ICPSR
Inter-university Consortium for Political and Social Research

Annual Report, 1980-1981

Inter-university Consortium for Political and Social Research

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ICPSR
Inter-university Consortium for
Political and Social Research

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Annual Report

1980-1981

ANNUAL REPORT

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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

ICPSR Inter-university Consortium for Political and Social Research

P.O. Box 1248 • Ann Arbor, Michigan 48106 • (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 NINETEENTH YEAR, 1980-1981

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ARCHIVAL ACTIVITIES

ARCHIVAL PROCESSING REPORT, 1980-1981

During the 1980-1981 year, the archive's data processing activities featured the preparation of seven waves of the 1980 American National Election Study, conducted by the National Election Study under the direction of Warren E. Miller; the acquisition and processing of Angus Campbell and Philip E. Converse's Quality of American Life study conducted in 1978; and by the arrival of the first substantive data files from the 1980 Census of Population and Housing in the United States. The results of the entire year's data processing activities are summarized below, under three categories: acquisition of new collections; addition of datasets in major series; and maintenance of on-going collections.

Acquisition of New Collections

The archive processed a major data collection dealing with life needs and expectations, as well as perceptions of socio-psychological conditions of individuals. This was the Quality of American Life survey conducted in 1978 under the direction of Angus Campbell and Philip E. Converse at the Survey Research Center and the Center for Political Studies of the Institute for Social Research, The University of Michigan. The study was an extension of a similar research effort which emanated from a survey of the Quality of American Life in 1971. Included in the 1978 survey were questions on the current conditions of life in the United States and on respondents' perceptions of improvement or worsening in the conditions of life on a national level.

Also acquired by the archive during the year was a data collection pertinent to the study of conventional and unconventional political participation in advanced industrial societies. This collection, Political Action: An Eight-Nation Study, 1973-1976, was prepared by Samuel H. Barnes, Max Kaase and a number of other scholars, and included national sample surveys conducted in Great Britain, Germany, Netherlands, Austria, the United States, Italy, Switzerland and Finland. These data were processed at the Zentralarchiv at the University of Cologne in co-operation with ICPSR. An integrated cross-sectional file as well as a parent-child "pairs" file comprise this collection, whose surveys focused on the various forms and combinations of political activity ranging from voting to protest actions, and on individual propensities to perform these activities.

The Youth-Parent Socialization Panel Study, 1965-1973, was also added to the archive's holdings during the year. This study, designed to assess political continuity and change across time for two biologically-related generations, was conducted by M. Kent Jennings and Richard G. Niemi and is a continuation of an investigation begun in 1965. For this collection, high school students and their parents were interviewed in 1965 and reinterviewed in 1973; research questions addressed in the questionnaire include life-cycle, generational, and period effects on political attitudes and behavior.

The first substantive data files from the 1980 Census of Population and Housing in the United States were acquired during 1980-1981. Fifty-one separate data files from the P.L. 94-171 Population Summaries series were received. These files, one for each state and the District of Columbia, were prepared to assist state and local jurisdictions with political redistricting and re-apportionment. Included in each file are counts of the population by racial and Hispanic heritage groupings, which were recorded for many levels of census and political geography, such as counties, minor civil divisions, census tracts, municipalities and political precincts.

In the area of historical data, archival holdings were augmented by the addition of two data collections containing information on the eighteenth and nineteenth centuries. The first, American Colonial Wealth Estimates, 1774, was prepared by Alice Hanson Jones and includes material garnered from probate inventories in each region of the American colonies just prior to the American Revolution. The second collection acquired was Students in Secondary Schools in France, 1864, prepared by Patrick J. Harrigan. This dataset contains information collected from questionnaires administered by the French Ministry of Education and contains material that can be used to assess the socio-economic origins of French secondary school students and the amount of social mobility fostered by public education.

Addition of Datasets in Major Series

Several major series were augmented by the receipt of additional files or installments. One of the most important series to which additional files were added was the American National Election Study, 1980. Collection of data in this study was funded by the National Science Foundation and administered by the American National Election Study Board of Overseers. During the year, seven of the eight integrated survey data collections in this study were acquired (an eighth component, the first survey wave of this study conducted in January-February of 1980, was released during the previous year). Four of the eight data collections focused on a year-long panel, while the other four consisted of interviews with representative cross-sections of citizens of voting age living within the coterminous United States. The latter four surveys included the traditional pre-election, post-election time series interviews conducted around the November 4 general election. The eight components of this complex study were processed and released in three separate datasets, with a fourth dataset (the complete four-wave panel in a unique dataset) to be made available in the coming year.

Another expansion of an existing series was the addition of 1980 data from the General Social Survey, conducted by the National Opinion Research Center. In the past year the Cumulative File for the years 1972 through 1980 was processed in co-operation with the Roper Center for Public Opinion Research and added to the archive's collection of General Social Surveys administered in each of the years from 1972 to 1978, and 1980 (the survey was not conducted in 1979). Three surveys in the Eurobarometer series were also acquired in 1980-1981. These surveys,

European Community, were conducted under the direction of Ronald Inglehart and Jacques-Rene Rabier. Added during the past year were Eurobarometer 10A, a survey with special focus on Scientific Priorities in the European Community; Eurobarometer 11, featuring questions related to the topic of the Year of the Child In Europe; and Eurobarometer 12, dealing with the European Parliamentary Elections of 1979. Two other major series were also augmented during the year. The first of these is the Panel Study of Income Dynamics, conducted since 1968 by James N. Morgan. The twelfth wave of interviews taken by the Panel Study of Income Dynamics in 1979 was added during 1980-1981. Several additional files from the National Longitudinal Survey of Labor Market Experience were also acquired. This study, conducted by Herbert S. Parnes, is a collection of data on labor market behavior and experiences since 1966. Added this year to that collection were the continuations of three cohorts (Mature Men through 1976; Mature Women through 1977; and Young Men through 1976). Also obtained was a new cohort, (Youth); interviews for this group were taken in 1979.

Maintenance of On-Going Collections

Several on-going collections of process-generated data on contemporary political affairs were augmented during the past year. Roll call voting records for the Second Session of the Ninety-Sixth Congress of the United States were processed and added to ICPSR's holdings of Congressional voting records that now span the First through the Ninety-Sixth Congresses, 1789-1980. Preparation of roll call voting records for the First Session of the Ninety-Seventh Congress (which convened in January of 1981) was begun as well, with interim partially proofed records for that Congress being made available on demand. Processing of county-level election returns from the 1979 statewide elections in the United States was completed; in addition, returns from most states for the 1980 national and statewide elections were received and processing on them was begun. As a result of these additions to ICPSR's collections of roll call voting and election data for the United States, a number of ancillary files were revised; these include datasets containing biographical characteristics of members of Congress and the candidate name and electoral constituency totals file. Finally, a major revision of the biographical characteristics file for the U.S. Congress was completed during the year. Information from two formerly separate collections (the Biographical Characteristics dataset and the Roster of Congressional Officeholders) were merged into one file; a number of new variables were added to this composite file and existing variables corrected and revised. As a result of this processing activity, data on both Congressional service of Members of each Congress and the characteristics of Members can now be analyzed simultaneously.

Progress on Externally-Funded Projects

Work was completed on the preparation of Macroeconomic Time Series data for the United States, France, Great Britain, and Germany, under terms of a grant from the National Science Foundation. The data were

originally collected by the National Bureau of Economic Research, which co-operated with ICPSR on the project. Data from the remaining seven major series in the original collection were completely processed during 1980-1981, bringing to sixteen the number of categories of time series prepared by this project over the last two and a half years. The categories of time series added at the beginning of 1980-1981 were:

Production of Commodities

Transportation and Public Utilities

Distribution of Commodities

Foreign Trade

Interest Rates

Money and Banking

Index of Leading, Coincident and Lagging Indicators

A second project undertaken by ICPSR in 1979 was also completed during the past year. That project, funded by the Robert Wood Johnson Foundation, processed seventy-one data files related to medical and surgical practice arrangements in twenty-four specialty areas. These data, originally collected in a survey of doctors and surgeons in 1975, were reformatted and standardized documentation was prepared for each of the files. All data files are currently available for use.

Work continued on the fourth year of a project supported by a grant from the Bureau of Justice Statistics. This project was designed to develop resources for the study of crime and criminal justice, and to maintain an archive of criminal justice data. During 1980-1981, the project gathered and processed additional data collected by individual researchers and governmental agencies. Chief among the datasets prepared during the year were eight additional quarters of the National Crime Survey, bringing the archive's holdings of files in this data collection up through the interview waves of 1979. Additional datasets containing materials on juvenile delinquency, prisoners and jails, illegal corporate activities, plea bargaining, and employment and expenditures in the criminal justice system were also acquired. The use of these data has been facilitated throughout the life of the project by extensive substantive and technical consultation and support to researchers using these data. A third focus of this project has been on both substantive and methodological training, conducted partly in conjunction with the ICPSR Summer Training Program. All three project activities (data archiving, consultation and training) will be continued into the next fiscal year.

Archival resources for the study of aging and aged individuals were significantly augmented during the year by a project to develop and maintain an archive of aging-related data, funded by a grant and co-operative agreement from the Administration on Aging of the U.S. Department of Health and Human Services and the National

Aging. This project, in its fourth year during 1980-1981, is a joint venture of ICPSR and the Institute of Gerontology at The University of Michigan. Highlighting the data acquisition and processing activities of this project during the past year were the additions of more current waves of two important surveys initiated by federal agencies; they were the 1970 and 1977 waves of the Health Interview Survey, conducted by the National Center for Health Statistics; and the 1975 re-interview segment of the Longitudinal Retirement History Survey, sponsored by the Social Security Administration. Other collections of data concerning geriatric home care, nursing homes and long-term health care facilities, and beneficiaries of social security benefits were also acquired and made available for use. In addition to the data archival efforts, the project has mounted training activities, with workshops and seminars conducted for both academic researchers and public officials. The work on this project will continue into the 1981-1982 fiscal year.

A project to develop and produce resources for the effective utilization of data collected in the 1980 Census of Population and Housing in the United States was nearly completed during the past year. Supported by a grant from the Administration on Aging of the U.S. Department of Health and Human Services, ICPSR (in conjunction with the Institute of Gerontology at The University of Michigan) developed a manual describing the 1980 Census data products as well as a FORTRAN-language computer program for retrieving and displaying data items from computer-readable census data files. The computer software was tested on actual 1980 Census data files, and drafts of the manual reviewed widely. This project will be completed, upon delivery of the manual and the computer software to state and area agencies on aging, in the first few months of the coming fiscal year.

Capabilities for retrieving elements of question texts from standard ICPSR computer-readable codebooks were partially developed in 1980-1981 under a project supported by the Forest Service of the U.S. Department of Agriculture. Activities included the automation of codebook information for a number of leisure and recreational activities-related survey questions, and the constructing of a SPIRES database and retrieval capabilities. The goal of this project is to demonstrate the feasibility of developing cost-effective text-searching capacities that could be used for retrieving question wordings and other information from survey instruments frequently used in the study of leisure activities. This project will be concluded in the coming fiscal year.

MACHINE-READABLE DATA FILES ACQUIRED AND PROCESSED, 1980-1981

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. Barnes, Samuel H., and Max Kaase, et al.; POLITICAL ACTION: AN EIGHT NATION STUDY, 1973-1976: PART 1 - CROSS SECTION FILE (ICPSR 7777)

   12,588 cases; 387 variables; 213,996 card-images; 562 pages of documentation

2. Barnes, Samuel H., and Max Kaase, et al.; POLITICAL ACTION; AN EIGHT NATION STUDY, 1973-1976: PART 2 - THE PARENT-CHILD PAIRS FILE (ICPSR 7777)

   1,635 cases; 771 variables; 55,590 card-images; 562 pages of documentation

3. Campbell, Angus, and Philip E. Converse; QUALITY OF AMERICAN LIFE, 1978 (ICPSR 7762)

   3,692 cases; 685 variables; 44,000 card-images; 700 pages of documentation

4. CBS News/New York Times; CBS NEWS/NEW YORK TIMES ELECTION SURVEYS, 1976: PARTS 1-4, 6-8, 10 MONTHLY NATIONAL TELEPHONE SURVEYS (ICPSR 7660)

   8 files: 1,800 average cases/file; 110 average variables/file; 3,000 average card-images/file; 40 average pages of documentation/file

5. CBS News/New York Times; CBS NEWS/NEW YORK TIMES ELECTION SURVEYS, 1976: PARTS 18-32 STATE PRIMARY DAY SURVEYS (ICPSR 7660)

   15 files: 50 variables/file; 1,000 card-images/file; 30 pages of documentation/file

6. Inter-university Consortium for Political and Social Research; ROSTER OF UNITED STATES CONGRESSIONAL OFFICEHOLDERS AND BIOGRAPHICAL CHARACTERISTCS OF MEMBERS OF THE UNITED STATES CONGRESS, 1789-1980: MERGED DATA. (ICPSR 7803)

   11,000 cases; 104 variables; 44,000 card-images; 68 pages of documentation

7. Inter-university Consortium for Political and Social Research; UNITED STATES CONGRESSIONAL ROLL CALL VOTING RECORDS FOR THE NINETY-SIXTH CONGRESS, (SECOND SESSION) 1980: HOUSE OF REPRESENTATIVES. (ICPSR 0004)

   604 votes; 5,000 card-images; 115 pages of documentation

8. Inter-university Consortium for Political and Social Research; UNITED STATES CONGRESSIONAL ROLL CALL VOTING RECORDS FOR THE NINETY-SIXTH CONGRESS, (SECOND SESSION) 1980: SENATE. (ICPSR 0004)

