hardware to retrieve the data nor do they have the financial resources to purchase such a service. And many times the routine Census tabulation specifications, such as predetermined age intervals, are not

relevant to the particular planning needs of agency personnel. Finally, to the extent that relevant data are retrieved, interpretation and application is difficult.

In regard to planners in aging network agencies it is recognized that their skill in dealing with Census or other complex datasets varies widely. Some planners are extremely sophisticated in the use of computer based analysis and data interpretation techniques. Others have virtually no experience in this regard. This fact must be taken into account in any efforts designed to assist aging network planners to better utilize Census data.

More planning is needed to insure effective utilization of the wide range of Census resources. Attention must be given to ascertaining which elements of the computer-readable products from the 1980 and subsequent Censuses are of greatest value to policy makers interested in aging, what are the technical formats most likely to be required, and what is the best acquisition and dissemination mechanism which can be established to satisfy planner's needs on a cost-effective basis. Given assumptions that some common needs exist and that the volume of data and cost of acquisition are so great that large numbers of individuals will not be able to afford to purchase their own copies of the tapes, the task is to determine how to maximize access to the valuable resource. Facilitation of effective access to and use of the 1980 Census data is all the more critical in view of the current availability (in computer-readable form) of the 1970 data, the interim data collection activities of the Current Population Surveys, and the prospect of another national Census in 1985. Taken together these materials will constitute an unparalleled resource for research and policy formulation. This will provide a mechanism for looking at trends in population and housing characteristics over time.

The Institute of Gerontology and the Inter-university Consortium for Political and Social Research (ICPSR) propose to develop strategies and materials which will enable planners and researcher's to make better use of Census data. These institutions are currently collaborating in the development and administration of the National Archive of Computerized Data on Aging (NACDA). The ICPSR has substantial experience in archiving and managing Census data, and will serve the repository function in the Michigan State Data Center, the organization responsible for providing access to 1980 Census data to users in the state. The ICPSR has been disseminating historical Census data to social scientists in its national network for more than ten years.

The Institute of Gerontology, through its staff of professional gerontologists, is well equipped to provide the interface between ICPSR and the aging network. The Institute is experienced not only in conducting gerontological research, but in translating research findings into improved services for older persons through educational programs and materials for practitioners, the formulation of social policies and the provision of technical assistance to service agencies. The combination of the skills and strengths of these two organizations will be further enhanced by the resources of the National Association of State Units on Aging (NASUA), which has agreed to collaborate with the IOG and ICPSR in the conduct of



this project.

The proposed project will develop, field test, and evaluate a series of concrete products designed to assist social scientists, planners, and agency personnel in the use of 1980 and subsequent Census materials.

The ultimate objective of the proposed project is to enable social scientists and service planners to use Census data on a regular basis, beginning with the data from the 1980 Census, to help establish service needs and fiscal allocations. Toward the accomplishment of this general objective, specific immediate project objectives are listed below.

1. Personnel from a sample of agencies on aging, representative of agencies on the local, state, regional and national levels of planning, will be identified as project advisors.
2. A survey to document types of data needed for planning and problems encountered in past attempts at using Census data will be conducted and analyzed.
3. An information brief will be written and distributed to all local, state, and regional offices on aging which describes potential uses of Census data, the types of data which will become available, and how these data can be accessed.
4. A two-part prototype "databook" will be prepared. Part I, background information regarding the U.S. Census, tips for using Census data, generally, and a guide for using the databook, will be completed by the end of the project. Part II will consist of appropriate text and pre-labelled blank tables and maps to be filled in when actual Census data are released. This part of the manual will be formatted and appropriate computer software designed to complete and print the tables when appropriate.
5. A plan for inserting the 1980 Census data into databooks for all planning levels, disseminating the databooks and facilitating their utilization will be put in place to be used when 1980 data become available and pending the receipt of additional implementing monies.

Title:	Dissemination and Utilization: Census Data as a Planning Tool
Source:	Administration on Aging Department of Health and Human Services
Grant Number:	90-AR-0015/01
Duration:	April 1, 1980 to March 31, 1981
Amount:	\$40,027

ARCHIVING MACHINE READABLE DATA AND PROVIDE DOCUMENTATION FOR  
DATA FROM THIRTEEN ELECTRIC UTILITY RATE DEMONSTRATIONS

A Project Supported by the Department of Energy

The Division of Regulatory Assistance, Office of Utility Systems Department of Energy has as one of its principle objectives, the conservation of oil and gas through increased efficiency of electric utility generating plants now in operation. In achieving this objective, the Division works with State public utility commissions in an effort to encourage the commissions to adopt new rate schedules for pricing electricity which will provide incentives for electric customers to shift their usage from the peak periods to the off-peak periods of the day.

As a part of this effort, the Division has funded a series of sixteen Electric Utility Rate Demonstrations throughout the nation. Most of these demonstrations are structured around an experimental design which contrasts the electricity shifting behavior of a sample of households on an experimental (time-of-day) electricity rate schedule with that of a sample of households on the conventional (declining block) rate schedule.

Two major data sets have been collected from the experimental and control groups in most of the demonstrations. These are the consumption data set and the demographic and attitude data set. The consumption data set consists of data on household electricity usage collected by a special electricity meter attached to the house. The demographic and attitude data consists of data about the members of the households.

In addition to these two data sets, many projects have two other data sets: system load data and weather data. System load data is data on the amount of electricity output from an entire electric utility system for each hour of the year. The weather data is data on temperature, humidity, and windspeed from the national weather service stations closest to the households in the demonstration.

Demonstrations have been held in sixteen states or cities. Quantitative, machine-readable data is available from thirteen of these sixteen demonstrations. The thirteen demonstrations are: Arizona, Connecticut, Ohio, North Carolina, Wisconsin, Oklahoma (Edmond), Rhode Island, Los Angeles, Puerto Rico, California, Arkansas, Washington (Seattle), and Vermont. The four types of data sets are: consumption (meter) data, demographic and attitude data, weather data, and system load data. Not all projects will have a data set from each of the four categories.

The objective of this proposal is to facilitate the dissemination of data sets from the electric utility rate demonstrations, together with accurate documentation, to State regulatory commissions, electric utility companies, and economists and econometricians who find it necessary to analyse this large data base in order to evaluate the effectiveness of time-of-day rates in shifting electricity usage from peak to off-peak times.

The Inter-university Consortium for Political and Social Research (ICPSR) of The University of Michigan is a major archive for social science data sets in the United States. It has archival responsibility for hundreds of data sets from major social surveys and experiments in the fields of education, economics, sociology, political science, and psychology. Since its founding in 1962, ICPSR has accepted responsibility for archiving, editing, protecting, and disseminating data from these valuable studies.

A major role of ICPSR is to archive and distribute data from social science surveys and experiments. Its administrative, professional, and technical personnel are highly trained in specific areas of data archiving including data checking, data editing, data documentation and data dissemination. Through its affiliated institutions, ICPSR distributes archived data throughout the United States as well as Canada, Mexico, Europe, and Japan, ICPSR has acquired an excellent reputation among social science research for the promptness of its services, the thoroughness of accompanying documentation, and the care with which data is checked and edited.

The ICPSR was established to service social science researchers. Its staff is recruited from among individuals with social science research backgrounds. The checking, editing, and documenting which ICPSR has performed on data sets provides strong evidence of the concern for the needs and interests of social science researchers.

By virtue of its experience in archiving and disseminating social science research data, including economic and econometric data, and the high level of training and experience of their personnel, ICPSR is uniquely qualified to accept the data from the Electric Utility Rate Demonstrations, to archive it, and to disseminate it to organizations and individuals who wish or need to analyze it.

Title:	Archive Machine-Readable Data and Provide Documentation Data from Thirteen Electric Utility Rate Demonstrations
Source:	Department of Energy
Grant number:	01-80RG
Duration:	September 1, 1980 to August 31, 1981
Amount:	\$105,000

ARCHIVING AND DISSEMINATION OF  
MEDICAL AND SURGICAL SPECIALTIES DATA

A project supported by the  
Robert Wood Johnson Foundation

This proposal seeks funding to support a project which will collect, process and redisseminate a set of data files related to medical practices in the United States. Data on medical and surgical practice arrangements in twenty-four medical specialties were obtained from the Division on Research in Medical Education of the Medical School at the University of Southern California, which had gathered the data in a survey of doctors and surgeons conducted in 1975. ICPSR will reformat and standardize both data and documentation for the more than seventy files contained in this collection, and disseminate the collection as widely as possible. All files were acquired in the past year and processing of the data has begun. This project will be concluded in the next fiscal year.

The twenty-four medical specialties include the following areas:

Allergy	Nephrology
Cardiology	Neurological Surgery
Dermatology	Neurology
Emergency Medicine	Obstetrics/Gynecology
Endocrinology	Oncology
Family Practice	Ophthalmology
Gastroenterology	Orthopedic Surgery
General Practice	Otorhinolaryngology
General Surgery	Pediatrics
Hematology	Psychiatry
Infectious Diseases	Pulmonary Diseases
Internal Medicine	Rheumatology

Information on each of these was collected on such topics as: patient encounters, patient care, professional activities, hospital and laboratory activities, travel, administrative matters, and diagnostic and therapeutic procedures.