   531 votes; 1,150 card-images; 250 pages of documentation

9. Jennings, M. Kent, and Richard G. Niemi; THE YOUTH-PARENT SOCIALIZATION PANEL STUDY: PARENT PANEL, 1965-1973 (ICPSR 7779)

   1,179 cases; 720 variables; 21,222 card-images; 675 pages of documentation

10. Jennings, M. Kent, and Richard G. Niemi; THE YOUTH-PARENT SOCIALIZATION PANEL STUDY: YOUTH PANEL, 1965-1973 (ICPSR 7779)

    1,348 cases; 775 variables; 26,960 card-images; 730 pages of documentation

11. Miller, Warren E., and National Election Studies/Center for Political Studies; AMERICAN NATIONAL ELECTION STUDY, 1980: SEPTEMBER-NOVEMBER PRE-POST WAVES (ICPSR 7763)

    1,614 cases; 1,350 variables; 79,086 card-images; 940 pages of documentation

12. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY, AND FRANCE; CATEGORY I: PRODUCTION OF COMMODITIES (ICPSR 7644)

    2 files: 1,769 cases; approx. 366 variables/file; approx. 72,153 card-images/file; approx. 195 average pages of documentation/file

13. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY, AND FRANCE; CATEGORY III: TRANS AND PUBLIC UTILITIES. (ICPSR 7644)

    2,071 cases; 292 variables; 67,230 card-images; 204 pages of documentation

14. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY, AND FRANCE; CATEGORY VI: DISTRIBUTION OF COMMODITIES (ICPSR 7644)

    1,276 cases; 279 variables; 39,556 card-images; 100 pages of documentation

15. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY AND FRANCE; CATEGORY VII: FOREIGN TRADE (ICPSR 7644)

    1,955 cases; 142 variables; 31,097 card-images; 100 pages of documentation

16. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY, AND FRANCE; CATEGORY XIII: INTEREST RATES (ICPSR 7644)

    2,388 cases; 121 variables; 31,581 card-images; 84 pages of documentation

17. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY AND FRANCE; CATEGORY XIV: MONEY AND BANKING (ICPSR 7644)

    1,833 cases; 432 variables; 90,784 card-images; 302 pages of documentation

18. National Bureau of Economic Research; MACROECONOMIC TIME SERIES FOR THE UNITED STATES, UNITED KINGDOM, GERMANY AND FRANCE; CATEGORY XVI; INDEXES OF LEADING, COINCIDENT, AND LAGGING INDICATORS (ICPSR 7644)

    1,285 cases; 121 variables; 23,000 card-images; 100 pages of documentation

19. National Opinion Research Center; GENERAL SOCIAL SURVEY CUMULATIVE FILE, 1972-1980 (ICPSR 7813)

    12,120 cases; 499 variables; 121,200 card-images; 675 pages of documentation

20. Rabier, Jacques-Rene, and Ronald Inglehart; EURO-BAROMETER 10A: SCIENTIFIC PRIORITIES IN THE EUROPEAN COMMUNITY, OCTOBER/NOVEMBER 1978 (ICPSR 7807)

    8,873 cases; 87 variables; 16,746 card-images; 80 pages of

21. Rabier, Jacques-Rene, and Ronald Inglehart; EURO-BAROMETER 11: YEAR OF THE CHILD IN EUROPE, APRIL 1979 (ICPSR 7752)

    8,884 cases; 141 variables; 26,652 card-images; 120 pages of documentation

22. Rabier, Jacques-Rene, and Ronald Inglehart; EURO-BAROMETER 12: EUROPEAN PARLIAMENTARY ELECTIONS, OCTOBER/NOVEMBER 1979 (ICPSR 7778)

    8,989 cases; 60 variables; 17,978 card-images; 80 pages of documentation

23. U.S. Dept. of Justice. Bureau of Justice Statistics; NATIONAL CRIME SURVEYS: NATIONAL SAMPLE, 1973-1979 (INCIDENT-LEVEL FILE (ICPSR 7635)

    8 datasets: 8,000 average cases/dataset; 352 average variables/dataset; 48,000 average card-images/dataset; 245 pages of documentation

24. U.S. Dept. of Justice. Bureau of Justice Statistics; NATIONAL CRIME SURVEYS: NATIONAL SAMPLE, 1973-1979 (PERSON-LEVEL FILE) (ICPSR 7635)

    8 datasets: 12,500 average cases/dataset; 925 average variables/dataset; 180,000 average card-images/dataset; 225 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.

25. Andersen, Ronald, and Lu Ann Aday; NATIONAL SURVEY OF ACCESS TO MEDICAL CARE, 1975-1976. HOSPITAL/EXTENDED CARE FILE (ICPSR 7730)

    678 cases; 32 variables; 678 card-images; 240 pages of documentation

26. Andersen, Ronald, and Lu Ann Aday; NATIONAL SURVEY OF ACCESS TO MEDICAL CARE, 1975-1976. MAIN QUESTIONNAIRE FILE (ICPSR 7730)

    7787 cases; 857 variables; 155,740 card-images; 240 pages of documentation

27. Andersen, Ronald, and Lu Ann Aday; NATIONAL SURVEY OF ACCESS TO MEDICAL CARE, 1975-1976. PHYSICIAN SUPPLEMENT FILE (ICPSR 7730)

    3,688 cases; 43 variables; 7,376 card-images; 240 pages of documentation

28. CBS News/New York Times; CBS NEWS/NEW YORK TIMES ELECTION SURVEYS, 1980 (ICPSR 7812)

    28 files: 1,500 average cases/file; 75 average variables/file; 3,000 average card-images/file; 50 pages of documentation/file

29. Center for Health Administration Studies/National Opinion Research Center; SURVEY OF HEALTH SERVICES UTILIZATION AND EXPENDITURES, 1963 (ICPSR 7741)

    2,367 cases; 152 variables; 11,835 card-images; 83 pages of documentation

30. Center for Health Administration Studies/National Opinion Research Center; SURVEY OF HEALTH SERVICES UTILIZATION AND EXPENDITURES, 1970 (ICPSR 7740)

    11,619 cases; 434 variables; 209,142 card-images; 199 pages of documentation

31. Detroit News; MICHIGAN SURVEY OF VOTER ATTITUDES, OCTOBER 1980 (ICPSR 7835)

    690 cases; 71 variables; 690 card-images; 25 pages of documentation

32. Fowler, Floyd J.; RESIDENTIAL NEIGHBORHOOD CRIME CONTROL PROJECT: HARTFORD, CONNECTICUT, 1973 (ICPSR 7682)

    891 cases; 560 variables; 9,801 card-images; 234 pages of documentation

33. Fowler, Floyd J.; RESIDENTIAL NEIGHBORHOOD CRIME CONTROL PROJECT: HARTFORD, CONNECTICUT, 1975 (ICPSR 7682)

    556 cases; 214 variables; 2,780 card-images; 120 pages of documentation

34. Inter-university Consortium for Political and Social Research; CANDIDATE NAME AND CONSTITUENCY TOTALS, 1788-1979. [Records from the 1979 Elections] (ICPSR 0002)

    10 cases; 10 variables; 10 card-images; 5 pages of documentation

35. Inter-university Consortium for Political and Social Research; GENERAL ELECTION DATA FOR THE UNITED STATES, 1968-1979. [Returns from the 1979 Elections] (ICPSR 0013)

    15 states: 60 cases/state; 20 variables/state; 120 card-images/state; 10 pages of documentation/file

36. Inter-university Consortium for Political and Social Research; REFERENDA AND PRIMARY ELECTION MATERIALS: POPULAR REFERENDA FOR THE UNITED STATES, 1968-1979. [Referenda for the 1979 Elections] (ICPSR 0006)

    90 pages of textual documentation

37. Inter-university Consortium for Political and Social Research; UNITED STATES CONGRESSIONAL ROLL CALL VOTING RECORDS FOR THE NINETY-SEVENTH CONGRESS (FIRST SESSION) 1981: HOUSE OF REPRESENTATIVES (ICPSR 0004)

    115 votes; 435 cases; 1,200 card-images; 25 pages of documentation

38. Inter-university Consortium for Political and Social Research; UNITED STATES CONGRESSIONAL ROLL CALL VOTING RECORDS FOR THE NINETY-SEVENTH CONGRESS (FIRST SESSION) 1981: SENATE (ICPSR 0004)

    200 votes; 100 cases; 400 card-images; 50 pages of documentation

39. Inter-university Consortium for Political and Social Research; UNITED STATES HISTORICAL ELECTION RETURNS, 1788-1979 [Records from the 1979 Elections] (ICPSR 0001)

    15 states: 60 cases/state; 20 variables/state; 120 card-images/state; 10 pages of documentation

40. Morgan, James N.; PANEL STUDY OF INCOME DYNAMICS, WAVES I-XII; FAMILY UNIT FILE (ICPSR 7439)

    6,373 cases; approx. 6,000 variables; approx. 1 million card-images; 9 volumes of documentation

41. Morgan, James N.; PANEL STUDY OF INCOME DYNAMICS, 1979. WAVES I-XII; FAMILY/INDIVIDUAL FILE (ICPSR 7439)

    19,428 cases; approx. 6,000 variables; approx. 3 million card-images; 9 volumes of documentation

42. Peterson, Mark A., Suzanne Polich, and Jan Michael Chaiken; SURVEY OF CALIFORNIA PRISON INMATES, 1976 (ICPSR 7797)

    624 cases; 378 variables; 13,104 card-images; 201 pages of documentation

43. U.S. Dept. of Commerce, Bureau of the Census; NATIONAL SURVEY OF INSTITUTIONALIZED PERSONS, 1976 (ICPSR 7866)

    12,335 cases; 851 variables; 236,986 card-images; 350 pages of documentation

44. U.S. Dept. of Justice. Bureau of Justice Statistics; CENSUS OF STATE CORRECTIONAL FACILITIES, 1974 (ICPSR 7811)

    592 cases; 388 variables; 5,920 card-images; 161 pages of documentation

45. U.S. Dept. of Justice. Bureau of Justice Statistics; CENSUS OF STATE CORRECTIONAL FACILITES, 1979 (ICPSR 7852)

    791 cases; 493 variables; 13,447 card-images; 154 pages of documentation

46. U.S. Dept. of Justice. Bureau of Justice Statistics; EXPENDITURE AND EMPLOYMENT DATA FOR THE CRIMINAL JUSTICE SYSTEM: 1971-1979 (ICPSR 7636)

    13,351 cases; 786 variables; 1,522,014 card-images; 262 pages of documentation

47. U.S. Dept. of Justice. Bureau of Justice Statistics; EXPENDITURE AND EMPLOYMENT DATA FOR THE CRIMINAL JUSTICE SYSTEM: ANNUAL FILE, 1979 (ICPSR 7618)

    10,742 cases; 280 variables; 590,810 card-images; 120 pages of documentation

48. U.S. Dept. of Justice. Bureau of Justice Statistics; JUVENILE DETENTION AND CORRECTIONAL FACILITY CENSUS, 1979 (ICPSR 7846)

    1,015 cases; 237 variables; 11,165 card-images; 93 pages of documentation

49. U.S. Dept. of Justice. Bureau of Justice Statistics; SURVEY OF INMATES OF STATE ADULT CORRECTIONAL FACILITIES, 1974 (ICPSR 7811)

    9,040 cases; 432 variables; 90,400 card-images; 178 pages of documentation

50. U.S. Dept. of Justice. Bureau of Justice Statistics; SURVEY OF JAIL INMATES, 1972 (ICPSR 7668)

    4,238 cases; 113 variables; 33,904 card-images; 98 pages of documentation

51. U.S. Dept. of Justice. Bureau of Justice Statistics; THE NATIONAL JUSTICE AGENCY LIST, 1980 (ICPSR 7858)

    Ten files: 1,000 average cases/file; 25 average variables/file; 4,000 average card-images/file; 200 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 may exist only in card-image form, or the form originally supplied by the investigator.