Title: Archiving and Dissemination of the Medical  
and Surgical Specialties Data  
Source: Robert Wood Johnson Foundation  
Grant Number: 5431  
Duration: April 1, 1980 to June 30, 1981  
Amount: \$24,343

## EDUCATIONAL ACTIVITIES



## THE 1979 ICPSR TRAINING PROGRAM

The seventeenth annual ICPSR Training Program in Quantitative Methods of Social Research was held in Ann Arbor from June 25 until August 17. The eight-week Summer Program is divided into two four-week terms; and, while many courses offered during the first session are prerequisites for second session courses, it is not difficult for a student who can attend only one of the terms to define a schedule of courses consistent with her/his background and interests in social methodology. In fact, the current Training Program schedule is quite versatile with lecture/workshops meeting for periods of one, two, three, and four weeks.

Total enrollment in the 1979 Program was 287 participants, distributed as follows:

First term:	70
Second term:	59
Both terms:	158

Figure 1: NUMBER OF PARTICIPANTS

As in previous years, approximately one-third of the participants were post-doctoral visiting scholars, more than half were graduate students, and the remainder were either advanced undergraduates or research scholars currently employed by government or private research firms (see Figure 2). In addition, fifteen professionals attended a special workshop for data librarians sponsored by ICPSR in conjunction with the Training Program.

Visiting Scholars:	90 (31%)
Graduate Students:	153 (54%)
Other:	44 (15%)
TOTAL:	287 (100%)

Figure 2: PARTICIPANTS' ACADEMIC STATUS

In addition to representing eighty-four ICPSR-member institutions in the U.S., participants who matriculate at universities in seven of the eight European federations also attended the 1979 summer session. The largest proportion of students were associated with political science departments; however, the number of sociologists attending the Training Program continued to increase, and the distribution of departmental affiliations of participants from academia illustrates the breadth of interest in and impact of the Program (see Figure 3).

Business Administration:	7 ( 3%)
Economics:	12 ( 5%)
Education:	15 ( 6%)
History:	16 ( 6%)
Political Science:	81 (33%)
Psychology:	18 ( 7.5%)
Public Health:	8 ( 3%)
Social Work:	12 ( 5%)
Sociology:	67 (27%)
Other:	11 ( 5%)
TOTAL:	247 (100%)

Figure 3: ACADEMICS' DEPARTMENTAL AFFILIATIONS

It is noteworthy that a growing number of participants from academia are affiliated with "relatively small" colleges and universities that do not grant a Ph.D. degree in the participant's area of expertise (see Figure 4). We believe that this is indicative of the fact that research methodology has become an essential component in the education of almost every social scientist, even to the extent that it has been introduced into the undergraduate curriculum of a few colleges.

Bachelors Degree-Granting Institutions:	14 ( 5%)
Masters Degree-Granting Institutions:	102 (35%)
Ph.D.-Granting Institutions:	131 (46%)
Non-Academics:	40 (14%)
TOTAL:	287 (100%)

Figure 4: PARTICIPANTS' DEPARTMENTS DEGREE-GRANTING STATUS

In addition, the geographic distribution of the participants' bases of operation indicates that, while proximity to Ann Arbor may have been an important or perhaps even a determining-factor in a participant's decision to attend the Training Program, students, nevertheless, came from every section of the U.S. and from more than fifteen foreign countries.

Although most participants, and certainly those who were designated Visiting Scholars by The University of Michigan, chose to audit courses, almost one-third enrolled in ICPSR courses for credit granted by The University (see Figure 5).

Visiting Scholar:	90 (31%)
Auditor:	113 (39%)
Enrolled for credit:	84 (30%)
TOTAL:	287 (100%)

Figure 5: PARTICIPANTS' REGISTRATION STATUS

By virtue of the efforts of an increasing number of dedicated ICPSR Official Representatives, many participants received financial assistance for matriculation in the Training Program. Participant support is primarily through direct grants, tuition subsidies provided by the student's home institution, extension of departmental fellowships, foundation



grants, etc. Summary information on student financial aid from sources other than ICPSR is, unfortunately, not available; however, there is reason to believe that such assistance far exceeds the \$25,000 in travel allocations distributed to participants by the Consortium. Study stipends totaling \$32,000 for forty research scholars were provided by a grant from the Law Enforcement Assistance Administration (LEAA), and the Administration on Aging (AoA) supported forty additional scholars, at least half of whom (by specification of the terms of the grant) were selected from the population of minority scholars. The AoA stipend support amounted to \$20,000. The University of Michigan Office of Opportunity Programs provided approximately \$15,000 for stipends for minority participants; however, these grants were rendered only to University of Michigan graduate students. Finally, the University of Michigan's generous policy of granting Visiting Scholar status to post-doctoral scholars enabled almost one-third of the Program's participants to take Consortium-sponsored courses and have full access to The University's facilities free of charge. Direct funding for the Summer Training Program - not including financial aid for participants - continues to be divided almost evenly between The University of Michigan and the Consortium (c. \$100,000 each)

Source	Amount	Number of Participants	Average Award
ICPSR	\$25,000	125	\$ 200
LEAA	32,000	40	800
AoA	10,000	20	500
AoA(minorities)	10,000	20	500
U of M (minorities)	15,000	15	1,000
TOTAL	\$92,000	220	

Figure 6: STIPEND SUPPORT FOR PARTICIPANTS

Our estimate of "typical" travel, rent, food, and entertainment (but not tuition) expenditures for an individual who attends both four-week terms of the Training Program is between \$1,500 and \$1,800. Since all participants who do not have Visiting Scholar status must pay tuition to The University of Michigan, either to audit courses or to receive special credit, financial aid is of critical importance to many. [In fact, it is indeed a tribute to ICPSR and the faculty of the Training Program that so many students, faculty, and research scholars interrupt their normal activities to study statistics, data analysis, and social methodology at the Consortium for two months during the summer]. Since financial aid is of critical importance to many students for whom the Summer Program is an important resource, efforts are currently under way to obtain support for minority scholars, and we will continue to seek stipends for participants in conjunction with study and research workshops which focus on specific substantive issues of interest to social scientists.

The faculty and technical staff of the 1979 Training Program were outstanding. There were thirty-two faculty members, all of whom have appointments at Consortium-member universities, and the Computer User Services (CUS) staff consisted of ten graduate students from five departments at The

University of Michigan. As is usually the case, many faculty were either ICPSR staff or on the faculty of one of the academic departments at The University of Michigan. The 1979 instructional staff was drawn from at least twelve different disciplines at sixteen separate universities in the U.S., Canada, and Europe. The diversity of backgrounds, interests, and research foci of the faculty and staff and the intensity of faculty and participant interaction created a lively, interesting, and, at times, exciting experience for both groups.

In the past, the schedule has been formulated (and often revised) to enable participants to attend a potpourri of lectures and lecture/workshops. This year the schedule was purposely designed so that students could take only one lecture/workshop during the first term and could enroll in only two during the second term. Our intention was to define a program in which participants were "forced" to focus their attention and efforts on only a few lecture/workshops and then increase our expectation of their commitment to those courses. This strategy is consistent with our prejudice that the Training Program is one in which resources should be utilized so that, in any given summer, students obtain a functional command of a few quantitative analytic methods instead of an inefficacious appreciation of many. Faculty were encouraged to emphasize data analysis and research project assignments, and we strongly endorsed and encouraged thoughtful, critical evaluation of the participant's work. The schedule for instruction was extended to five days per week (from four days per week), and many observers noted that the changes resulted in a more efficient utilization of our resources.

The standard schedule of lectures and lecture/workshops was augmented by a schedule of rather informal "brownbag" seminars, conducted by a collection of well-known social scientists. Included in this group were:

Frank H. Aarebrot (U. of Bergen) Norwegian Social Sciences Data Services	"Centre-Periphery Structures in Europe"
Hubert M. Blalock (U. of Washington) Professor of Sociology President, ASA	"Measurement Problems (And Some Solutions) in Social Research"
Angus Campbell (U. of Michigan) Professor of Psychology and Sociology	"The Early Years of Election Surveys"
Heinz Eulau (Stanford U.) Professor of Political Science	"American National Election Pilot Study"

M. Kent Jennings (U. of Michigan) Professor Political Science	"The Intergenerational Transmission of Political Orientations: A Longitudinal Perspective"
Gregory Marks (ICPSR) Director, ICPSR Computer Support	"Future Prospects for Small Computers"
Warren E. Miller (U. of Michigan) Professor of Political Science Director, Center for Political Studies President, APSA	"American National Election Study: Planning for 1980"
John R. Nesselroade (Penn. State U.) Professor of Human Development	"Multivariate Analysis of Aging Phenomena"

Figure 7: INFORMAL SEMINARS AND LECTURES

It is noteworthy that more emphasis was placed upon computing instruction in 1979 than at any time in the past. Almost two hundred participants attended a one-week lecture series (taught on three separate occasions) devoted to computing on The University of Michigan system, and their instruction included utilization of "guided exercises" designed to introduce students to the type of "hands on" experience that is essential for data analysis assignments in the lecture/workshops. As a consequence of this, and the greater emphasis placed upon critical evaluation of the participants' work, all but a few students capitalized on our excellent computer facilities and generous computing budget to put their knowledge of research methodology to use in the analysis of various data sets. In fact, even though the "unit cost" of computing continues to decrease, combined staff and student computing expenditures in 1979 were more than double those expenditures for the 1978 Training Program.

Computing Expenditure (\$)	Number of Participants
$0 \leq X \leq 10$	51 (18%)
$10 \leq X \leq 25$	85 (30%)
$25 \leq X \leq 50$	66 (23%)
$50 \leq X \leq 100$	72 (25%)
$100 \leq X \leq 200$	9 ( 3%)
more than 200	4 ( 1%)
TOTAL	287 (100%)

Figure 8: PARTICIPANTS' COMPUTING EXPENDITURES

Finally, 1979 was a period of curriculum revision and consolidation. Historically, lecture/workshops which focused on the general linear model (e.g., Regression Analysis, Least Squares Analysis, Causal Models, Time Series Analysis, Dynamic Analysis) made up most of the Training Program curriculum, and the process of fitting linear models (or systems of linear models) to data was central to the instructional orientation of the Program. While continuing to place emphasis on linear

models, we have increased our course offerings in both methods of exploratory data analysis and methods for analyzing data measured on nominal or ordinal scales (e.g., Applied Multivariate Analysis, Multivariate Dimensional Analysis, Discrete Multivariate Analysis, Exploratory Data Analysis). Many courses, which in previous years were special workshops, have now become integrated components of the Training Program's curriculum. Furthermore, revision of a fairly standard Introduction to Research Design and Elementary Statistics course, in response to the apparent interests of the participants, resulted in a lecture/workshop that many students utilized as a basis for the study of more advanced topics.

We believe that the Summer Training Program's current offerings at the beginning and intermediate levels consist of a solid, diversified core of courses of special relevance to a broad spectrum of scholars with interests in social science research. In addition, the core of courses provides a strong base for a curriculum which will include more advanced courses in statistics, data analysis and social methodology (those on the frontier of the development of quantitative methods of social research), and this same core complements those of the Consortium's special workshops that focus on specific substantive applications (Quantitative Historical Analysis, Quantitative Analysis of Crime and Criminal Justice, Empirical Research in Aging, Measuring Media Use and Media Impact).

In recent years, attempts to keep the Training Program responsive to the evolving needs of member institutions have been aimed in two directions. One of these was the introduction of more advanced technical topics, representing the state-of-the-art of current methodological development; the other was expansion of the general objectives of the Program by adding a variety of workshops focusing on less technical issues of current interest to social scientists. On the whole, the response has been more frequently favorable in the latter respect than in the former. Thus, it appears that the level of technical sophistication of the more "advanced" lecture/workshops, though perhaps modest by objective standards, is one beyond which most social scientists are reluctant to venture in their formal training. Conversely, the opportunity to become familiar with ongoing research concerns and applications of quantitative methods in different domains of social science seems to represent an added source of interest in the Training Program welcomed by many participants. At the same time the traditional curriculum of the Program continues to be utilized by participants and member institutions in several ways, ranging from introductory or developmental training to a substitute for, or complement of, the curricula of the participants' university bases.

1979 ICPSR TRAINING PROGRAM  
IN QUANTITATIVE METHODS OF SOCIAL RESEARCH

FIRST TERM (June 25-July 20)

<u>Time</u>	<u>Lectures</u>
9 am - 10 am	Elementary Mathematics for Social Scientists (30)* Anna Tsao (U. of Michigan)
	Mathematics for Social Scientists (80) Gregory Markus (U. of Michigan)
10 am - 11 am	Dynamic Analysis (50) Philip Converse (U. of Michigan)
	Formal Theories of Political Analysis (35) Douglas Rae (Yale U.) (July 2-20)
11 am - 12:30 am	Introduction to Computers (95) Peter Joftis (ICPSR) (June 26-29)
1 pm - 2:30 pm	Introduction to Linear Models (60) Robert Hoyer (ICPSR) Martha Abele (U. of Michigan)
	Introduction to Computers (55) Peter Joftis (ICPSR) (July 5-8)

Lecture/Workshops

10 am - 12 am	Quantitative Historical Analysis (15) Jerome Clubb (ICPSR) Maris Vinovskis (U. of Michigan) Ruth Wasem (ICPSR)
	Measuring Media Use and Media Impact (11) Peter Clarke (U. of Michigan) Benjamin Taylor (U. of Michigan)
	Empirical Research Issues in Aging (42) Hiram Friedsam (North Texas State U.) Christopher Innes (ICPSR)
2:30 pm - 4:30 pm	Introduction to Research Design and Elementary Statistics (53) Robert Hoyer (ICPSR) Martha Abele (U. of Michigan)
	Introduction to Linear Models (15) Karen Rasler (Florida State U.)
	Intermediate Linear Models (27) John Pothier (Yale U.)
	Intermediate Linear Models (20) Robert Stine (Princeton U.)
	Advanced Linear Models (20) Youssef Cohen (U. of Michigan)

## 1979 Program (continued)

Causal Models (24)

William Ting (U. of Michigan)

Eric Jones (U. of Michigan)

Multivariate Dimensional Analysis (16)

Robert Fish (Stanford U.)

Archiving Criminal Justice Data (18)

Michael Traugott (ICPSR)

Judith Marks (ICPSR) (June 26-July 6)

\*Number of participants enrolled

1979 ICPSR TRAINING PROGRAM  
IN QUANTITATIVE METHODS OF SOCIAL RESEARCH

SECOND TERM (July 23-August 17)

<u>Time</u>	<u>Lectures</u>
9 am - 10 am	Causal Models (35)* John Fox (York U.)
	Data Analysis and Public Policy (60) Lawrence Mayer (Princeton U.)
1 pm - 2:30 pm	Introduction to Computers (40) Peter Joffis (ICPSR) (July 23-27)
<u>Lecture/Workshops</u>	
9 am - 12 am	Management and Library Control of Data (15) Carolyn Geda (ICPSR) (July 23-27)
	Quantitative Analysis of Criminal Justice Problems (24) Alan Lizotte (Emory U.)
10 am - 12 am	Exploratory Data Analysis (40) Lawrence Mayer (Princeton U.) Peter Tittman (U. of Pennsylvania) Robert Stine (Princeton U.)
	Time Series Analysis (53) Gregory Markus (U. of Michigan) Toni Richards (U. of Michigan)
	Experimental Studies (18) Marilyn Dantico (Florida Atlantic U.) (July 23-Aug. 3)
	Multi-Level Analysis (20) Leigh Burstein (U. of California-Los Angeles) (August 6-17)
2:30 pm - 4:30 pm	Introduction to Linear Models (20) Duncan Snidal (U. of Chicago)
	Intermediate Linear Models (25) Steven Jackson (Cornell U.)
	Advanced Linear Models (12) Michael Berbaum (U. of Michigan)

## 1979 Program (continued)

Causal Models (25)

John Fox (York U.)

Eric Jones (U. of Michigan)

Discrete Multivariate Analysis (25)

Michael Gillespie (U. of Alberta)

Applied Multivariate Analysis (25)

Robert Hoyer (ICPSR)

Robert Stine (Princeton U.)

Centre-Periphery Structures (6)

Frank Aarebrot (U. of Bergen, Norway)

(July 23-August 3)

\*Number of Participants enrolled



ICPSR TRAINING PROGRAM  
RECORD OF ATTENDANCE

	Credit	Auditor	Visiting Scholar	Total
1963	23	43	16	82
1964	42	35	14	91
1965	124	71	34	229
1966	100	56	17	173
1967	118	79	27	224
1968	123	64	55	242
1969	63	108	36	207
1970	100	107	47	254
1971	87	96	48	231
1972	65	109	28	202
1973	75	101	50	226
1974	70	75	51	196
1975	59	73	54	186
1976	72	98	41	211
1977	71	99	56	226
1978	76	114	67	257
1979	84	113	90	287

ICPSR METHODOLOGY MONOGRAPH SERIES

The Inter-university Consortium for Political and Social Research has initiated a monograph series on social science methodology. The aim of the series is timely publication of innovative work, the scope of which exceeds that of journal article length. Each monograph will be between 60 and 125 pages in length.

The series is interdisciplinary in scope and emphasizes quantitative research methodology including areas such as conceptualization and design, analysis, formalization, and computer utilization.

The editorial board consists of Michael Hannan (editor, Stanford University), Christopher H. Achen (University of California, Berkeley), Lutz Erbring (University of Chicago), Robert M. Hauser (University of Wisconsin, Madison), Paul W. Holland (Educational Testing Service), John E. Jackson (University of Pennsylvania), Karl G. Joreskog (University of Uppsala), Samuel H. Preston (Population Division, United Nations), Richard Robinson (Johns Hopkins University), W. Phillips Shively (University of Minnesota), Aage B. Sørensen (University of Oslo), and Nancy Brandon Tuma (Stanford University).