52. Airasian, Peter W., George F. Madaus, Thomas Kellaghan; CONSEQUENCES OF INTRODUCING EDUCATIONAL TESTING INTO NORTHERN IRELAND, 1973-1977 (ICPSR 7790)

    8 files: 3,500-9,000 cases/file; 193 variables/file; 558,238 average card-images/file; 40 pages of documentation

53. Brett, Jeanne Herman, Julius G. Getman, Stephen B. Goldberg; UNION REPRESENTATION ELECTIONS AND THE ROLE OF THE NATIONAL LABOR RELATIONS BOARD (ICPSR 7625)

    1,239 cases; 164 variables; 111,510 card-images; 51 pages of documentation

54. CBS News; CBS NEWS ELECTION SURVEYS, PART 1; PRE-CONGRESSIONAL POLL, SEPTEMBER 1978 (ICPSR 7814)

    1,451 cases; 95 variables; 4,353 card-images; 20 pages of documentation

55. CBS News; CBS NEWS POLLS, 1977-1979 (ICPSR 7817)

    Five files: 1,251 average cases/file; 50 average variables/file; 3,753 average card-images/file; 5 average pages of documentation/file

56. CBS News/Los Angeles Times; CBS NEWS/LOS ANGELES TIMES CALIFORNIA PRIMARY DAY SURVEY, 1978 (ICPSR 7816)

    2,482 cases; 70 variables; 5,020 card-images; 10 pages of documentation

57. CBS News/New York Times; CBS NEWS/NEW YORK TIMES POLLS, 1977-1978 (ICPSR 7818)

    8 files: 1,250 average cases/file; 55 average variables/file; 3,750 average card-images/file; 10 average pages of documentation/file

58. CBS News/New York Times; CBS NEWS/NEW YORK TIMES POLLS, 1979 (ICPSR 7819)

8 files: 1,250 average cases/file; 45 average variables/file; 3,750 average card-images/file; 10 average pages of documentation/file

59. Detroit News; NATIONAL SURVEY OF VOTER ATTITUDES. JUNE 1980 (ICPSR 7820)

893 cases; 46 variables; 839 card-images; 20 pages of documentation

60. Flanagan, John C., David V. Tiedeman, et al.; PROJECT TALENT PUBLIC USE FILE, 1960-1976 (ICPSR 7823)

4,000 cases; 1,175 variables; 119,160 card-images; 700 pages of documentation (550 microfiched)

61. Harrigan, Patrick J.; STUDENTS IN SECONDARY SCHOOLS IN FRANCE, 1864 (ICPSR 7806)

27,771 cases; 10 variables; 27,771 card-images; 34 pages of documentation

62. Jones, Alice Hanson; AMERICAN COLONIAL WEALTH ESTIMATES, 1774 (ICPSR 7329)

24 files: 919 average cases/file; 15 average variables/file; 2,000 average card-images/file; 22 average pages of documentation/file

63. O'Leary, Joseph T., and Dominic Dottavio; INDIANA OUTDOOR RECREATION SURVEY, 1978 (ICPSR 7805)

5,888 cases; 265 variables; 37,831 card-images; 28 pages of documentation

64. Preston, Samuel H., and Robert L. Higgs; UNITED STATES CENSUS DATA, 1900: PUBLIC USE SAMPLE (ICPSR 7825)

127,507 cases; 33 variables; 112,206 card-images; 77 pages of documentation

65. U.S. Dept. of Agriculture. Forest Service; NATIONAL CAMPING MARKET SURVEY, 1971 (ICPSR 7798)

2 files: 2,003 cases; 90 variables; 4,006 card-images/file; 20 pages of documentation

66. U.S. Dept. of Agriculture. Forest Service; NATIONAL CAMPING MARKET SURVEY, 1973 (ICPSR 7799)

2 files: 2,207 cases; 90 variables; 4,414 card-images/file; 20 pages of documentation

67. U.S. Dept. of Agriculture. Forest Service; NATIONAL CAMPING MARKET SURVEY, 1978 (ICPSR 7800)

4 files: 2,013 cases; 60 variables; 4,026 card-images/file; 30 pages of documentation

68. U.S. Dept. of Agriculture. Forest Service; NATIONAL SKIING MARKET SURVEY, 1978 (ICPSR 7801)

6 files: 800 cases/file; 60 variables/file; 1,600 card-images/file; 40 pages of documentation

69. U.S. Dept. of Commerce. Bureau of the Census; FEDERAL STATE COOPERATIVE PROGRAM, 1975-1976 POPULATION ESTIMATES (ICPSR 7841)

3,150 cases; 5 variables; 3,150 card-images; 20 pages of documentation

70. U.S. Dept. of Commerce. Bureau of the Census; FEDERAL STATE COOPERATIVE PROGRAM: 1976-1977 POPULATION ESTIMATES (ICPSR 7842)

3,150 cases; 5 variables; 3,150 card-images; 20 pages of documentation

71. U.S. Dept of Commerce. Bureau of the Census; FEDERAL STATE COOPERATIVE PROGRAM: 1977-1978 POPULATION ESTIMATES (ICPSR 7843)

3,150 cases; 4 variables; 3,150 card-images; 20 pages of documentation

72. U.S. Dept. of Commerce. Bureau of the Census; GENERAL REVENUE SHARING, 1976 POPULATION ESTIMATES (ICPSR 7844)

40,131 cases; 5 variables; 40,131 card-images; 20 pages of documentation

73. U.S. Dept of Commerce. Bureau of the Census; GENERAL REVENUE SHARING, 1978 POPULATION ESTIMATES (ICPSR 7840)

40,316 cases; 4 variables; 40,316 card-images; 20 pages of documentation

74. U.S. Dept. of Justice. Bureau of Justice Statistics; SURVEY OF INMATES OF STATE CORRECTIONAL FACILITIES, 1979 (ICPSR 7856)

    11,397 cases; 993 variables; 284,925 card-images; 659 pages of documentation

75. University of Southern California School of Medicine, Division of Research in Medical Education; NATIONAL STUDIES OF PHYSICIANS FROM TWENTY-FOUR MEDICAL AND SURGICAL SPECIALTIES, 1976-1978 (ICPSR 7782)

    24 physician files: 434 average cases/file; 1,500 variables/file; 57,000 average card-images/file; 130 pages of documentation/file

    24 patient files: 16,368 average cases/file; 315 variables/file; 196,000 average card-images/file; 44 pages of documentation/file

    23 telephone files: 3,592 average cases/file; 75 variables/file; 13,000 average card-images/file; 30 pages of documentation/file

76. Verba, Sidney, Norman H. Nie and Jae-On Kim; POLITICAL PARTICIPATION AND EQUALITY IN SEVEN NATIONS, 1966-1971 (ICPSR 7768)

    Six files: 2,000 average cases/file; 300 average variables/file; 70,000 average card-images/file; 50 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.

77. ABT Associates; SURVEY OF AMERICAN PRISONS AND JAILS, 1979: PRE-RELEASE FACILITIES FILE (ICPSR 7899)

    405 cases; 207 variables; 2,814 card-images; 71 pages of documentation

78. ABT Associates; SURVEY OF AMERICAN PRISONS AND JAILS, 1979: PRISON SURVEY FILE (ICPSR 7899)

    558 cases; 292 variables; 7,267 card-images; 102 pages of documentation

79. CBS News; CBS NEWS ELECTION SURVEYS, PART 2 - NATIONWIDE ELECTION DAY POLL, 1978 (ICPSR 7814)

    8,808 cases; 40 variables; 26,424 card-images; 30 pages of documentation

80. Church, Thomas W., Jr.; ASSESSING LOCAL LEGAL CULTURE: PRACTITIONER NORMS IN FOUR CRIMINAL COURTS, 1979. (ICPSR 7808)

    242 cases; 111 variables; 729 card-images; 86 pages of documentation

81. Clarke, Stevens H.; ALASKA PLEA BARGAINING STUDY, 1974-1976. (ICPSR 7714)

    3,586 cases; 201 variables; 14,344 card-images; 120 pages of documentation

82. Clinard, Marshall B. and Peter C. Yeager; ILLEGAL CORPORATE BEHAVIOR, 1979: ECONOMIC DATA FILE (ICPSR 7855)

    582 cases; 124 variables; 13,386 card-images; 68 pages of documentation

83. del Castillo, Richard Griswold; MEXICAN-AMERICAN FAMILIES IN LOS ANGELES, 1844-1880: SOCIAL CHARACTERISTICS FILE (ICPSR 7582)

    2,047 cases; 21 variables; 4,094 card-images; 10 pages of documentation

84. del Castillo, Richard Griswold; MEXICAN-AMERICAN FAMILIES IN LOS ANGELES, 1844-1880: SOCIO-ECONOMIC FILE (ICPSR 7582)

    9,744 cases; 23 variables; 19,488 card-images; 10 pages of documentation

85. Fischer, Claude S.; NORTHERN CALIFORNIA COMMUNITY STUDY, 1977:COMMUNITY FILE (ICPSR 7744)

    99 cases; 500 variables; 990 card-images; 320 pages of documentation

86. Kansas City, Missouri, Police Department; POLICE RESPONSE TIME ANALYSIS, 1975. (ICPSR 7760)

    13 files: 1,060 cases/file; 150 variables/file; 8,000 card-images/file; 395 pages of documentation

87. Kerstetter, Wayne A.; EVALUATION OF PRETRIAL SETTLEMENT CONFERENCE, DADE COUNTY, FLORIDA, CRIMINAL COURT, 1979 (ICPSR 7710)

    Five files: 600 average cases/file; 200 average variables/file; 1,800 average card-images/file; 30 pages of documentation

88. McLaughlin, Frank E., et al.; PRIMARY CARE JUDGMENTS OF NURSES AND PHYSICIANS, 1976-1978: CLINICAL SIMULATION TEST - CHRONIC OBSTRUCTIVE PULMONARY DISEASE DATA (ICPSR 7731)

    200 cases; 900 variables; 4,400 card-images; 105 pages of documentation

89. McLaughlin, Frank E., et al.; PRIMARY CARE JUDGMENTS OF NURSES AND PHYSICIANS, 1976-1978: CLINICAL SIMULATION TEST - HYPERTENSION DATA (ICPSR 7732)

    173 cases; 600 variables; 2,422 card-images; 71 pages of documentation

90. Mullins, Alden F., Jr.; MILITARY PERSONNEL AND WEAPONS STOCKS IN NEWLY INDEPENDENT STATES, 1957-1976 (ICPSR 7821)

    569 cases; 211 variables; 3,414 card-images; 18 pages of documentation

91. National Academy of Sciences. Committee on Occupational Classification and Analysis; DICTIONARY OF OCCUPATIONAL TITLES (DOT): PART I - CURRENT POPULATION SURVEY, APRIL 1971, AUGMENTED WITH DOT CHARACTERISTICS (ICPSR 7845)

    60,441 cases; 126 variables; 276,517 card-images; 194 pages of documentation

92. National Academy of Sciences. Committee on Occupational Classification and Analysis; DICTIONARY OF OCCUPATIONAL TITLES (DOT): PART II - FOURTH EDITION DICTIONARY OF DOT SCORES FOR 1970 CENSUS CATEGORIES (ICPSR 7845)

    574 cases; 145 variables; 8,610 card-images; 194 pages of documentation

93. National Center for Health Statistics; HEALTH INTERVIEW SURVEY, 1970 (ICPSR 7838)

    5 files: average 52,000 cases/file; average 100 variables/file; average 335,000 card-images/file; 85 pages of documentation

94. National Center for Health Statistics; HEALTH INTERVIEW SURVEY, 1977 (ICPSR 7839)

    5 files: average 50,000 cases/file; average 100 variables/file; average 324,500 card-images/file; 85 pages of documentation

95. Ostrom, Elinor, Roger B. Parks, and Gordon P. Whitaker; POLICE REFERRAL PRACTICES AND SOCIAL SERVICE AGENCY PRACTICES IN THREE METROPOLITAN AREAS, 1977. POLICE REFERRAL FILE (ICPSR 7791)

    26,465 cases; 36 variables; 52,930 card-images; 140 pages of documentation

96. Ostrom, Elinor, Roger B. Parks, and Gordon P. Whitaker; POLICE REFERRAL PRACTICES AND SOCIAL SERVICE AGENCY PRACTICES IN THREE METROPOLITAN AREAS, 1977. SOCIAL AGENCY FILE (ICPSR 7791)

    103 cases; 139 variables; 5,665 card-images; 140 pages of documentation

97. Ostrom, Elinor, Roger B. Parks, and Gordon P. Whitaker; POLICE REFERRAL PRACTICES AND SOCIAL SERVICE AGENCY PRACTICES IN THREE METROPOLITAN AREAS, 1977. SOCIAL AGENCY NARRATIVE FILE (ICPSR 7791)

    103 cases; 139 variables; 5,150 card-images; 140 pages of documentation

98. Parnes, Herbert S.; NATIONAL LONGITUDINAL SURVEYS OF LABOR MARKET EXPERIENCE, 1966-1977. MATURE MEN COHORT (ICPSR 7610)

    5,518 cases; 2,100 variables; 1,037,216 card-images; 2,100 pages of microfiched documentation

99. Parnes, Herbert S.; NATIONAL LONGITUDINAL SURVEYS OF LABOR MARKET EXPERIENCE, 1966-1977. MATURE WOMEN COHORT (ICPSR 7610)

    5,393 cases; 4,500 variables; 1,400,727 card-images; 3,200 pages of microfiched documentation

100. Parnes, Herbert S.; NATIONAL LONGITUDINAL SURVEYS OF LABOR MARKET EXPERIENCE, 1966-1977. YOUNG MEN COHORT (ICPSR 7610)

    5,713 cases; 5,500 variables; 1,662,239 card-images; 3,600 pages of microfiched documentation

101. Parnes, Herbert S.; NATIONAL LONGITUDINAL SURVEYS OF LABOR MARKET EXPERIENCE, 1966-1977. YOUTH COHORT (ICPSR 7610)

12,700 cases; 2,200 variables; 1,655,742 card-images; 5,800 pages of microfiched documentation

102. Social Security Administration; RETIREMENT HISTORY LONGITUDINAL SURVEY, 1975 (ICPSR 7859)

8,716 cases; 4,200 variables; 522,960 card-images; 350 pages of documentation

103. Straus, Murray A., and Richard J. Gelles; \` PHYSICAL VIOLENCE IN AMERICAN FAMILIES, 1976 (ICPSR 7733)

2,143 cases; 931 variables; 109,293 card-images; 250 pages of documentation

104. U.S. Dept. of Agriculture. Economic Development Division; ELDERLY IN RURAL KENTUCKY, 1975 (ICPSR 7860)

398 cases; 500 variables; 2,786 card-images; 15 pages of documentation

105. U.S. Dept. of Commerce. Bureau of the Census; CENSUS OF POPULATION AND HOUSING, 1980 (UNITED STATES) -- CENSUS SOFTWARE PACKAGE (CENSPAC) (ICPSR 7789)

12 files: 160 pages of documentation of software for using 1980 U.S. Census data

106. U.S. Dept. of Commerce. Bureau of the Census; CENSUS OF POPULATION AND HOUSING, 1980 (UNITED STATES): P.L. 94-171 POPULATION COUNTS: 1978 RICHMOND DRESS REHEARSAL (ICPSR 7810)

8,540 cases; 24 variables; 17,080 card-images; 75 pages of documentation

107. U.S. Dept. of Commerce. Bureau of the Census; CENSUS OF POPULATION AND HOUSING, 1980 (UNITED STATES): P.L. 94-171 POPULATION COUNTS (ICPSR 7854)

51 files: 25 variables/file; 50 card-images/file; 40 pages of documentation

108. U.S. Dept. of Commerce. Bureau of the Census; COUNTY AND CITY DATA BOOK (UNITED STATES) CONSOLIDATED FILE: CITY DATA, 1944-1977 (ICPSR 7735)

1,014 cases; 1,020 variables; 126,750 card-images; 250 pages of documentation

109. U.S. Dept. of Commerce. Bureau of the Census; COUNTY AND CITY DATA BOOK (UNITED STATES) CONSOLIDATED FILE: COUNTY DATA, 1947-1977 (ICPSR 7736)

3,236 cases; 992 variables; 417,444 card-images; 311 pages of documentation

110. U.S. Department of Commerce. Bureau of the Census; CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1977. (ICPSR 7784)

288,254 cases; 317 variables; 1,232,286 card-images; 150 pages of documentation

111. U.S. Dept. of Commerce. Bureau of the Census; CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1979 (ICPSR 7837)

282,015 cases; 430 variables; 1,205,614 card-images; 150 pages of documentation

112. U.S. Dept. of Commerce. Bureau of the Census; CURRENT POPULATION SURVEY, MAY 1978 (ICPSR 7783)

126,676 cases; 220 variables; 760,056 card-images; 87 pages of documentation

113. U.S. Dept. of Commerce. Bureau of the Census; CURRENT POPULATION SURVEY: ANNUAL DEMOGRAPHIC FILE, 1980 (ICPSR 7863)

332,131 cases; 425 variables; 1,494,590 card-images; 201 pages of documentation

114. U.S. Dept. of the Interior; OUTDOOR RECREATION SURVEY, 1977: FEDERAL ESTATE SURVEY (ICPSR 7680)

11,549 cases; 400 variables; 69,294 card-images; 60 pages of documentation

115. U.S. Dept. of the Interior; OUTDOOR RECREATIONAL SURVEY, 1977: GENERAL POPULATION SURVEY (ICPSR 7679)

4,029 cases; 450 variables; 36,261 card-images; 63 pages of documentation

116. U.S. Dept. of Justice. Bureau of Justice Statistics; JUVENILE DETENTION AND CORRECTIONAL FACILITIES, 1979 (ICPSR 7846)

1,015 cases; 235 variables; 45 card-images; 90 pages of documentation

117. Vera Institute of Justice, New York City; NEW YORK CITY COURT EMPLOYMENT PROJECT EVALUATION STUDY, 1976-1979 (ICPSR 7832)

    666 cases; 3,150 variables; 29,422 card-images; 1,565 pages of documentation

118. Yankelovich, Skelly, and White, Inc.; SURVEY OF JUDGES ON THE ROLE OF COURTS IN AMERICAN SOCIETY, 1979 (ICPSR 7824)

    104 cases; 250 variables; 936 card-images; 25 pages of documentation

ICPSR DATA SERVICES PROVIDED

JULY 1, 1980 TO JUNE 30, 1981

The following pages list all requests for data and related services answered by the ICPSR archive for the fiscal year July 1, 1980 to June 30, 1981. Summary figures for the period are presented below.

Three hundred and five different institutions, organizations or individuals requested 7,564 datasets, totaling 521,943,914 card-images. The total for fiscal year 1979-1980 was 438,331,732 card-images. The increase between the two years was nineteen percent. There has been a 333 percent increase in card-image distribution over the five year period 1976-1977 and 1980-1981.

Of the non-members requesting services, twenty-seven received SETUPS material under the distribution arrangement with the American Political Science Association. Non-member SETUPS card-images totaled 388,935. Ninety-three 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. Forty requestors received machine-readable data totaling about 26 million card-images (five percent of total) at charges established for non-member services. Of these, twenty were from non-academic organizations and twenty 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.

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

	Recipient	Number of Data Sets	Number of Card Images
NM	ABT Associates, Inc. Cambridge, Massachusetts	1	-0-
NM	Academic Book Center Portland, Oregon	1	-0-
M	University of Akron	6	1,518,195
M	University of Alabama	85	4,126,947
M	University of Alberta	38	4,655,255
NM	Alcorn State University Natchez, Massachusetts	1	-0-
M	Allegheny College	32	53,460
NM	Ambassador Book Service Hempstead, New York	3	-0-
M	American University	29	1,454,778
M	Arizona State University	47	3,473,543
NM	University of Arizona Tucson, Arizona	5	207,636
M	University of Arkansas at Little Rock	30	187,389
M	Associated Colleges of the Midwest	21	907,920
NM	Atlanta University Atlanta, Georgia	1	-0-
M	Auburn University at Auburn	110	2,499,643
M	Australian Consortium for Social & Political Research, Inc.	19	396,714
NM	Avila College Kansas City, Missouri	1	-0-
NM	Baker and Taylor Company Momence, Illinois	4	-0-
NM	Ballen Booksellers International Commack, New York	2	-0-
NM	Battelle Seattle, Washington	1	-0-
NM	Battelle Pacific Northwest Laboratory Richland, Washington	1	981,058
NM	Beaver/Butler Area Agency on Aging New Brighton, Pennsylvania	1	-0-
NM	Birmingham Southern College Birmingham, Alabama	5	9,626
NM	Blackwell North America, Inc. Blackwood, New Jersey	5	-0-
NM	Blue Mountain Community College Pendleton, Oregon	1	-0-
NM	The Book House Jonesville, Michigan	6	-0-
NM	Boston University Boston, Massachusetts	2	3,099,784

M=Member N=Non-Member 0=Contractual Arrangement

NM	Bowdoin College Brunswick, Maine	1	13,406
M	Bowling Green State University	5	213,323
NM	Brandeis University Waltham, Massachusetts	2	-0-
M	University of British Columbia	30	1,135,374
M	British National Federation	101	1,514,442
NM	Brock University St. Catharines, Ontario, Canada	1	44,960
NM	The Brookings Institution Washington, D.C.	3	96,495
NM	Broward Community College Fort Lauderdale, Florida	1	-0-
M	Brown University	17	5,433,311
NM	Bucknell University Lewisburg, Pennsylvania	2	6,837
NM	Bureau of Justice Statistics Washington, D.C.	1	-0-
NM	Bureau of Social Science Research Washington, D.C.	1	-0-
NM	California Department of Youth Authority Sacramento, California	3	48,171
M	California Institute of Technology	37	364,270
M	California State University and Colleges	93	3,369,584
M	University of California at Berkeley	47	560,214
M	University of California at Davis	14	2,113,926
M	University of California at Los Angeles	409	16,918,066
M	University of California at San Diego	10	10,671,202
M	University of California at Santa Barbara	34	1,540,141
NM	University of California at Santa Cruz	1	-0-
NM	Calvin College Grand Rapids, Michigan	2	39,725
M	Carleton University	6	96,576
M	Carnegie-Mellon University	86	19,494,626
NM	Case Western Reserve University Cleveland, Ohio	2	53,896
NM	Catholic University of America Washington, D.C.	1	-0-
NM	University of Central Arkansas Conway, Arkansas	1	-0-

NM	Central Intelligence Agency Washington, D.C.	11	526,985
M	Central Michigan University	17	303,857
M	University of Chicago	127	5,017,749
M	University of Cincinnati	53	2,859,020
M	The Claremont Colleges	8	434,090
NM	Clarion State College Clarion, Pennsylvania	1	-0-
NM	Clark University Worcester, Massachusetts	2	30,492
M	Cleveland State University	9	293,648
NM	Colorado Division of Criminal Justice Denver, Colorado	2	-0-
M	Columbia University	57	2,776,596
NM	Connecticut Department of Aging Hartford, Connecticut	1	-0-
M	University of Connecticut	38	4,794,794
M	Cornell University	70	1,108,793
NM	Coutts Library Services Lewiston, New York	2	-0-
M	City University of New York	11	1,726,219
NM	Dade Community College Miami, Florida	1	-0-
M	Danish Data Archives	20	615,637
M	University of Dayton	8	1,610,151
M	University of Denver	79	2,842,576
NM	DePaul University Chicago, Illinois	1	-0-
M	Doshisha University	98	2,447,231
M	Duke University	22	48,833
M	Dutch National Membership	21	566,111
NM	E.B.S. Inc. Book Service Lynbrook, New York	1	-0-
NM	Ralph Earle Cambridge, Massachusetts	1	-0-
M	East Carolina University	48	1,151,369
NM	Eastern Michigan University Ypsilanti, Michigan	14	317,775
NM	Edison Community College Fort Myers, Florida	1	-0-
NM	Elizabethtown College Elizabethtown, Pennsylvania	3	8,504
NM	Elon College Elon College, North Carolina	27	48,538
NM	Emery-Pratt Company Owosso, Michigan	1	-0-
M	Emory University	86	6,572,386

M	European Universities Institute in Florence, Italy	3	-0-
NM	Fayetteville State University Fayetteville, North Carolina	13	24,820
M	Florida Consortium for Political Research	85	13,404,384
NM	Florida State Bureau of Justice Assistance Tallahassee, Florida	1	-0-
M	Fordham University	23	131,614
NM	Fort Hays State University Hays, Kansas	12	17,482
NM	Franklin Book Company Jenkintown, Pennsylvania	1	-0-
NM	K. Freedman Rockville, Maryland	1	-0-
NM	Frostburg State College Frostburg, Maryland	3	3,613
NM	George Mason University Fairfax, Virginia	1	-0-
M	George Washington University	10	275,093
M	Georgetown University	5	26,753
M	Georgia State University	3	297,588
M	University of Georgia	114	1,615,662
M	German National Federation	41	2,293,665
NM	Goucher College Towson, Maryland	2	6,769
NM	Graduate Theological Union Berkeley, California	1	-0-
NM	Group Operations Incorporated Washington, D.C.	1	-0-
NM	Hanover College Hanover, Indiana	1	4,707
NM	Hartwick College Oneonta, New York	2	6,351
M	Harvard University	112	6,003,364
NM	University of Hawaii Honolulu, Hawaii	3	-0-
NM	Health Care Financing Administration Baltimore, Maryland	7	350,942
NM	Heidelberg College Tiffin, Ohio	2	4,849
NM	Howard University Washington, D.C.	1	-0-
NM	The Huron Institute Cambridge, Massachusetts	2	-0-

M	Illinois State Colleges and Universities	8	8,880
M	University of Illinois at Chicago Circle	51	4,487,512
M	University of Illinois at Urbana	89	8,108,770
M	Illinois State University at Normal	35	2,693,130
NM	Illinois Wesleyan University Bloomington, Illinois	13	24,820
M	Indiana University	101	8,275,557
NM	Indiana State University at Terre Haute Terre Haute, Indiana	1	-0-
NM	Institute for Social Analysis Reston, Virginia	1	-0-
M	Iowa State University	56	2,153,733
M	University of Iowa	38	2,163,093
NM	James Madison University Harrisonburg, Virginia	1	4,707
M	Johns Hopkins University	27	1,536,222
NM	Joint Center for Political Studies Washington, D.C.	1	-0-
M	Kansas State University	56	829,506
M	University of Kansas	16	383,161
M	University of Kentucky	16	453,896
NM	Key Book Service Inc. Bridgeport, Connecticut	1	-0-
NM	Killingsworth, Liddy and Company Arlington, Massachusetts	3	52,238
NM	C.L. Kruger Dortmund, West Germany	1	-0-
M	Lehigh University	23	763,021
O	Library of Congress	93	452,661
NM	Arthur D. Little Corporation Cambridge, Massachusetts	1	-0-
M	Louisiana State University	44	7,654,195
M	University of Louisville	17	161,142
M	Loyola University of Chicago	32	1,860,073
NM	University of Maine at Portland Portland, Maine	1	-0-
NM	University of Maine at Presque Isle Presque Isle, Maine	1	-0-
NM	Mankato State University Mankato, Minnesota	2	-0-
M	University of Maryland	72	10,148,566
NM	Marywood College Scranton, Pennsylvania	1	-0-
M	Massachusetts Federation	23	6,902,801

M	Massachusetts Institute of Technology	67	9,252,918
NM	Massachusetts Parole Board Boston, Massachusetts	1	-0-
NM	Mathematica Policy Research Institute Princeton, New Jersey	1	-0-
M	McGill University	9	413,121
M	McMaster University	21	789,161
M	Memphis State University	13	1,514,482
M	Miami University	54	2,761,059
NM	Michigan Criminal Justice Coordination Corporation Pontiac, Michigan	1	-0-
M	Michigan State University	106	5,079,922
M	University of Michigan	137	14,671,516
NM	Midwest Library Service Bridgeton, Missouri	2	-0-
NM	Midwestern State University Wichita Falls, Texas	16	26,257
M	University of Minnesota	55	8,988,809
M	Mississippi State University	13	377,430
NM	University of Mississippi University, Mississippi	2	131,978
M	University of Missouri at Columbia	5	127,058
M	University of Missouri at St. Louis	45	4,581,794
NM	Monmouth College West Longbranch, New Jersey	14	23,718
NM	Mount Holyoke College South Hadley, Massachusetts	4	19,790
NM	Murray State University Murray, Kentucky	1	-0-
NM	Nathanial Hill and Associates Raleigh, North Carolina	1	30,492
NM	National Criminal Justice Reference Service Rockville, Maryland	1	-0-
NM	National Information Center Boulder, Colorado	1	-0-
NM	National Institute on Aging Washington, D.C.	2	-0-
M	University of Nebraska at Lincoln	10	3,836,194
NM	University of New Hampshire Durham, New Hampshire	18	22,560
M	University of New Mexico	85	1,914,197
M	University of New Orleans	26	3,818,633
NM	New York County District Attorney New York, New York	1	-0-