Manuscripts (3 copies) should be sent to Professor Michael Hannan, Department of Sociology, Stanford University, Stanford, California 94305.

The first title in the research methodology series was published in July, 1980. The monograph, The Dynamics of Riots, by Barbara Salert and John Sprague (Washington University, St. Louis) may be ordered from University Microfilms International (UMI), Ann Arbor, Michigan 48106

The Dynamics of Riots, by Barbara Salert and John Sprague

Traditionally, social science research on civil disorder has concentrated on the long-term social, economic, and political conditions that cause outbreaks of violence. Salert and Sprague's book focuses, instead, on the short-term public interactions that determine the severity and duration of a riot.

The study begins with the construction of a model that includes mathematical representations of factors the authors feel influence the unfolding of civil disorders: "thresholds" (points at which the nature of the riot changes significantly), levels of citizen participation and police response, and the concepts of the "contagious" and "immunizing" effects of riot behavior borrowed from the science of epidemiology.

Using nonlinear discrete time mathematics and information about the ghetto riots of the 1960s, the authors show that their model effectively captures some of the complexity and uncertainty of the outcomes of actual riots.

The work's conclusions about the critical determinants of the form of riots have important implications for social science methodology, law enforcement, sociology, and political science.

## COMPUTER SUPPORT ACTIVITIES



## COMPUTER SUPPORT ACTIVITIES

Computer software and technical assistance for the ICPSR is provided by the Computer Support Group of the Center for Political Studies. These supporting activities serve the internal needs of the ICPSR servicing and archival staff as well as contributing to meeting the external needs of the ICPSR membership. A significant amount of relevant software development takes place outside of the ICPSR context, in other realms of the Center and the Institute for Social Research. We strive to ensure that these other projects bear in mind the interest of the ICPSR membership so that further benefits are derived at minimal cost.

### Major Expansion of ICPSR Computing Hardware

The ICPSR has extensively changed the computational procedures for the archival processing, servicing, and administrative activities, as has been described in previous Annual Reports. In addition to a major effort on software, this commitment to greatly enhance staff productivity led to the ICPSR staff having its own Prime 300 minicomputer by the start of 1978. The success of this installation and the evident value of further investment in process automation led by early 1979 to two steps toward increasing capacity. The first was the upgrading of the Prime to a Model 350. The second was a proposal to the National Science Foundation requesting major expansion of the ICPSR computational resources.

Funding for the proposed hardware acquisitions was received from NSF in the Spring of 1980. Discussions with computer vendors moved immediately toward the earliest possible upgrading of the ICPSR minicomputer facilities. Five vendors were informed of the nature of the system desired and asked if they would participate in the bidding process. These vendors -- Data General, Digital Equipment Corporation (DEC), Hewlett-Packard, Perkin-Elmer, and Prime -- were selected on the basis of known or projected system capabilities and local service availability. A formal bid document was prepared; a copy is included later in this section. Two vendors chose to respond with full equipment proposals: DEC and Prime.

Emphasis must be given to the value of the bidding process. The importance of bidding in obtaining appreciable price discounts is well established and was proven again in this acquisition. Non-price competition also has an important role in bidding, and in this case resulted in improved delivery schedules, inclusion of advanced hardware and a readiness to discuss long-range development plans. The pressure of the formal deadline for bid submission also helps enormously in getting the vendors to provide information and access to demonstration facilities on a timely basis. A final and very important consideration is that bidding helps get access to each vendor's benchmarking facilities, allowing extensive and well-controlled exploration of the relative performance of each system and assessment of configuration alternatives.

The final outcome of the bidding process was the selection of a Prime 750, which will be connected in a high speed network

with the ICPSR's earlier Prime 350. The Prime 750 essentially matched the performance of the system proposed by DEC, a VAX-11/780, and was much lower in price, with considerably better delivery, simpler installation requirements, and offered a more appropriate and well-supported selection of disk and tape peripherals.

Another component of the equipment acquisition covered in the NSF proposal was terminals to be used with the computing system. Extensive evaluation led to the selection of Zenith (also sold under the name Heath) Z-89 microcomputers as terminals. These units offer the desired degree of programmability, allowing placement of selected computing tasks on the user's terminal for maximum responsiveness and workload-sharing with the central minicomputers. The Zenith Z-89's also include a minifloppy disk drive, further increasing their flexibility. Since these units were available at a price well below any prospective alternative terminal, the choice was straightforward.

#### Low-cost Microcomputers

Two microcomputers have been used for exploratory work during the year, a Terak 8510/a acquired under a grant from the National Science Foundation, and an Apple II acquired with support from the Law Enforcement Assistance Administration. The potential of these systems for word processing, terminal emulation for access to other computers, administrative support, and data analysis has been explored and various strong and weak points identified. A report on this experience is being prepared for circulation to ICPSR members, expanded to cover additional microcomputers such as the Zenith Z-89 mentioned in the last section.

#### National Computer Networking

ICPSR members may obtain access to the University of Michigan Computing Center via the GTE Telenet national network, which currently serves nearly 200 cities in the U.S. and Canada and more than 20 other foreign countries. Cities are added to Telenet on a regular basis. This service has been in operation for almost three years, with its usefulness and reliability amply demonstrated. The network service adds only \$5.50 per hour to the cost of MTS, regardless of distance within the U.S., and about \$30 per hour abroad. Memos describing the service and procedures for obtaining an account are available upon request.

#### Graphics Displays

One of the software developments supported by the Center for Political Studies that is also relevant for ICPSR is a series of graphics software capabilities for generating and editing such displays as histograms, bar charts, scatterplots, and other, less-common presentation formats. This software is available now via network access on the Michigan computing system.

## OSIRIS

OSIRIS III is a stable system which is no longer under development. Maintenance for current users is still provided by the Institute for Social Research.

The Survey Research Center at the Institute embarked several years ago on the development of OSIRIS IV. ICPSR has made no investment in this system beyond the inclusion of hierarchical file capabilities, described in a following section. As a convenience for ICPSR members, special pricing for copies of OSIRIS IV has been arranged with the Survey Research Center.

### Hierarchical Data Handling

The Computer Support Group of the Center for Political Studies has made a major commitment to the development of a new tool for analyzing logically complex data collections, which often have a large number of variables and cases, also have an additional dimension which causes difficulties when using conventional systems. This dimension may be a variation of the data over time, or it may be that the collection is not really a single dataset but several that are to be processed together for full analysis. OSIRIS Hierarchical Data Structures (OHDS) lets the user define the logical relationship existing between the various data elements and builds a hierarchical dataset reflecting this relationship.

The integration of OHDS in OSIRIS IV allows full access to all of general OSIRIS features of filtering, recoding, and command processing as well as the full range of the OSIRIS IV analytic capabilities and facilities for updating, subsetting, and analyzing the hierarchical dataset.

April 29, 1980

UNIVERSITY OF MICHIGAN  
Request for Proposal

Computer System for the Inter-university Consortium for  
Political and Social Research.

Please furnish your quotation in accord with the specifications given in this document. Proposals must be submitted in three copies indicating Request for Quotation number \_\_\_\_\_, to the University of Michigan, 3025 Administrative Service, Ann Arbor, Michigan, 48109, Attn: Otto Kruse. Proposals must be delivered no later than 5:00 p.m., Monday, June 9, 1980. It shall be the responsibility of the vendor to insure that the vendor's proposal is delivered at the proper time.

The University intends to accept the proposal that is most advantageous from the standpoint of price, technical sufficiency, vendor performance, delivery, and other factors. In order to establish technical sufficiency the proposal must indicate vendor capabilities regarding the requirements stated in this Request for Proposal.

I. System Specifications

The University of Michigan and the Inter-university Consortium for Political and Social Research (ICPSR) want to acquire a timesharing minicomputer system, primarily for the interactive, CRT-terminal-based entry and editing of text and data, unattended processing of very large disk-based data files, and supporting computer-to-computer communications functions with other systems including a Prime 350, the University's Amdahl 470/V7 running the Michigan Terminal System, and a variety of microcomputer systems.

The overall nature of the intended application requires a timesharing system capable of supporting full interactive use by at least 30 intelligent CRT terminals or equivalent resource users, operating at 9600 baud or above. Much of this use will be in the form of transmissions of blocks of between several hundred and several thousand bytes between the minicomputer and the CRT terminals or other systems including microcomputers (we are developing a form of local, distributed computing network). Many of the tasks performed by terminal users will be of a word processing or forms entry and edit type which are characterized by a relatively high level of disk input-output activity relative to CPU load. The software used by the ICPSR requires about 300,000 bytes as the address space; future programs are likely to be even larger. The working set size of the current programs is about 50,000 bytes when running on a Prime 350. The system will also be used for software development, predominantly in FORTRAN, with future use of Pascal expected; software development will constitute perhaps 20 percent of the system work load.



The system should be based on a 32 bit architecture, with virtual memory management hardware to allow running programs that are much larger than available real memory. The input-output bus capabilities should be of sufficient bandwidth to support the disk, tape, terminals, and other peripherals, with room for at least 50 percent growth beyond the proposed configuration.