M	New York University	6	110,823
NM	North Carolina Federal Correctional Institute Butner, North Carolina	1	-0-
M	University of North Carolina at Chapel Hill	70	28,684,082
NM	University of North Carolina at Charlotte Charlotte, North Carolina	1	-0-
NM	University of North Carolina at Greensboro Greensboro, North Carolina	1	-0-
NM	University of North Carolina at Wilmington Wilmington, North Carolina	1	-0-
M	North Texas State University	13	393,009
NM	Northeastern University Boston, Massachusetts	14	3,265,466
M	Northern Arizona University	19	304,983
M	Northern Illinois University	82	2,758,919
M	Northwestern University	100	5,217,285
M	Norwegian Social Science Data Services	2	-0-
M	University of Notre Dame	33	4,411,260
NM	Oakland University Rochester, Michigan	2	7,992
M	Ohio State University	59	2,540,537
NM	Ohio University Athens, Ohio	85	3,530,999
M	Ohio Wesleyan University	5	348,903
M	Oklahoma State University	45	5,119,836
M	University of Oklahoma	44	6,582,956
M	Old Dominion University	2	11,212
M	University of Oregon	63	8,271,857
NM	Pacific Lutheran University Tacoma, Washington	1	-0-
NM	Pathway Book Service New Rochelle, New York	1	-0-
NM	Peat, Marwick, Mitchell New York, New York	1	-0-
M	Pennsylvania State University	66	3,669,358
NM	Pennsylvania Student Book Store State College, Pennsylvania	1	-0-
M	Philadelphia Federation	66	11,966,342

NM	Philadelphia Geriatric Center Philadelphia, Pennsylvania	2	123,234
M	University of Pittsburgh	59	2,664,830
NM	Policy Analysis Inc. Brookline, Massachusetts	2	116,387
M	Princeton University	157	19,215,212
NM	Public Agenda Foundation New York, New York	2	35,229
NM	University of Puerto Rico Rio Piedras, Puerto Rico	2	-0-
M	Purdue University	27	966,499
NM	Rand Corporation Santa Monica, California	9	6,391,242
M	Reed College	7	56,472
NM	Rhode Island College Providence, Rhode Island	1	-0-
NM	Roanoke College Salem, Virginia	3	4,849
M	University of Rochester	79	2,148,616
NM	Rosemont College Rosemont, Pennsylvania	1	-0-
NM	Rothacker Berlin, Republic of Germany	1	-0-
M	Rutgers University	288	15,186,996
NM	Saint Louis University St. Louis, Missouri	15	23,718
NM	Saint Mary's College Notre Dame, Indiana	21	28,707
NM	St. Cloud State University St. Cloud, Minnesota	2	2,539
NM	City of St. Louis, Missouri	1	-0-
NM	St. Mary's University San Antonio, Texas	1	-0-
NM	College of St. Thomas St. Paul, Minnesota	1	-0-
NM	St. Vincent College Latrobe, Pennsylvania	1	4,496
NM	Sam Houston State University Huntsville, Texas	1	4,659
M	Sangamon State University	24	113,354
NM	University of Santa Clara Oakland, California	13	17,482
NM	Scholarly Book Center, Inc. Waukegan, Illinois	4	-0-
NM	V.J. Scott Birmingham, Alabama	1	-0-
NM	Petrenko Serpukhovskay U.S.S.R.	1	-0-

NM	Seton Hall University South Orange, New Jersey	2	4,569
NM	Siena College Loudonville, New York	1	-0-
NM	Simmons College Boston, Massachusetts	1	-0-
NM	Simon Fraser University Burnaby, British Columbia, Canada	1	-0-
NM	Smithsonian Institution Washington, D.C.	1	189,149
M	University of South Carolina at Columbia	32	3,404,292
M	University of Southern California	27	7,233,014
M	Southern Illinois University at Carbondale	31	1,014,106
M	Southern Illinois University at Edwardsville	19	1,025,368
NM	Southwestern at Memphis Memphis, Tennessee	3	14,769
NM	Soviet Academy of Science Moscow, U.S.S.R.	1	2,054
NM	Spartan Bookstore San Jose, California	1	-0-
M	Stanford University	61	4,987,339
NM	State University College New Platz, New York	1	4,707
M	State University of New York at Albany	82	6,116,222
M	State University of New York at Binghamton	45	4,203,043
M	State University of New York at Buffalo	32	4,850,120
NM	State University of New York at Farmingdale Farmingdale, New York	2	9,030
M	State University of New York at Geneseo	1	15,424
M	State University of New York at Stony Brook	35	2,251,925
NM	Statistics Canada Ottawa, Ontario, CANADA	1	-0-
NM	Lorey Orvis Streiff New York, New York	1	-0-
M	Swedish National Membership	7	346,097
M	Swiss National Membership	30	253,095
M	Temple University	92	3,939,473
M	University of Tennessee at Knoxville	9	723,648
M	Texas Federation	146	5,627,311

NM	Texas Tech University Lubbock, Texas	2	6,769
M	University of Texas at Arlington	10	212,866
NM	University of Texas at Dallas Richardson, Texas	3	974,591
M	University of Texas at El Paso	1	-0-
NM	Tiger Book Store, Inc. Memphis, Tennessee	1	-0-
M	University of Toledo	1	121,944
NM	University of Toronto Toronto, Ontario, Canada	14	23,718
NM	Tougaloo College Tougaloo, Mississippi	3	45,773
M	Tulane University	7	181,859
NM	United States Congress Washington, D.C.	2	35,001
NM	United States Department of Commerce Washington, D.C.	2	53,546
NM	United States Department of Defense Washington, D.C.	7	15,332
NM	United States Department of Justice Washington, D.C.	3	82,280
NM	United States General Accounting Office Washington, D.C.	2	224,589
M	Union College	19	1,139,159
NM	The Urban Institute Washington, D.C.	7	5,183,361
M	Utah State University	56	547,972
M	University of Utah	14	4,424,727
M	University of Vermont	51	2,242,878
M	Virginia Federation	136	12,066,661
M	Virginia Polytechnic Institute and State University	45	4,870,354
NM	Virginia Union University Richmond, Virginia	1	-0-
M	Washington and Lee University	3	39,724
NM	The Washington Post Washington, D.C.	2	-0-
M	Washington State University	17	1,344,618
M	Washington University	73	8,313,978
M	University of Washington	23	1,356,598
M	Wayne State University	43	2,444,987

NM	Waynesburg College Waynesburg, Pennsylvania	1	-0-
NM	Robert C. Wegner Youngstown, Ohio	1	-0-
NM	Wellesley College Wellesley, Massachusetts	1	119
M	Wesleyan University	1	328,267
M	West Virginia University	38	3,075,765
M	Western Kentucky University	5	133,878
M	Western Michigan University	40	870,625
M	University of Western Ontario	19	4,550,255
M	Wichita State University	18	495,017
NM	Wilkes College Wilkes-Barre, Pennsylvania	1	-0-
M	University of Windsor	34	883,792
NM	University of Wisconsin at Eau Claire Eau Claire, Wisconsin	1	-0-
M	University of Wisconsin at Madison	232	12,430,036
M	University of Wisconsin at Milwaukee	143	2,178,417
NM	University of Wisconsin at Oshkosh Oshkosh, Wisconsin	15	23,718
NM	University of Wisconsin at River Falls River Falls, Wisconsin	1	4,496
NM	University of Wisconsin at Stevens Point Stevens Point, Wisconsin	1	4,707
M	University of Wyoming	59	2,039,400
M	Yale University	25	2,987,982
NM	Yankee Book Peddler Cantoocock, New Hampshire	3	-0-
NM	Yankelovich, Skelly and White, Inc. New York, New York	3	25,085
NM	Yeshiva University New York, New York	1	-0-
NM	York University Downsview, Ontario, Canada	1	75,699

M=Member N=Non-Member O=Contractual Arrangement

TOTALS:

Total Number of Institutions:	305
Total Number of Datasets:	7,564
Total Number of Card-images:	521,943,914

ICPSR DATA SERVICES PROVIDED

July 1, 1980 to June 30, 1981

	Number of Datasets	Number of Card Images
Total Member Data Services Provided:	6,993	495,093,872
Total Non-Member Data Services Provided:	571	26,850,042
Non-Member Data Services Provided:		
(Academic	161	11,898,237)
(Non-Academic	72	14,562,870)
(SETUPS	216	388,935)
(Text only	122	0)
TOTAL DATA SERVICES PROVIDED:	7,564	521,943,914

FIVE-YEAR DATA SERVICING SUMMARY:

1976-1977 to 1980-1981

Fiscal Year	Data Sets	Card Images
1980-1981	7,564	521,943,914
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

% Change 1979-1980 to 1980-1981:	1.6	19.1
% Change 1976-1977 to 1980-1981:	11.7	333.3

ICPSR BIBLIOGRAPHY

1980

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EXTERNAL FUNDING FOR THE DEVELOPMENT OF ICPSR DATA RESOURCES
CONTINUING PROJECTS, 1980-1981 AND 1981-1982

Summaries of the following projects appeared in the 1978-1979 Annual Report, pp. 57-66:

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:	National Endowment for the Humanities
Grant Number:	RC0058
Duration:	October 15, 1979 to April 15, 1981
Amount:	$35,812

Summaries of the following projects appeared in the 1979-1980 Annual Report, pp. 55-86.

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
Grant Number:	90-A-12790/03
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:	July 15, 1980 to July 14, 1981
Amount:	$399,890

Title:	Question Retrieval from Machine-Readable Codebooks
Source:	Department of Agriculture
Grant Number:	23-429
Duration:	October 1, 1980 to September 30, 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 September 30, 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 December 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

EXTERNAL FUNDING; PROJECTS FUNDED FOR IMPLEMENTATION IN 1980-1981 AND CONTINUING INTO 1981-1982.

Descriptions of externally funded projects which were initiated during 1980-1981 or 1981-1982 are presented on the following pages.

Title:	Supporting Facilities for Research and Policy Developments and Evaluation in the Field of Aging
Source:	Administration on Aging
Grant Number:	90A1279/04
Duration:	March 1, 1981 to February 28, 1982
Amount:	$386,952

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-K0005
Duration:	July 15, 1981 to September 30, 1981
Amount:	$102, 922
Grant Number:	82-BJ-CX-K001
Duration:	October 1, 1981 to September 30, 1982
Amount:	$402,337

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 Reseach (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.

During this fiscal year (1980-1981) a fourth task will be added to the project.

IV. Development of a national aging data base and sampling system.

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 third phase of the project was described in the 1979-1980 Annual Report, pp. 73-76.

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. This year a fourth activity will be added: the creation of a national data base and sampling system. These 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 third 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.

During this renewal of the project a fourth element has been added, The National Association of State Units on Aging (NASUA) and the National Association of Area Agencies on Aging (N4A) have proposed development of a national aging data base and sampling system.

The purposes of this task are threefold: to support the operational responsibilities and needs of state units and area agencies on aging as they are affected by the use of both computerized and manually operated information systems; to increase the capacity of the network to produce and use information of substantially higher quality than is currently in day-to-day use; and to make available to network units and to AoA information which accurately reflects the activities of state units, area agencies, providers and clients and which can be produced with minimum

intrusion on the activities of those network units. Beyond these specific project goals, the product of this dta collection effort would be of considerable value to researchers in the field of aging.

Data collected through the activity would be greatly enhanced by the NACDA holdings, particularly data from the 1980 United States censuses to be acquired, and would in turn enhance the value of NACDA to the field of aging. And the NACDA project, through the ICPSR facilities and membership and the contacts of the Institute of Gerontology, can ensure access to the data for secondary analysis by any and all interested parties.

There are nine parts to this activity:

1. The Aging Date Base Design

Members of the NACDA staff will sit as members of the Project Advisory Board for the NASUA project. One of the early responsibilities of the Board will be the identification of relevant data items for inclusion in the aging data base. This will include the identification of past studies which are relevant to the project, in order to ascertain commonly included, and frequently duplicated, data items in these past studies. Incorporation of these data items in the new data base is expected to reduce subsequent demands on the network of repeated data collection efforts.

As a separate NACDA effort in conjunction with this component, an attempt will be made to acquire the computer-readable versions of these data bases for archiving. This would provide an immediate historical, comparative dimension to the data to be collected subsequently as part of the Aging Network Census.

2. Instrument Design

3. Design of an Item Sample

4. Data Collection Design

5. Systems Design and Hardware/Software Selection

This project task involves two technical elements: design of formats for the data to be collected in the field so that their compatibility with the NACDA formats will be maximized, and the design/selection of appropriate computer software to process and analyze the data files which will result.

6. Data Processing

This component has two elements associated with it: processing of the data collection instruments as they come from the field into a technical format compatible with the data base design described above, and the actual processing of the data by NACDA for inclusion in the archive. Ideally, both of these elements could be treated simultaneously by having NACDA perform both tasks at once utilizing the facilities of the ICPSR.

7. Sampling Design

8. Identify Needed Research Data

During the process of acquiring and processing past studies of the aging network under Compenent One, the NACDA staff, in conjunction wth the Project Advisory Board and other representatives of the research community, will seek to identify additional data about the network which should be included in the aging data base to support further research.

9. Data Access and Dissemination

Within six months of the collection of the data it will be made available to individuals interested in the research and policy applications of these data. The NACDA staff itself will obtain copies of the data as soon as they are available in order to begin processing them. If the NACDA staff actually performs the data processing, under the terms described above, this task will obviously be facilitated. But NACDA would receive the preliminary version of the data for archival processing from whomever does the initial data entry and processing tasks.

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:	90A1279/04
Duration:	March 1, 1981 - February 28, 1982
Amount:	$386,952

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 three and one-half years, beginning 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 and third phases were described in the 1978-1979 Annual Report, pp. 57-58, and the 1979-1980 Annual Report, pp. 77-79. 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 expand the archival holdings and the number of individuals who utilize the services of the resource base. Additional emphasis will be placed upon providing technical assistance to the Crime Survey Analysis Section at the Bureau of the Census. The project will be focused upon an integrated program of activities designed to stimulate the extended analysis of a wide vareity 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 contunue to make use of the technical skills and facilities of the Inter-university Consortium for Political and Social Research (ICPSR) at the Center for Political Studies of The University of Michigan, and its well-developed techniques and network for data dissemination.

The CJAIN project is needed to increase the availability of quantitative resources for researchers 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 seres of training programs and exhibits.

Several elements of the CJAIN project were highlighted in the recent

report on "Criminal Justice Administrative Statistics" prepared by the National Academy of Public Administration (1980). The report suggests the need for attention to be devoted to "encouraging more extensive analysis of existing data" and for "an inventory or catalogue of all criminal justice data resources comparable to catalogs maintained and disseminated by other federal statistical agencies" (12-13). The inventory of machine-readable data being developed by the National Criminal Justice Data Archive is cited specifically as a basis for such an inventory.

During the last project period, the number of datasets in the archive was increased substantially, and there are now over sixty separate collections of data, involving many times that number of individual datasets, listed in the holdings (a 33% increase over last year). 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, 269 requests for service were filled, involving the distribution of either data, documentation, or both (a 35% increase over the previous year). Almost 43,000,000 card-image equivalents of data were distributed in response to these requests (a 39% increase over last year). There were also eighty-five additional requests for information, advice, or other forms of consultation, which were also answered by the CJAIN staff.

In this past continuation period, the support of the CJAIN was converted to a cooperative agreement between the Bureau of Justice Statistics and the Inter-university Consortium for Political and Social Research. Through continued close 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. A survey of user needs and satisfaction with services is currently underway, and adjustments in programmatic activities will be made to increase further the effectiveness and responsiveness of the project. These elements are described in greater detail below.

The project will consist of three separate tasks, each of which bears an integral relation to the others. The firt task includes 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 functions as the regular repository and disseminator of the National Crime Survey data as they are released by the Bureau of the Census. The archive in turn makes these public data files available in a wide variety of technical environments on a timely basis in a technical condition 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 a

extension of the consultation service, and in conjunction with expanded archival resources, the project staff will provide further 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 1982 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 exposes 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 fifteen 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 Archive
Source:	Bureau of Justice Statistics
Grant Number:	80-BJ-CX-K0005
Duration:	July 15, 1981 - September 30, 1981
Amount:	$102,922
Grant Number:	82-BJ-CX-K001
Duration:	October 1, 1981 - September 30, 1982
Amount:	$402,227

EXTERNAL FUNDING; A PROJECT PROPOSAL SUBMITTED FOR FUNDING FOR IMPLEMENTATION DURING 1981-1982.

A description of a project proposal submitted for funding but still pending, is presented on the following pages.

Title:	Development of Facilities for Remote, On-Line Access to Data Resources of the Inter-university Consortium for Political and Social Research
Submitted to:	National Science Foundation
Duration:	January 1, 1982 to December 31, 1983

DEVELOPMENT OF FACILITIES FOR REMOTE ON-LINE ACCESS TO DATA RESOURCES OF THE INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH

A proposal submitted to the
National Science Foundation

This proposal requests support for developing a new, key component of a national facility providing remote, on-line access to extended arrays of data and advanced computational resources for applied and basic research into social processes. The proposed remote access facility would employ innovative technical approaches to maximize the ease and lower the cost of use of these computing resources. The facility would also be designed to capitalize upon the full range of computational machinery including large-scale mainframe equipment, minicomputers, and small, inexpensive microcomputers. Specific support is requested for the development of a network interface computer, in what constitutes an experimental undertaking, but with immediately practical benefits for research on societal processes and and for rapid reporting of results for current bodies of statistical data.

The key developmental work required to achieve these goals involves a major innovation: special interface software would be placed on a minicomputer interposed between the remote user and the University of Michigan central computer in a novel but technically straightforward way. The result would be a network interface computer, providing a wide range of services designed to enhance ease of access and productive use of data and computational resources. This interface computer would function interactively to simplify the user's task in issuing commands and generating setups, would establish a complete history of the session, and would enable access to an on-line counseling service by a staff expert. Documentation would be readily accessible on this machine, capabilities for computer-based searches of the data documentation would be facilitated, and extensive on-line "tutorial" and "help" materials would be provided to aid in the use of data analysis and management software. The interface computer would provide enhanced security for the facility against inappropriate use, protect confidential materials, and prevent destructive access, whether inadvertent or deliberate. A further innovation would result from design of the resource to support and facilitate local use by researchers and others of modestly-priced microcomputers. The overall impact of the development of the proposed network interface computer would be much easier and more productive use of data and computational power than is now possible.

The proposed facility would provide access both to the current data holdings of the Inter-university Consortium for Political and Social Research (ICPSR) and to additional data holdings as they are acquired and developed in the future. It would provide remote access to major federally collected data resources such as those provided by the 1980 Census of the United States, now being acquired by ICPSR. Over 250 colleges and universities are currently members of ICPSR. For this established and extended network of data users the proposed facility would provide new, more convenient and, in many cases, less costly modes

of access to these data resources. At the same time, the facility would allow and encourage new forms of research applications and use of data, utilizing the advanced computational equipment at The University of Michigan and a broad range of standard and specialized data analysis and management software that is already operational on that equipment. It would expand the body of users who could draw effectively upon ICPSR resources and form the basis for an on-line information utility of special national importance.

The projected facility would build upon data and technical capabilities that are currently available. The Telenet national computer network would provide access to the facility, connecting through Merit network computers on the University of Michigan campus. A Prime 750 mini-computer owned by the ICPSR would be used as the network interface computer; all communications between the remote Telenet user and the University's Michigan Terminal System would pass through this computer. No support is requested for acquisition or development of data, for development of data analysis or management software, or for equipment acquisition. In fact, remote access to ICPSR data and to University of Michigan equipment and software is already technically feasible. At present, however, use of this mode of access to ICPSR data is cumbersome and unnecessarily expensive both for data users and for the ICPSR. Under current conditions, only the technically proficient, the determined, and the well-funded can employ this mode of access. What is requested here is support only for the marginal developmental work required to make remote access to these resources easier, less expensive, and more practical.

The overall benefit of national network access to the data and computational resources of the ICPSR are reviewed in the next section. Then the specific virtues of the proposed network interface computer are discussed, followed by sections on the design and implementation, and the fiscal and technical viability of the proposed approach.

SCIENTIFIC VALUES AND ADVANTAGES OF NETWORK ACCESS TO ICPSR RESOURCES

Current Use of ICPSR Facilities

The value of ICPSR data resources and related services for basic and applied research, for instructional applications, and for monitoring social processes is well demonstrated. One basic indication of value is provided by the publications and research reports based on data obtained from ICPSR. Each year approximately one hundred books, articles, dissertations, and conference papers are reported as based entirely or in part upon data supplied by ICPSR. Over 1100 publications, dissertations and papers have been reported based all or in part on one data collection series (the American National Election Studies, 1952-1980) maintained and disseminated by ICPSR. It is certain, moreover, that these figures seriously underreport the actual number of publications, papers and dissertations based upon data provided by ICPSR. Several samplings of professional journals and programs for the meetings of professional associations indicate that no more than half of the publications and papers based upon ICPSR data are reported to the staff in Ann Arbor.

Very extensive instructional use is also made of ICPSR data both at the graduate and undergraduate levels and, to a much lesser degree, the secondary school level. Data are widely used in classroom situations and as a basis for seminar papers, student reports, theses and dissertations. ICPSR data dissemination and reporting mechanisms do not provide systematic information on the incidence and magnitude of these applications. (See Appendix A to this proposal.) Unsystematic reports and occasional descriptions of specific applications provide abundant evidence, however, that this form of use of ICPSR data is very substantial indeed.

There has been steady and rapid increase in the volume of data requested and supplied to member and other institutions, to individual scholars, and to governmental and private agencies. During the 1977-78 fiscal year, for example almost fourteen billion characters of data were supplied; in the following year over twenty-seven billion characters were supplied; in 1979-80 the volume rose to approximately thirty-five billion characters; and in the fiscal year just completed (1980-81) over forty-six billion characters of data were supplied.

A further demonstration of the value of ICPSR data and services is of another form. ICPSR member fees are substantial: $6400 for major graduate institutions, $4100 for the larger predominately undergraduate institutions, and $2500 for smaller undergraduate institutions. Even so, and despite general and increasing financial stringency within the college and university community, ICPSR membership has steadily increased in recent years from approximately 200 institutions in 1976-77 to slightly more than 250 at present. It appears, in short, that retention or initiation of affiliation with ICPSR has been a high priority for a significant number of institutions despite financial difficulties.

There is also in recent years increased evidence of recognition of the value of ICPSR data and related services outside the academic sector. Increasingly, governmental agencies at the local, state and federal levels, private businesses, non-profit organizations, consulting firms, and public interest groups request data and services of ICPSR or inquire about their availability. As examples, services are routinely provided to the Congressional Research Service, the Bureau of the Census, to the Bureau of Justice Statistics, and to the State and Area Agencies on Aging supported by the Administration on Aging. Most recently inquiries about access to data and related services have been received from the Department of State, the White House staff (DIDS), and the General Accounting Office. Similar requests are often received from business firms and organizations in the private sector.

These requests for services from the non-academic sector take various forms. In some cases they involve requests for computer-readable copies of particular data collections, but more frequently they are of another form. In some instances data reductions and analyses are requested; in others the requests are essentially informational (the distribution of some attribute within some segment of the national population, for example); and increasingly remote, on-line access to ICPSR resources is requested.

These are legitimate requests and they look toward broadening and

diversifying use of data, they increase the utility of data, and they demonstrate and call attention to the value and importance of the data, methods, and formulations of social research. Thus every effort is made by ICPSR to accommodate them. On the basis of present capabilities, however, these requests all too frequently cannot be effectively and economically accommodated without severe staff dislocations. Moreover, the effort to respond to these requests presents for ICPSR a potentially serious economic burden. The remote access capabilities proposed here would allow ICPSR to respond to a substantially increased proportion of these requests without the burdens and dislocations which they presently pose.

Remote access to ICPSR data is technically feasible and is now sometimes employed, particularly by staff members of various federal agencies. Yet by far the predominant mode of access remains provision of data collections, or subsets of data collections, on electronic media, usually magnetic tape, for use on local computational systems. While we expect that this mode of access will continue, improved remote, on-line access to ICPSR data can serve additional and major scientific values that are not now being served, it would extend access to these resources to an expanded community of scientists, and it would allow effective use of these resources in the governmental and private sectors. Remote access capabilities would also afford major operational economies for ICPSR, its member institutions, and other present and potential users of ICPSR data and services. Each of these values and advantages can be addressed in turn.

1. Increased Scientific Capability

As a consequence of several considerations, important scientific advantages would be gained by extending ICPSR data services to include capacity for routine remote, on-line access at low cost. Among these considerations are the changing nature of data and applications of data, technological change, and new capabilities for sharing scientific tools and information.

One category of advantages to remote access result from change in the nature of data bearing upon social processes. The trends of recent years have been toward more data collection efforts in the governmental and private, as well as the academic, sectors and toward increase in the size and technical complexity of data collections. At the same time, the cumulative results of several decades of systematic data collection efforts are now available. These resources constitute major research opportunities. Extended longitudinal perspectives on societal processes are now possible and the combinatorial research opportunities provided by the many and diverse data collections now available are legion. It appears predictable, however, that the incidence of new data collection efforts by academically based researchers will diminish at least in the immediate future. Thus it becomes doubly important for scientific progress that the value of extant data and of data collected by government and private enterprise be more nearly realized.

On several counts, present modes of access to ICPSR data are not adequate for the realization of these values. It is still the case that many researchers lack effective access to the computational capabilities

required to utilize the large data collections that are increasingly included in ICPSR holdings Similarly, capabilities required to analyze and manage complexly structured data collections are not now generally available. To realize the combinatorial possibilities presented by ICPSR data collections, and those to be added in the future, requires that the researcher have the capacity to search extended arrays of documentation to identify for retrieval specific data and variables relevant to particular research applications. Given the extensive, diverse and growing number of data collections included in ICPSR holdings, such searches are becoming increasingly prohibitive on a manual basis.

Realization of the combinatorial research opportunities presented by ICPSR data holdings requires, moreover, that the reseacher draw upon and combine subsets of data and variables, or derived measures, taken from numerous data collections often of considerable magnitude. Employing conventional modes of access to data, the researcher must obtain copies of each of the relevant data collections in their entirety, install them on local equipment, and then carry out elaborate subsetting and merging operations. Frequently, these tasks are too complicated and costly in terms of time and money to be supported and important research opportunities are foregone. Alternatively, researchers ask that subsetting and merging operations be carried out by ICPSR with the consequence of increasingly unsupportable economic burdens upon ICPSR.

For these same reasons, "exploratory data analysis," in Tukey's sense of the term, is also often precluded. To carry out exploratory analyses designed to determine the statistical properties of data and variables -- and, hence, their appropriateness and utility for particular substantive and analytic applications -- requires that researchers acquire and install data collections on local equipment. The costs in time and effort that are involved often makes analyses of this sort impractical. Obviously, these difficulties are compounded where large and complex data collections, such as the data from the national censuses, are concerned. By the same token, the value of extant data collections for the purposes of designing new data collection efforts is also reduced. Such data collections often afford opportunities to examine and evaluate the utility of particular question wordings, measures, and scales. Present modes of access to data are an obstacle to realization of these values.