The system as proposed should include 2 million bytes of MOS memory. The hardware should be capable of ready expansion to at least a total of 6 million bytes.

A total of at least 750 million bytes of on-line disk storage must be included in the configuration. These should be of the CDC Storage Module type or equivalent performance. At least three separate and interchangeable drives should be included, so that two are always available in the event one fails.

The tape drive desired for the system should offer both 6250 bpi and 1600 bpi densities. It should be capable of 75 ips and preferably more. The 6250 bpi capability is highly desired, both for use in doing disk file backup and for interchange of data files with other, larger systems. If a 6250 bpi tape drive is not in the current product line, the proposal may offer one or more alternatives. One would be to offer only a high performance 800/1600 bpi drive: this would be relatively unattractive to us and would be valued accordingly. A second alternative would be to provide the system without a tape drive (or allow us to immediately sell or exchange an included 800/1600 bpi tape drive to another party) and we then obtain a 6250 bpi unit from another vendor for use as the only tape drive on the system: our major concerns here would be hardware service and software support in the operating system and utility routines. A third alternative would be to deliver the system with an 800/1600 bpi drive, subsequently exchanging or augmenting that unit for a 6250 bpi unit before a specified date (not later than June 30, 1981) and at a specified cost: this would be the best of the alternatives.

Asynchronous multiple line controllers for 48 RS-232 lines should be included. These should be individually programmable for line speeds up to 9600 baud. Four lines will need modem control, the others will not.

A serial synchronous interface is also needed, to support communications with the University's computer at 19.2 K baud or higher speeds. If this controller provides hardware support of the HDLC or SDLC protocols, this will be an important advantage.

The vendor's proposal should not include any users' terminals nor a line printer. The ICPSR will be acquiring these separately; they probably will be Ontel OP/1-R's as the terminals and a Printronix P-600 as the printer.

The vendor's operating system should take advantage of the virtual memory hardware, establishing a paging environment in which only a program's current working set need be resident in

real memory for efficient execution. The system should provide a capability for terminal users to create job streams which will execute in an unattended mode, deferred until some later time. Utility software should be included, such as a text editor, text formatter (such as some form of RUNOFF), general file sort, and routines for copying, checking, and correcting disks and tapes. Tape support should include the reading and writing of both ASCII and EBCDIC tapes and of either ANSI or IBM standard label formats. Disk support should include both sequential and direct access files. If there are differences between the text files used by the system's editor, FORTRAN, Assembler, Pascal, sort, or text processor (RUNOFF), these should be noted in the vendor's proposal. The operating system should support inter-process communication, such that a sender process can pass information quickly and as needed to a receiver process without the receiver process having to actively await the information.

Source code for the operating system and the necessary language compilers and assemblers for this source code should be included in the vendor's proposal. Documentation and aids for the development of device drivers should be specifically noted in the vendor's proposal: we will be doing our own driver's for the CRT terminals, the printer, and for at least some of the computer-to-computer network communications.

The languages to be in the proposal must include an Assembler and a FORTRAN which encompasses at least the 1966 ANSI standards. It is highly desirable that the vendor also offer a FORTRAN meeting the 1977 ANSI standard and a PASCAL that has been extended to support direct access disk use. The ability of each of the above compilers to produce reentrant, fully shareable object code should be explicitly specified in the vendor's proposal, as should a specification of the ability to link subroutines written in any of these languages or assembler, into programs written in any of the other languages in this set. A linker/loader must be provided, and the inclusion of a dynamic loader is highly desirable. A symbolic debugger for these languages must be included.

Networking of several computers is an integral part of the overall ICPSR installation. The greatest volume of network traffic will be between the proposed minicomputer and the current Prime 350 of the ICPSR. The form of the hardware link between these machines will require specific discussions in each case, but we desire at least 56K baud transmission and preferably much faster. We want to have a minimum of one user on each system, and preferably several, able to access the other system as a normal interactive user. We also desire the ability to transfer ASCII, and preferably general binary files, between these systems. Vendor support of HDLC, SDLC and X.25 protocols is relevant as providing alternative bases for constructing the desired networks, with by far the greatest value added to the vendor's proposal if X.25 support is available. It is highly desirable that a complete networking package, hardware and software, be available. Support for this package should include source code, protocol descriptions, and hardware documentation so that we may construct custom interfaces to other computing systems.

The vendor's capabilities for providing disk backup on tape should be specified in detail, including the time required to backup an entire disk of the type proposed, with the proposed

tape unit. There should be a description of the capabilities for doing backups while users are on the system, review of the capabilities for selective or incremental backups, and a description of the process for retrieving information from the backup tapes.

The vendor should provide the ICPSR with a complete set of documentation for the proposed system, both hardware and software, for evaluation. This should be done as soon as possible, preferably before the submission of the proposal. The documentation will be returned to the vendor at the completion of the evaluation if that is desired. A remote login and file space on a vendor system comparable to that proposed should also be provided to permit on-line examination of system capabilities.

## II. Performance Tests

Two types of benchmarks must be run and results provided with the vendor's proposal. The first consists of nine small FORTRAN programs which are to be run as the only job on the system. These were originally produced by the EDUCOM organization and are being used here as a point of reference for raw CPU and input-output capabilities.

The second type of benchmark simulates a multi-user interactive environment like that we will actually place on the system. This benchmark will be run in three sizes, simulating 20, 30, and 40 user environments. This software is predominantly FORTRAN, but some assembler code may be needed to provide an efficient interface with a few key system resources for character handling, dynamic memory allocation, disk input-output, and access to timing information. This benchmark system collects relevant performance information for comparison across systems, in addition to whatever the vendor provides in the benchmarking environment.

The source code for these benchmarks, user terminal scripts, and relevant setup information will be provided on tape to a vendor upon request. We will provide up to two days of staff assistance toward making the benchmarks operational on the vendor's system.

## III. Delivery

All hardware and software should be delivered within 60 days of the signing of the purchase order. If the vendor cannot meet this requirement for some or all of the system, the best available delivery should be stated. Such additional time delay will be evaluated as effectively increasing the cost of the system because of the consequent delay in becoming operational for users.

## IV. Training, Documentation

The cost and availability of training from the vendor should be specified, both what is covered within the proposed

configuration and what is optional at extra cost.

Documentation cost and availability should be similarly specified.

## V. Maintenance

The diagnostic capabilities incorporated within the hardware, the operating system, and the stand-alone maintenance utilities should be described. This should cover both capabilities for identifying failures as they occur, and capabilities for speeding the repair of the system. The Detroit/Ann Arbor facilities for hardware service should be described, including number of staff with one year or more experience with the proposed system, number of staff with three years or more experience in large-system service, number of installations to be covered by this staff, staff turnover in the past year, and any other information relevant to the assessment of staff quality, experience, and training. The proposal should describe parts inventory and practices in the repair and checkout of board-level components. The quality of service is of extreme concern to the ICPSR and the vendor is urged to provide as much relevant information on the quality of service offered as possible, including customer references.

The availability of vendor staff for assistance in system generation and resolution of problems with vendor software should also be stated. The matter of software service quality should be addressed in the same manner as for hardware, with particular attention to staff quality.

The vendor's proposal should specify the monthly cost of hardware maintenance for a period of 24 months after delivery. This should be based on service being provided during a normal 8 to 5 work day, with service to begin no more than eight hours after being requested. If the vendor can provide more responsive service, this should be noted, and the price increment given as a separate item.

The cost of maintenance and upgrades for the software offered, for a 24 month period, should be specified.

The possibility exists that hardware, acquired from another source and either new or used, may be added to the system. Specific examples include a 6250 bpi tape drive or a 300 megabyte disk drive. If these are detachable from the system for fault isolation and are maintained by another party, does this pose any problems? If these are new units from the same OEM source as used for your system (a common example would be CDC Storage Module disk drives), under what circumstances is your vendor service available or not available? If these are used units originally purchased from you, under what circumstances is your vendor service available?

## VI. Configuration Potential for Upgrading

The vendor should specify what, if any, discount from manufacturer's list price would be offered on any hardware or

software additions or upgrades to the proposed configuration during the 24 months following delivery.

The ability of the configuration to be augmented with additional memory, disk, tape, synchronous and asynchronous line controllers should be stated.

In more general terms, the vendor is encouraged to provide a discussion of whether the system is a member of a compatible family of systems, what more powerful systems might be a direct and easy upgrade from the proposed system, and what smaller systems support the same architecture and operating system. A review of the current number of installations of this family of systems, noting academic use in particular and any other evidence of marketplace acceptance, should be provided. Authoritative, comparative evaluations of the system by governmental or private institutions should be cited if available.

A statement of vendor trade-in policy on upgrades should be provided. In addition, recent evidence from independent equipment brokers of the market value of used systems comparable to those proposed would be highly desirable.

#### VII. Vendor Commitment to the Academic User

The Inter-university Consortium for Political and Social Research (ICPSR) is a membership organization to which over 200 universities and colleges belong. The ICPSR provides social science research data, methodological training, and computer software to these members as a service. As a consequence it is highly relevant to the ICPSR that the system used by its staff is either currently widely used at the member institutions, or that there is a major potential for substantial future use. With respect to the later point, the extent to which the ICPSR could indicate that any of its member institutions could obtain the same or a smaller configuration from the vendor at a specified discount would be quite relevant. The discount, if any, that the vendor would offer over the next 24 months, under appropriate conditions, to these ICPSR members should be stated. A list of the ICPSR members is enclosed.

#### VIII. Vendor Commitment to Computer Science

The vendor's commitment and involvement with the academic computer science community is of importance. Of particular interest is the vendor's willingness to be of assistance to our own research and development efforts. Three areas will receive extensive work by students and staff with the proposed configuration.

The first area of effort is networking and distributed processing, linking the proposed minicomputer to other minicomputers and larger mainframes as part of a campus-wide, mixed-system network, plus incorporating intelligent terminals and microcomputers within the ICPSR group. This work will focus on interfaces to industry-standard protocols for longer distances along with Ethernet-like capabilities for local mini-

and microcomputer links, emphasizing appropriate allocation and synchronization of concurrent, distributed processes and associated files.

The second research area, which will build upon the network capability, will be the use of the proposed minicomputer as a data base preprocessor. Academic, governmental, and commercial users of social science public opinion surveys and public record data (for example the 1980 U.S. Census) confront serious problems in obtaining rapid and efficient manipulation and retrieval of substantial portions of such data bases for use in analysis and presentation to researchers and decision-makers. The proposed minicomputer will be used in a variety of experimental settings as a dedicated preprocessor, providing selected and properly formatted data via the network to analysis and display software running on other systems in the network, overlapping retrieval with analysis.

The third area of research will address the factors that enhance the friendliness of the end-user system. The use of intelligent terminals and microcomputer systems, networked as already mentioned, is central to this effort, enabling intelligent and extensive assistance and feedback to the user, extended with a rich array of graphical and other visual aids and a variety of auditory feedback.

There are several ways in which the vendor's interest and commitment to such work might be expressed. One would be through specific additions or upgrades to the proposed configuration, possibly in the form of price discounts or outright gifts of hardware or software. Improved delivery schedules would also be evidence of the vendor position. Of clear relevance is the vendor's readiness to provide source code and documentation for the operating system and other software, with sufficient information to enable a knowledgeable person to extend or alter the operating system or add device drivers. A similar consideration is the availability of detailed hardware information including such things as bus timings and protocols so that experimental input-output hardware might be developed.

#### IX. Testing Before Acceptance of Vendor Proposal

In submitting a proposal, a vendor agrees to provide access to a configuration matching that proposed, within a week after our requesting access, for the purpose of verifying the tests described in II above.

#### X. Acceptance of Installation

The installation must perform the tests described in II above to the level established in the vendor's benchmark run. In addition the system must achieve 95 percent up-time for the 8 a.m. to 5 p.m. period of normal workdays over a sequence of days, totalling 40 hours of scheduled availability. When these criteria are met, payment in full for the system will be completed.

#### XI. Miscellaneous Costs

The proposals should state any charges to be made for installation, shipment, insurance, or any other items associated with delivery of a working installation.

#### XII. Purchase Conditions

The configuration will be purchased outright. If any of the equipment proposed is an older or used component, this should be explicitly stated along with clarification as to any updating or refurbishing that would be done. The vendor's conditions of payment should be specified, in the context of the acceptance procedure already cited under X above.

#### XIII. Vendor's Commitment, Warranty, Representation

All written materials provided by the vendor shall be taken as binding specifications whether or not explicitly incorporated in the subsequent purchase order. The vendor should state what actions the vendor will take if failure to meet the specifications occurs, and what credits to the University would be offered, if any.

#### XIV. References

The vendor should provide as soon as possible the names and addresses of 10 installations using a system comparable to that proposed, for purposes of our verifying performance. At least three of these installations should be serviced by the local maintenance staff; the others may be at other sites around the nation.

#### XV. Itemization of Proposal

Itemization of the proposed costs will be of help in comparing proposals, simplify final manipulation of the chosen configuration to meet ICPSR budget constraints, and enable bids on selected components by alternative vendors. Item by item display of the purchase price, applicable discounts, and maintenance charges is desired. A display which permits easy addition or deletion of items in the following categories is of particular importance: disk drives beyond the first, the proposed tape drive or any alternatives, hardware and software for network support, FORTRAN 77, and Pascal.

#### XVI. Clarifications

Requests for additional information or clarifications should be addressed to Otto Kruse. For technical information contact Gregory A. Marks, phone (313) 763-3482.





## ORGANIZATION AND ADMINISTRATION



## ICPSR COUNCIL MEMBERSHIP

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 Lawrence LeDuc, University of Windsor  
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 Dina A. Zinnes, University of Illinois, Urbana

1977-1979

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 Murray G. Murphey, University of Pennsylvania  
 Roberta S. Sigel, Rutgers University  
 John D. Sprague, Washington University

1975-1977

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 Murray G. Murphey, University of Pennsylvania  
 Norman Nie, University of Chicago  
 James W. Prothro, University of North Carolina  
 Roberta S. Sigel, Rutgers University

1974-1975

Betty Nesvold, California State College, San Diego, Chair  
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 Harold Guetzkow, Northwestern University  
 Everett C. Ladd, Jr. University of Connecticut  
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 Sam Bass Warner, Boston University

1973-1974

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 Matthew Holden, University of Wisconsin  
 Hans D. Klingemann, ZUMA, Mannheim, Germany  
 Betty Nesvold, California State College, San Diego  
 Sam Bass Warner, Boston University

1972-1973

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 Fred Coombs, University of Illinois, Urbana  
 Ada Finifter, Michigan State University  
 Wayne L. Francis, University of Washington  
 Harold Guetzkow, Northwestern University  
 Gerhard Loewenberg, University of Iowa  
 Betty Nesvold, California State College, San Diego

1971-1972

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1970-1971

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1969-1970

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1968-1969

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- 1965-1966      Joseph Tanenhaus, University of Iowa, Chair  
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 William Buchanan, University of Tennessee and Washington  
 and Lee University  
 Kenneth Janda, Northwestern University  
 Dwaine Marvick, University of California, Los Angeles
- 1964-1965      John C. Wahlke, State University of New York at Buffalo,  
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 Robert H. Salisbury, Washington University  
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University of Houston	Robert Diersing
Lamar University	Kent Tedin
Rice University	Tom Sanders
Southwest Texas State University	David Gow
Texas A & M University	Patricia Shields
University of Texas-Austin	James Dyer
Texas Christian University	Steve Hendricks
Stanford University	Eugene Alpert
State University of New York-Albany	John Chubb
State University of New York-Binghamton	Ann Wood
State University of New York-Buffalo	Christopher Peck
State University of New York-Geneseo	Nancy McGlen
State University of New York-Stony Brook	Ann Young
	Roger Pijacki

Swedish National Membership:

University of Goteborg  
University of Lund  
Univeristy of Stockholm  
University of Umea  
University of Uppsala

Swiss National Membership:

Graduate Institute for International  
Studies  
University of Geneva  
Swiss National Library  
University of Zurich

Tel Aviv University

Temple University

University of Tennessee

University of Texas-Arlington

University of Texas-El Paso

University of Texas-Dallas

University of Toledo

Tulane University

University of Tulsa

Union College

University of Utah

Vanderbilt University

University of Vermont

Virginia Federation:

University of Virginia  
College of William and Mary

Virginia Polytechnic Institute and  
State University

University of Washington

Washington and Lee

Washington State University

Washington University (St. Louis)

Wayne State University

Wesleyan University

Western Kentucky University

University of Western Ontario

West Virginia University

Wichita State University

University of Windsor

University of Wisconsin-Madison

University of Wisconsin-Milwaukee

University of Wyoming

Yale University

York University

Soren Holmberg

Urs Luterbacher

David Handley

Daniel Frei

Asher Arian

David Elesh

Michael Fitzgerald

Luther Odom

Z. A. Kruszewski

David Morgan

Sharon Rogers

Joseph Sheley

Edward Dreyer

Frederick Hartwig

John Francis

Richard Pride

Charles Bann

David Magelby

Ronald Rapoport

Richard Shingles

Jonathan Pool

John Handleman

Siegfried Vogt

John Sprague

Jersey Liang

Richard Body

Tom Madron

Edward Hanis

Thomas Ingersoll

James Sheffield

Larry LeDuc

Alice Robbin

James Gibson

Oliver Walter

JoAnne Dione

Tom Atkinson

ICPSR MEMBERSHIP REPORT  
SUMMARY OF INSTITUTIONAL AND GROUP AFFILIATIONS  
 1979-1980

Category A Affiliates.....	82
Category B Affiliates.....	41
Category C Affiliates.....	3
Category S Affiliates.....	8
Total Institutional Affiliates.....	134
Federated Memberships	
The Associated Colleges of the Midwest.....	12
The California State University and Colleges.....	19
Florida Consortium for Political Research.....	7
Illinois State Colleges and Universities.....	5
Massachusetts Federation.....	2
Philadelphia Federation.....	4
Southwest Regional Federation.....	9
Virginia Federation.....	2
Total Federated Institutions.....	60
National Memberships	
Australian Consortium for Social and Political Research.....	15
Belgian National Membership.....	1
British National Membership.....	1
Danish National Membership.....	3
Dutch National Membership.....	7
German National Membership.....	4
Norwegian National Membership.....	3
Swedish National Membership.....	5
Swiss National Membership.....	4
Total National Affiliations.....	43
TOTAL INSTITUTIONAL AND NATIONAL AFFILIATES.....	237