Moreover, many research applications do not involve extended data analysis. In many cases important research needs require only very limited access to determine from a large-scale data collection, for example, the distribution of some population group within the national population. Others are essentially informational in character, to determine, for example, voter participation rates in a given election in a particular state or constituency. Although of central relevance to the research process, needs such as these do not require local access to large-scale data collections, and current modes of access are obstacles to their satisfaction. The facility proposed here would contribute in major ways to meeting these needs and thereby strengthen the research process.

The massive data produced by the 1980 Census of the United States provide an illustration of these issues and of the value of the facililty

proposed here. For the coming decade the 1980 data will be a primary research resource to which countless researchers will turn on numerous occasions. The costs of acquiring these data in their entirety will be beyond the means of all but a few colleges and universities. Even if costs of acquisition can be borne, substantial costs for long-term management and storage of the data will still be faced. Much of the research use of these data, however, will not involve extensive analysis or justify the costs of acquiring data for local access. Rather, many research applications will be informational in character or will involve only limited data reductions or analytical examination of one or a few variables drawn from one or more of the Summary Tape Files or from the Public Use Micro-Data Samples. Under present modes of access to the 1980 data, many of these important research needs will not be met and the value of the data will be less than fully realized. The projected facility would meet many of these needs and would permit significantly greater research use of the 1980 data.

The facility proposed here would constitute a major step toward realizing the values described above. (1) It would provide access to the large-scale computational facilities that are not available to significant numbers of researchers. (2) It would provide access to capabilities already operational on University of Michigan equipment for analysis and management of complexly structured data files. These capabililties are not now available at many local installations. (3) The facility would provide capacity for computer based searches of documentation to locate and identify data and variables appropriate to particular research applications. (4) It would allow researchers to carry out "exploratory data analyses" and to meet essentially informational needs without the requirement that a costly investment be made in acquiring and installing massive data collections on local equipment. (5) The facility would provide researchers with a means to fashion data files suited to particular research applications by combining subsets from other data collections, again without the costs and time delays involved in acquisition and installation of large data collections on local systems.

Advances in computing technology are the bases for a second category of values and advantages that the projected facility would provide. Currently available equipment allows design of analysis and management sustems that require less expertise of users than do earlier systems, reducing the technical barriers between researcher and analytic applications. At the same time, the spread of interactive hardware opens the way for working more directly and continuously with fewer technical interruptions and distractions than is the case with facilities that are currently available to most researchers. The development of relatively inexpensive, high-performance minicomputers and micros, moreover, has meant decline in the costs of computing with the consequence that more, and more diverse, research applications have become economically feasible. As yet, however, few researchers are able to capitalize effectively on these potentialities.

In several somewhat diverse ways the facility discussed here would contribute to realization of these advantages. The user assistance capabilities located on the interface computer described above would permit easy use of data analysis and managment software resident on

University of Michigan mainframe equipment. As a consequence of these interface capabilities, the technical expertise and familiarity required to effectively employ this software would be significantly reduced.

We believe, moreover, that these interface capabilities would serve as a prototype and would be adaptable for use at other installations. In this way the projected facility would contribute to more general reduction of the technical obstacles to use of empirical data and computational capabilities.

The facility would also contribute to more rational use of equipment, including micros and minicomputers, locally available to researchers. Using the central facility data, users could perform subsetting and merging operations, derived measures could be created, and intermediate analysis and data reductions produced. In this way small and specialized data files -- composed, for example, of derived measures or the results of intermediate analysis -- could be created and immediately transmitted to the researcher via the Telenet capability for local use on small machines. Where larger files or the configuration of equipment warranted, the files could be transmitted by a more traditional medium such as tape. Put somewhat differently, using this approach large-scale and demanding data processing and analysis (in terms of machine capacity or a requirement for specialized software) could be carried out using the central facility while detailed and specific analysis could use local equipment. One of the by-products of this aspect of the proposed facility, it should be added, would be progress toward development of technical conventions for transmitting data for use on smaller equipment, an area that is currently characterized by considerable chaos.

A third category of values and advantages centers on the potentials for sharing and communication that would result from the projected facility. Examples of these values have already been seen in the case of researchers who employ University of Michigan equipment remotely to work with large and complex data collections such as the National Crime Surveys. When difficulties are encountered in using these data, the network environment makes it possible for these individuals, either singly or in combination, to work directly with ICPSR staff members who have intimate technical and substantive familiarity with the data collection. In this way solutions are quickly found and results obtained. Similar advantages could be realized where other data collections are concerned.

The proposed facility would also make the Michigan teleconference system generally available. Through this system individuals with common research or other interests are able to establish specialized "conferences" to exchange and convey information. Individuals involved in collaborative research projects based at multiple institutions have also found the network environment to be an excellent vehicle for rapid exchange of tabulations and analytic results and for collaboratively developing analysis strategies and research reports. Users of microcomputers have especially great needs for such a national facility for exchange of information, particularly on matters relevant to their own disciplinary areas. A national facility would aid them in locating software suitable to their needs, and in translating data into formats

suitable for their particular machine. But most important, it would provide these individuals with a national, perhaps international, forum for contact with others with closely related problems and interests.

2. Expansion of Data Use

The proposed facility would contribute directly to improved, more effective, and more economical use of extant data resources and of data collected in the future in basic and applied research. It would also work directly to provide new ranges of potential users with effective access to data and computational facilities, and it would permit and encourage new and more diverse applications of these resources.

Stated in the most general terms, the facililty would work to equalize access to data and computational resources. The computational facilities available to academically based researchers are extensive, but they are also unevenly available. Some researchers still lack access to equipment of adequate size to work with large data collections, and many lack access to adequate data analysis and management systems particularly for large and complexly structured data collections. The proposed facility would work directly to remedy this situation. The facililty would also contribute to improvement of computational resources that are locally available to researchers since it would reduce the need to invest in little-used capabilities while increasing the viability of local use of minicomputers and micros.

The facility would contribute as well to more effective use of data and computational capabilities in the governmental and private sectors. As suggested above there is substantial interest in governmental agencies at the national, state and local levels in the use of data for purposes of policy development and assessment, for program management and evaluation, for planning, and for the more general purpose of monitoring social processes. Essentially similar needs are expressed in the private sector -- in this case, for example, for data and analytic capacities to assess markets, to devise and evaluate marketing strategies, and for purposes of longer-term planning. Many of the ICPSR data holdings are fully relevant to these needs, and increasingly the staffs of governmental and private agencies include individuals who are technically and methodologically equiped to employ data and who are, indeed, often familiar with ICPSR resources.

Despite interest, and despite recognized need for access to data for governmental and private sector applications, there are two major obstacles to effective use of ICPSR resources. Governmental researchers, policy makers and planners often have limited or no access to computational equipment and even when it is available, adequate software is not. Thus they are unable to employ data to serve governmental needs, and a similar situation often exists in the private sector as well.

The second obstacle lies in the time pressures that frequently confront potential data users in the governmental and private sectors. Needs for data and potential applications often cannot be anticipated in advance, but information, analytic results, data reductions, and the like are required rapidly once needs and applications are identified. Even when appropriate equipment and software are available, the delays

involved in acquiring and installing data cannot be tolerated. The consequence is that data are not employed despite their recognized relevance to issues and problems of concern.

The proposed facility would overcome both of these obstacles and allow effective use of ICPSR data in the governmental and private sectors. It would provide access to requisite equipment and analytic and management software to those without that access. At the same time it would provide a means of rapid access to relevant data without the time delays encountered through present modes of access. Thus it would substantially expand the range of data users and applications and allow the value of these data to be more fully realized.

3. Economic Values and Advantages

Several important economic advantages would be served by the proposed facility. One of these involves advantages to the community of colleges and universities, a second involves advantages to researchers and others who employ ICPSR data, and the third concerns cost pressures that currently confront ICPSR. Each of these issues can be addressed in turn.

First, colleges and universities throughout the nation are suffering severe financial stringencies, and it is predictable that these stringencies will continue and, indeed, increase for a number of years into the future. In view of this situation, it is probable that many institutions will experience increasing difficulty in supporting the costs of up-grading mainframe equipment to meet needs for increased computational capacity. Similarly, institutions will also face difficulty in acquiring new and more advanced software. One consequence of this situation may be that academically based researchers will suffer from lack of access to adequate computational power and capabilities, and their research and instructional applications will be constrained.

Here again, the projected facility would contribute in several ways to alleviation of this difficulty. In the most direct sense, the facility would provide an alternate source of access to computational equipment and capabilities. Thus it would both provide researchers with adequate computational power and reduce or slow the need in some instances for continual upgrading of local facilities. In the longer term, the facility would, we believe, contribute to greater specialization among colleges and universities in the development and maintenance of computational capabilities. It would look, thereby, toward reduction or focusing of expenditure of resources by hard-pressed institutions.

A second category of economic benefits would redound to the users of ICPSR data themselves. As noted above, using present modes of access, data must normally be acquired on magnetic tape and installed for use on local equipment. For most extended applications we expect that this mode of access will continue to be employed. It does involve, however, time delays and costs to the user or to his or her institution. As noted above, for several categories of applications of ICPSR data, these time delays and costs are neither tolerable nor necessary and work to limit data use. The proposed facility would eliminate delays and reduce costs

by allowing these applications to be carried out using the central facility without the need to transfer data to a local installation. Moreover, and as is discussed below, even in the case of individuals who wish to receive data for use at local installations, the facility would work to significantly reduce the time delays that are presently involved in acquiring data.

The third category of economic benefits concern ICPSR and its capacity to continue to provide low-cost services to its member institutions and other users. In recognition of the financial stringencies confronting academic institutions, ICPSR has not increased fees for membership since the 1975-76 fiscal year. Member fees, in other words, have remained constant for the past six years despite generalized inflationary cost increases in virtually all areas of ICPSR activity, despite cost pressures associated with steady and rapid increase in the volume of data requested and supplied, and despite an increased incidence of data requests that involve subsetting, merging, and other forms of complex, costly processing. Cost containment has been accomplished through comprehensive reorganization of the ICPSR and redesign and automation of the processes and procedures which it employs. (The latter step was made possible through an award for equipment acquisition from the National Science Foundation.)

The facility proposed here would allow a further step in this broad cost containment program. An element in the automation of ICPSR processes has involved development and implementation of an automated system for filling requests for data. Tape and other technical specification for member institutions along with technical specifications for ICPSR data collections are stored on-line. Through a few simple commands and the identification numbers of the requesting institutions and of the data, the ICPSR data services staff can quickly create elaborate setups to copy data collections -- or, to an as yet somewhat limited degree, subsets of data collections. These setups are then transmitted via a network link to the University's Michigan Terminal System for execution. Error checking is automatically carried out, records of the transaction are created and stored, and requisite forms and letters for transmitting the data are prepared with minimal further staff involvement.

This system has substantially reduced the labor, and hence the costs, involved in responding to requests for data. The facility proposed here would allow costs to be further reduced. Using the projected facility, individuals at remote sites could enter their own requests without intervention by the ICPSR staff. In this way, burdens on ICPSR staff would be reduced, increase in demand for data could be accommodated without increase in costs, and time delays in ordering and receiving data would also be shortened.

In general then, the proposed facility would have significant benefits in terms of costs, reduced time delays, and convenience of use of ICPSR data. These benefits would be realized both by academic institutions and others who employ ICPSR data and by individual users. At the same time the continuing goals of ICPSR of containing costs while maintaining fiscal viability and improving and expanding, rather than degrading, services would be served.

RATIONALE FOR THE NETWORK INTERFACE COMPUTER

The basic motivation for the development of the network interface computer is to be able to place a process between the user and the Michigan Terminal System (MTS), a process which assists, controls, or monitors the user. Such a process could provide many valuable services, including making tutorial and documentation aids available to the user while running, for example, SPSS. That is, the user could request tutorial assistance in getting SPSS invoked for MTS, so that a person already familiar with SPSS could make immediate use of it on MTS without having to decipher a body of documentation unique to that operating system. When the tutorial is a process working between the user and SPSS, it is possible to provide information and control in smaller, easier, interactive steps. A number of additional, highly useful processes are described in the next section: all rely on the proposed design approach allowing intermediary action between the user and the desired final computation task.

Another, important example of such an intermediary process would be one to help the user locate desired data. This process could provide aids for searching for the desired data and then provide information on the current physical location of the data for other process components which link the data and the software. Thus the user would not need to know a great many detailed points about data storage and format information. This also means the ICPSR can change the physical details of data storage without the cost of informing many users. It means that unauthorized use of data can be prevented. For data which is to be made available on only a limited basis, such as research materials restricted to a specific group of users, such a control process is very important and can be augmented with encryption procedures if desired. While various levels of access control facilities exist on most large computing systems today, and the ICPSR already makes use of the many such tools on MTS, the additional security which results from having an intervening process reside on a separate computing system is quite substantial. Thus the network interface computer provides a major advantage in data access both for the user and for the ICPSR.

A question that needs to be addressed is why the intervening process is placed on a minicomputer rather than directly on the Michigan Terminal System. The reason is that MTS, like many large timesharing systems, does not permit multi-tasking or inter-process communication within a job. The value of such a facility is well-recognized by users of such minicomputer-based timesharing systems as UNIX, PRIMOS, or VAX/VMS, where some form of pipelining of information or messages between processes on an interactive basis is supported in the operating system design. When this is coupled with the excellent network interfaces in the PRIMOS operating system on the ICPSR computers, a unique possibility for providing a user-support process emerges. The established software and large-scale data handling capabilities of the Michigan Terminal System may be made much more accessible and readily understood by the remote user, using the new minicomputer and networking capabilities to greatly enhance the mainframe system in a unique and innovative manner.