## 1979-1980 ICPSR COUNCIL AND STAFF

## ICPSR Council

Paul Allen Beck, Florida State University  
 Aage R. Clausen, Ohio State University, Chair  
 Norval D. Glenn, University of Texas, Austin  
 Robert T. Holt, University of Minnesota  
 Ruth S. Jones, University of Missouri, St. Louis  
 Lawrence LeDuc, University of Windsor  
 Murray G. Murphey, University of Pennsylvania  
 Judith S. Rowe, Princeton University  
 John D. Sprague, Washington University  
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Associate Directors

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 Philip E. Converse, University of Michigan  
 Heinz Eulau, Stanford University  
 M. Kent Jennings, University of Michigan  
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Jerome M. Clubb, Executive Director  
 Carolyn L. Geda, Director, Management and Administration  
 Donna Gotts, Administrative Secretary  
 Karen Roper, Senior Secretary  
 Paula Cataffo, Secretary

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Michael W. Traugott, Director, Resource Development  
 Erik W. Austin, Director, Archival Development  
 Robert R. Beattie, Assistant Director  
 (International Relations)  
 Christopher A. Innes, Assistant Director (Sociology)  
 Santa A. Traugott, Assistant Director  
 (Contemporary Politics)  
 Janet Vavra, Technical Director (Member Services)

Joy Aggio, Assistant in Research  
 Deborah Alper, Research Assistant  
 Hugh Battley, Research Assistant  
 Maia Bergman, Research Assistant  
 Phyllis Brooks, Assistant in Research  
 Anne Burns, Research Assistant  
 Joella Coles, Research Assistant  
 Joan Fisher, Senior Secretary  
 Joel Gordon, Assistant in Research  
 Patricia Green, Research Assistant  
 Laurie Howland, Secretary  
 Catherine Huffman, Research Assistant  
 Juwana Jackson, Word Processor  
 Paul Killey, Research Assistant  
 David Kushner, Computer Preparation Clerk  
 Linda Lamping, Research Assistant

Martha Love, Research Associate  
Tom Lyons, Research Assistant  
Ginger Maggio, Data Archive Specialist  
Judy Marks, Research Associate  
William McNee, Assistant in Research  
Margareth Miller, Research Assistant  
Ruth Montgomery, Research Assistant  
Mary E. Neal, Assistant in Research  
Audrey Porsche, Assistant in Research  
Cristina Puentes, Word Processor  
Eric Quackenbush, Research Assistant  
Nicole Roger-Hogan, Assistant in Research  
Katherine Savatsky, Research Assistant  
Ruth Wasem, Research Assistant  
Verna Washington, Data Archive Specialist  
Joan Weber, Research Assistant  
Elizabeth Weems, Research Assistant  
Catherine Whitaker, Research Assistant  
Wendell Willacy, Research Assistant  
B. Jean Wylie, Assistant in Research  
Susan Wyman, Research Assistant

Summer Program

Robert Hoyer, Program Director  
Henry Heitowit, Program Coordinator  
Lynda Pinto-Torres, Senior Secretary  
Martha Baldwin, Secretary

Instructors:

Frank Aarebrot, University of Bergen  
Martha Abele  
Michael Berbaum  
Leigh Burstein, Univ. of California, LA  
Peter Clark  
Jerome Clubb  
Youseff Cohen  
Philip Converse  
Marilyn Dantico, Florida Atlantic University  
Robert Fish, Stanford University  
John Fox, York University  
Hiram Friedsam, North Texas State University  
Carolyn Geda  
Michael Gillespie, University of Alberta  
Robert Hoyer  
Christopher Innes  
Steve Jackson, Cornell University  
Peter Joftis  
Eric Jones  
Alan Lizotte, Emory University  
Judith Marks  
Greg Markus  
Lawrence Mayer, University of Pennsylvania  
John Pothier, Yale University  
Douglas Rae, Yale University  
Karen Rasler, Florida State University  
Toni Richards  
Duncan Snidal, University of Chicago  
Robert Stine, Princeton University

Benjamin Taylor  
William Ting  
Peter Tittman, University of Pennsylvania  
Michael Traugott  
Anna Tsao  
Maris Vinovskis  
Ruth Wasem

Computer Counselors:

Susan Albert, Coordinator  
Samuel Evans  
Michael Hawthorne  
Vansantha Kandiah  
Marita Kaw  
Mourad Oulid-Aissa  
Rob Simmons

Library

Jeffrey Miller, Coordinator  
Bruce Dickson  
Cameron Holm  
Miriam Kahn  
Ann Powers

Computer Support Group

Gregory Marks, Director  
Sylvia Barge, Senior Programmer Analyst  
Tina Bixby, Senior Systems Analyst  
Susan Horvath, Programmer Analyst  
Peter Joftis, Systems Analyst  
Sharon Brevoort, Programmer Analyst  
Ida Sanburn, Administrative Assistant  
Richard Junglass, Systems Research Programmer  
Douglas Orr, Systems Research Programmer

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\*The Summer Program staff is from The University of Michigan  
unless otherwise specified.

## FINANCIAL SUMMARY

FINANCIAL SUMMARIES AND PROJECTIONS  
1979-80 and 1980-81





ACTUAL AND PROJECTED  
EXPENDITURES AND INCOME  
1979-1980 and 1980-1981

The following summaries present income and expenditure projections for July 1, 1980 through June 30, 1981 and actual expenditures for July 1, 1979 through June 30, 1980. Expenditures are presented for fourteen allocation categories which constitute the functional areas of Consortium activity. These categories are in turn grouped into four broader categories of activities. These are (I) Resource Development and Services, which includes development of data and computational resources, data acquisitions, dissemination of these resources, and necessary work required to support these activities; (II) Equipment Acquisition; (III) Educational Activities, primarily the annual Summer Training Program; and (IV) Governance and Member Relations, which includes the periodic Council meetings, the Biennial Meeting of Official Representatives, Consortium administration and publication of the Guide to Resources, the Annual Report and other informational materials. Each of these broader categories is followed by a summary of expenditures and income sources for the category. A final display summarizes actual expenditures and income sources for 1979-1980 and projections for 1980-1981.

Income and expenditures are projected to be substantially higher in 1980-1981 than in 1979-1980 (\$2,261,852 as compared to \$1,462,466). Income from member fees is projected at \$876,490, a small increase over 1979-1980 (\$841,033). The University of Michigan contribution to the Summer Program for 1980-1981 (\$104,703) is slightly larger than in the preceding year (\$99,313). Income and expenditures from foundation grants and agency contracts and cooperative agreements will be significantly higher in 1980-1981 (\$1,245,659) than in 1979-1980 (\$486,377). Additional proposals will be submitted during the remainder of the current year and two projects are subject to renewal in late winter 1981. Thus there is a reasonable probability that income and expenditures from these sources will actually be higher than projected. It should be noted, however, that projected income and expenditures from these sources for 1980-1981 include a major equipment acquisition award (\$473,945) from the National Science Foundation.

## FINANCIAL SUMMARY: PROJECTIONS AND EXPENDITURES

	Actual Expenditures 1979-80	Projected Expenditures 1980-81
I. RESOURCE DEVELOPMENT AND SERVICES		
<u>Expenditures</u>		
A. Archival Development		
Professional and technical staff salaries and fringe benefits	\$338,493	\$446,876
Supplies, postage and communications	16,020	17,136
Printing and duplicating	3,548	12,983
Computer time and machine rental	54,813	96,757
Subcontract	28,801	7,500
Travel	<u>13,229</u>	<u>27,467</u>
Total Direct Costs	\$454,904	\$608,719
Indirect Costs	<u>146,855</u>	<u>224,364</u>
Subtotal	\$601,759	\$833,083
B. Data Acquisition		
Professional and technical staff salaries and fringe benefits	9,597	5,920
Supplies, postage, communications, and data	1,833	5,600
Travel and per diem	<u>1,306</u>	<u>1,600</u>
Total Direct Costs	\$ 12,736	\$ 13,120
Indirect Costs	<u>1,910</u>	<u>1,970</u>
Subtotal	\$ 14,646	\$ 15,090

I. RESOURCE DEVELOPMENT AND SERVICES (cont'd)	Actual Expenditures 1979-80	Projected Expenditures 1980-81
<u>Expenditures</u>		
C. Documentation		
Professional and technical staff salaries and fringe benefits	\$ 10,569	\$ 23,843
Supplies, postage and communications	920	1,785
Printing and duplicating	48,524	62,512
Computer time and machine rental	88	2,344
Travel	<u>3,174</u>	<u>970</u>
Total Direct Costs	\$ 63,275	\$ 91,454
Indirect Costs	<u>8,432</u>	<u>23,382</u>
Subtotal	\$ 71,707	\$114,836
D. Data Maintenance		
Professional and technical staff salaries and fringe benefits	\$ 14,806	\$ 15,500
Supplies, postage and communications	4,147	4,400
Computer time and machine rental	<u>3,766</u>	<u>3,000</u>
Total Direct Costs	\$ 22,719	\$ 22,900
Indirect Costs	<u>3,407</u>	<u>3,400</u>
Subtotal	\$ 26,126	\$ 26,300

I. RESOURCE DEVELOPMENT AND SERVICES (cont'd)	Actual	Projected
	Expenditures 1979-80	Expenditures 1980-81
<u>Expenditures</u>		
E. Computer Support		
Professional and technical staff salaries and fringe benefits	\$ 62,732	\$ 65,877
Supplies, postage and communications	431	450
Printing and duplicating	395	400
Computer time and machine rental	1,724	3,700
Travel and per diem	<u>268</u>	<u>268</u>
Total Direct Costs	\$ 65,550	\$ 70,695
Indirect Costs	<u>9,833</u>	<u>10,605</u>
Subtotal	\$ 75,383	\$ 81,300
F. Data Services		
Professional and technical staff salaries and fringe benefits	\$ 88,107	\$101,210
Supplies, postage and communications	29,237	26,200
Printing and duplicating	2,004	2,050
Computer time and machine rental	<u>17,830</u>	<u>20,900</u>
Total Direct Costs	\$137,178	\$150,360
Indirect Costs	<u>19,356</u>	<u>21,640</u>
Subtotal	\$156,534	\$172,000

I. RESOURCE DEVELOPMENT AND SERVICES (cont'd)	Actual Expenditures 1979-80	Projected Expenditures 1980-81
SUMMARY OF TOTAL EXPENDITURES FOR RESOURCE DEVELOPMENT AND SERVICES:		
TOTAL DIRECT COSTS	\$756,362	\$957,248
INDIRECT COSTS	<u>189,793</u>	<u>285,361</u>
TOTAL COSTS	\$946,155	\$1,242,609

## Funding:

ICPSR Operating Budget	\$531,338	\$546,140
National Science Foundation	59,409	10,000
Administration on Aging	79,422	156,336
Law Enforcement Assistance Administration	251,020	363,597
Russell Sage Foundation	9,955	34,012
National Endowment for the Humanities	7,676	28,636
Department of Energy	---	77,880
Robert Wood Johnson Foundation	3,335	21,008
Department of the Interior	4,000	---
Department of Agriculture	<u>---</u>	<u>5,000</u>
TOTAL	\$946,155	\$1,242,609

II. EQUIPMENT ACQUISITION	Actual Expenditures 1979-80	Projected Expenditures 1980-81
PRIME 750 terminals, mini-computers	\$ ---	\$473,945
PRIME 350 Upgrade	<u>10,000</u>	<u>---</u>
Subtotal	\$ 10,000	\$473,945

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## Funding:

ICPSR Operating Budget	\$ 10,000	\$ ---
National Science Foundation	<u>---</u>	<u>473,945</u>
TOTAL	\$ 10,000	\$473,945

III. EDUCATIONAL ACTIVITIES	Actual Expenditures 1979-80	Projected Expenditures 1980-81
<u>Expenditures</u>		
A. ICPSR Summer Program		
Professional and technical staff salaries and fringe benefits	\$126,878	\$128,223
Supplies, postage, communications and rent	14,110	16,875
Printing and duplicating	6,177	4,600
Stipend support	54,942	66,200
Computing and equipment rental	34,785	33,400
Travel and per diem	<u>3,101</u>	<u>3,700</u>
Total Direct Costs	\$239,993	\$252,998
Indirect Costs	<u>26,698</u>	<u>21,250</u>
Subtotal	\$266,691	\$274,248
B. Educational Development Activities		
Professional and technical staff salaries and fringe benefits	\$ 8,201	\$ 9,550
Supplies, postage and communications	---	---
Computing and equipment rental	<u>---</u>	<u>---</u>
Total Direct Costs	\$ 8,201	\$ 9,550
Indirect Costs	<u>1,230</u>	<u>1,400</u>
Subtotal	\$ 9,431	\$ 10,950
SUMMARY OF TOTAL EXPENDITURES FOR EDUCATIONAL ACTIVITIES:		
TOTAL DIRECT COSTS	\$248,194	\$262,548
INDIRECT COSTS	<u>27,928</u>	<u>22,650</u>
TOTAL COSTS	\$276,122	\$285,198

III. EDUCATIONAL ACTIVITIES (cont'd)	Actual Expenditures 1979-80	Projected Expenditures 1980-81
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## Funding:

ICPSR Operating Budget	\$105,249	\$105,250
The University of Michigan	99,313	104,703
Law Enforcement Assistance Administration	37,210	36,295
Administration on Aging	<u>34,350</u>	<u>38,950</u>
TOTAL	\$276,122	\$285,198



IV. GOVERNANCE AND ADMINISTRATION	Actual Expenditures 1979-80	Projected Expenditures 1980-81
<u>Expenditures</u>		
A. Governance and Member Relations		
Professional and Administrative staff salaries and fringe benefits	\$ 17,053	\$ 33,550
Supplies, postage and communications	7,155	5,200
Printing and duplicating	1,837	1,500
Travel and meetings:		
Council Meetings, Advisory Committee, and Professional Conferences	<u>29,397</u>	<u>32,000</u>
Total Direct Costs	\$ 55,442	\$ 72,250
Indirect Costs	<u>8,316</u>	<u>10,800</u>
Subtotal	\$ 63,758	\$ 83,050
B. November 1979 Biennial Meeting of Official Representatives		
Professional and Administrative staff salaries and fringe benefits	\$ 2,265	\$ 900
Supplies, postage and communications	1,247	800
Printing and duplicating	556	350
Travel and per diem	<u>60,374</u>	<u>39,700</u>
Total Direct Costs	\$ 64,442	\$ 41,750
Indirect Costs	<u>9,666</u>	<u>6,250</u>
Subtotal	\$ 74,108	\$ 48,000 <sup>1</sup>

<sup>1</sup>Prorated budget (\$48,000) for meeting of Official Representatives scheduled in the fall of 1981.

IV. GOVERNANCE AND ADMINISTRATION (cont'd)	Actual Expenditures 1979-80	Projected Expenditures 1980-81
<u>Expenditures</u>		
C. Central Administration		
Professional and administrative staff salaries and fringe benefits	\$ 43,609	\$ 67,650
Supplies, postage and communications	5,633	6,400
Printing and duplicating	2,234	2,000
Computing and equipment rental	278	2,200
Travel and per diem	<u>1,059</u>	<u>1,000</u>
Total Direct Costs	\$ 52,813	\$ 79,250
Indirect Costs	<u>7,922</u>	<u>11,900</u>
Subtotal	\$ 60,735	\$ 91,150
D. Publication of <u>Guide</u> , Annual Report, Informational and Summer Program Materials		
Professional and administrative staff salaries and fringe benefits	\$ 14,738	\$ 16,700
Supplies, postage and communications	408	150
Printing and duplicating	11,153	12,700
Computing and equipment rental	<u>1,169</u>	<u>3,400</u>
Total Direct Costs	\$ 27,468	\$ 32,950
Indirect Costs	<u>4,120</u>	<u>4,950</u>
Subtotal	\$ 31,588	\$ 37,900
SUMMARY OF TOTAL EXPENDITURES FOR GOVERNANCE AND ADMINISTRATION:		
TOTAL DIRECT COSTS	\$200,165	\$226,200
INDIRECT COSTS	<u>30,024</u>	<u>33,900</u>
TOTAL	\$230,189	\$260,100

IV. GOVERNANCE AND ADMINISTRATION (cont'd)	Actual Expenditures 1979-80	Projected Expenditures 1980-81
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## Funding :

ICPSR Operating Budget	\$230,189	\$260,100
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## V. GRAND TOTAL

Total Direct Costs	\$1,214,721	\$1,919,941
Total Indirect Costs	<u>247,745</u>	<u>341,911</u>
Grand Total	\$1,462,466	\$2,261,852

## BUDGET SUMMARY

	Final 1979-80	Projected 1980-81
INCOME SOURCES		
A. ICPSR Operating Budget (Member Fees)	841,033	876,490
B. Miscellaneous Income	35,743	35,000
C. National Science Foundation	59,409	483,945
D. National Endowment for the Humanities	7,676	28,636
E. Law Enforcement Assistance Administration	288,230	399,892
F. Administration on Aging	113,772	195,286
G. The University of Michigan	99,313	104,703
H. Russell Sage Foundation	9,955	34,012
I. Department of Energy	---	77,880
J. Robert Wood Johnson Foundation	3,335	21,008
K. Department of Interior	4,000	---
L. Department of Agriculture	<u>---</u>	<u>5,000</u>
TOTAL	\$1,462,466	\$2,261,852