FACILITY DESIGN AND IMPLEMENTATION

As noted above, development of the facility proposed here will build upon resources already in place and work already accomplished. Advanced data analysis and management capabilities operational on University of Michigan or ICPSR equipment will be employed and no support for software development in these areas is requested. A Prime 350 purchased by ICPSR some three years ago and a Prime 750 acquired in 1980 with support from the National Science Foundation will be used for the developmental work and as the interface machine described more fully below. With the support of the National Endowment for the Humanities, bibliographic control is being gained over all ICPSR data holdings and will contribute to achievement of project goals. The facility will provide access to current data holdings of ICPSR and to data added to the archive in the future. Acquisition and development of data will continue at an enhanced rate in the future. Thus the facility will provide ready access to steadily expanding data resources. No support is requested here, however, for data acquisition or development. Moreover, as is also noted above, remote access to University of Michigan computational facilities and to ICPSR data are already technically feasible. Awards from the Bureau of Justice Statistics, the Administration on Aging and the National Institute on Aging have also allowed improvement of this form of access for specialized purposes and particular data collections.

Relevant to this immediate proposal are the existing networking capabilities of the ICPSR. The Prime 350 and 750 are linked together via Primenet using Node Controllers and a transmission rate of ten million bits per second. This network level has proven very efficient and reliable, and thus similar quality is expected when the Public Data Network level of Primenet is added by the ICPSR in September. This level of Primenet supports X.25 standard access to national networks such as Telenet. In fact, the development system used by Telenet is a Prime, which further increases the expectation that the interface will function well. However, the ICPSR will not connect directly to Telenet but instead will link to that national network through the Merit network at the University of Michigan. Merit is a network linking the educational computing centers at the University of Michigan, Michigan State University, Wayne State University, and Western Michigan University. Merit has recently finished an X.25 standard interface which is used to connect to Telenet and which will also be used to connect to Primenet. The use of Merit means that the ICPSR does not have to pay the full price of the Telenet connection. This also gives the ICPSR the benefit of pricing and service negotiations conducted on behalf of the entire Merit user community, which is substantial since Merit is one of the largest providers of service to Edunet. The Primenet to Merit connection will utilize a 19,200 bit per second link at the start. Merit is of course directly connected to the Michigan Terminal System. All of the networking capabilities just described will be in place before this project is begun, and no support for any of these is requested.

This proposal requests funding specifically to design, develop, and implement the software yielding a network interface computer. This software would be developed largely on the Prime 350, so that the initial testing period would cause a minimum of disruption to the normal flow of ICPSR staff work. When completed the system would be moved to the Prime

750, where it is anticipated that between five and ten remote users may be served while using no more than five percent of the system's resources. Since the system configuration can be controlled and the system belongs to the ICPSR, the needs of both the local staff and the remote users can be appropriately balanced to ensure necessary performance.

The heart of the network interface computer is software running on the Prime which takes the incoming commands entered by the user at a remote terminal, and scans and parses them to see if they should be passed through to MTS intact or if they require further action by other, auxiliary process components on the Prime. This main (scan and parse) process must be designed with a knowledge of which commands are acceptable and hence the initial implementation would explicitly support software such as SPSS, MIDAS, OSIRIS (three data analysis systems), CONFER (for teleconferencing), SPIRES (information retrieval), and the MTS Editor, the key systems needed by users. The main, intervening process on the Prime would always generate an on-line history file for each user session. This history could be examined to discover the source of a user problem. From these histories would be extracted summary information to be used in analyses of overall use patterns, typical places where users need aid, and other information relevant to the on-going evaluation and upgrading of the service to the user.

An auxiliary process likely to get frequent use would be one providing on-line assistance in the use of the software named above. The user could ask for help on any of the basic commands for each software package and immediately receive information on syntax and use. This would not require any break in the use of the package on MTS, so that if a user were in the midst of using MIDAS, for example, the assistance would be available from the network interface computer without any interruption to MIDAS on MTS. A similar auxiliary process would provide a tutorial service to help the user in initial use of a software package, with the tutorial actually invoking the package so that the user is given a very realistic, hands-on session. The way these aids were used would be identical for the various packages, so that the user would have a consistent method for gaining information about the software.

Learning about the data resources is as important as knowing the software. Thus an auxiliary process would be provided that would help the user search among key data files for those meeting the user's needs. This would be a complex process, interconnecting a variety of elements. A major element would be an interface to the SPIRES retrieval system on MTS, through which the user could search for desired data. Part of this capability is already being done by ICPSR staff with funding from the National Endowment for the Humanities; this portion of the system would allow a search for data collections based on general characteristics such as country, time period, nature of sample or collection frame, and similar characteristics. A second component of this information base would be created with the support proposed here: the machine-readable codebooks for the major ICPSR data collections would be indexed at the variable level by a straightforward, automated process. This would involve stripping out a set of unimportant "stop words" and then building an index to the data on the remainder, utilizing SPIRES for the searches. This would leave a larger search base for the user than a labor-intensive

hand-coding effort, but it would give a desirable mix of openness and low cost. The monitoring of user experience with these searches should be especially helpful in understanding how this capability should evolve.

Another portion of the data location process is determining the physical location of the data and the conditions of access. This process would have control of which users could use the data, including charging for use outside the ICPSR membership where appropriate, or limiting access to specified users. Whenever any request was made for data, this process would perform the needed checking and return the relevant information. Thus if a MIDAS user asked to have specific data read, this process would verify user rights and then make the data available to MIDAS without any further intervention or specification by the user, thereby greatly simplifying the user's commands.

Users would be given a capability for defining their own names for commands and constructing command macros, where a simple user command is expanded into a complex series of commands to the system. This facility would be helpful where a user works with several different systems and would like to make the commands as much alike as possible. As the user becomes familiar with the system and performs highly similar tasks over and over, the macro capability offers real productivity gains.

There are times when there is just no substitute for the help of another human being. This is especially true for new users or even experienced ones who are unable to make progress or get around a problem because they are locked into the wrong concept or model of what is happening in the computing system. These people can benefit from the kind of review of their thinking and posing of alternatives that only another person can provide. Thus an important auxiliary process would be one in which an ICPSR staff member could have a terminal connected essentially in parallel with that of the remote user. This would also give access to the job history file, so that the expert counselor could review previous actions by the user.

A process which would tie into that for data searching but which already exists as a primary system on the ICPSR Prime is the data service request generation system, called FAST. No funding for this system is proposed here; the software and information base already exists. FAST could be used by ICPSR members to enter a data request from a remote terminal. This would save the delays of the mail, would provide the written specification and authorization that is missing in a phone call, and would further reduce the ICPSR staff labor component in handling requests. When coupled with the searching capabilities, plus the general resources of MTS, and the modest beginnings of file transfer to microcomputers noted below, this is an important step in expanding the modes of archival access.

The ICPSR is currently working to gain access to commercial software and in other cases implementing software aimed at ready use of microcomputers for word processing, budgeting and other forms of spreadsheet manipulation, simple data analysis and management, and smart terminal emulation. Many of these capabilities would also run on minicomputers or larger systems. The microcomputers, however, offer the most exciting potential for giving the user a very responsive computing

environment. Some of the software, for example, offers the potential of having MTS generate a collection of frequency tables or correlation coefficients which could then be quickly and cheaply transmitted over the network for manipulation and study at length on a microcomputer. No funding for any of this software is sought in this proposal, with the exception of implementing a simple mechanism for moving ordinary character files containing text or data between a user's microcomputer and the network interface computer.

While the general tone of the above discussion is one of positive belief that all the processes will work well and the facility will receive enthusiastic use, it is certainly true that there is much about the proposed network interface computer that is innovative and hence must be regarded as experimental. For example, it is expected that all the processes, particularly the main (scan and parse) task, can be made efficient enough that the remote user notices no added delay. Certainly the history file, especially the extracted usage information, would be very important in evaluating what is happening and finding ways to make the system a better fit for real user needs. That data base may be an important addition to the ICPSR archival holdings.

FISCAL AND TECHNICAL VIABILITY

Proposals to create new facilities or to extend existing facilities must necessarily confront questions of fiscal and technical viablitiy. In the present case the former questions concern whether the facility can be sustained on the basis of its own resources and/or charges for use without becoming a continuing burden on funding agencies. The latter questions concern whether technical capacities and capabilities are adequate to sustain anticipated use and meet the demands of growing use.

The experience of facilities that provide remote access capabilities sometimes seem to involve a form of "Catch 22." Charges are held at low levels to attract use, but revenue is inadequate to sustain the facility on a self-sufficient basis and continuing reliance must be placed on other sources of support. Alternatively, charges to users are set at high levels in the hope of generating revenue sufficient to sustain the facililty. The consequence is, however, that use of the facility is constrained because of high costs and financial viability is none-the-less threatened, or use is confined to only the most well-supported researchers, to the private sector, or to governmental users.

The facility described here would escape these difficulties. ICPSR is largely self-sufficient on the basis of income from member fees and from charges assessed non-members for provision of data and services. Grants and contracts are frequently received to support special projects, and awards have also been received to support development of ICPSR capabilities. It remains the case, however, that ICPSR is self-sufficient in its operations. With developmental work completed the projected facility would not add to ICPSR operating costs. Rather, it would work in various ways to reduce operating costs, and in fact development of the facility is an element in a continuing cost containment program.

As noted above individuals requesting data would be able to, in effect, fill their own data requests remotely thus reducing demands upon ICPSR staff. Similarly, with the facility in place some users of ICPSR data would employ data remotely rather than requesting copies for local use, and costly ICPSR staff work on subsets and combinations of data collections would be diminished. Thus the remote access capability would work to offset cost pressures associated with rising demand for data and related services. The facility, as suggested above, would also attract use in the governmental and private sectors and among non-members more generally. Income from this use would yield additional revenue which would provide at least partial support for further development of the facility as required in the future.

Since the proposed facility would not increase operating costs, and since the facility will employ resources that must, in any event, be in place for ICPSR operations, high use levels will not be necessary to sustain it. We believe, however, that use of the facility would grow rapidly. The user base for the University of Michigan computational system is large, and as a consequence, charges for use of the system are low. The added value of the network interface computer is estimated as increasing the overall cost to user by one to two dollars per connect hour.

It is likely that the ICPSR membership would provide a major portion of the initial use of the facility particularly in the case of larger data collections such as the data from the 1980 Census of the United States. Individuals affiliated with member institutions would need only defray the direct costs of employing University of Michigan computational equipment plus Telenet costs. Except in special cases involving ICPSR staff in extensive data processing or consultation, no charges beyond the annual membership fee would be assessed for data access to ICPSR by such individuals. It is also likely that the facility would attract substantial use from the governmental and private sectors. It would be necessary, of course, to assess a data access charge in the case of such users. It would obviously not be equitable to allow access to data by individuals at non-member institutions on the same terms as to individuals at member institutions that have capitalized the development of data and related resources and that support ICPSR on a sustaining basis. Similarly, it would be necessary to charge such users for any consultation services provided. While these charges would not be prohibitive, they would constitute a significant source of revenue to sustain the facility.

The second set of questions concern technical viability, particularly whether existing equipment would become saturated with the consequences of extended user delay and inability to employ the system. Here again, there is every reason to believe that these eventualities would be avoided. The Prime 750 would support five to ten simultaneous remote users in addition to consultants, as discussed above. The need for consultants would also tend to diminish with time with the consequence that this interface machine could support additional simultaneous remote users. It is possible, although unlikely in the immediate future, that use of the facility could exceed this level. In that case, some scheduling of use could occur and would relieve strain on the interface machine. Moreover, should use of this level develop, it

would also produce income to help defray the cost of increasing capacity.

The proposed facility would, of course, impose additional demands upon University of Michigan equipment. This equipment is, however, of very large capacity, and the University has a long and enviable record of expanding computational capacity to meet increasing user demand. The projected facility would also produce revenue which would aid in expanding equipment as need occurred. The University of Michigan system, moreover, is directly linked through the Merit network to other large-scale computer systems located at several Michigan universities. Thus it would be technically feasible to employ these machines as a part of the projected facility should that be dictated by user demand.

It appears, therefore, that the projected facility would be technically viable for an extended period into the future. It is also clear that the facility would be fiscally viable on a self-sustaining basis even at modest use levels. Thus even though the network interface computer constitutes an innovative and experimental effort, the practical value of the resultant system is assured.

EDUCATIONAL ACTIVITIES

THE 1980 ICPSR SUMMER TRAINING PROGRAM

The eighteenth annual ICPSR Training Program in Quantitative Methods of Social Research was held in Ann Arbor from June 29 until August 20. The eight week Summer Program is divided into two four-week sessions; and, while many courses offered during the first session are pre-requisites for second session courses, it is not difficult for a participant who can attend only one of the terms to define a schedule of courses consistent with his/her background and interests in social methodology. Total enrollment in the 1980 Program was 257 participants, distributed as follows:

first session (only):	73
second session (only):	54
both sessions:	130

As in previous years, about one-fourth of the participants were post-doctorate visiting scholars; a few were non-academic researchers or advanced undergraduates, and the remainder were graduate students.

Academic Status

visiting scholars:	61
graduate students:	169
other:	27

The largest proportion of participants were associated with political science departments; however, the number of sociologists attending the 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.

Department Affiliation

Political Science	70	Social Work	9
Sociology	66	Education	13
History	2	Public Health	8
Psychology	23	Criminology	5
Economics	9	Urban and Regional Planning	8
Business Administration	11	Other	33

Although most participants, and certainly those who were designated Visiting Scholars, chose to audit courses, more than one-third enrolled in ICPSR courses for credit granted by The University of Michigan.

Registration Status

visiting scholar:	61
auditor:	102
credit:	94

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 $12,000 for seventeen research scholars were provided by a grant from the Law Enforcement Assistance Administration (LEAA). The Administration on Aging (AoA) supported thirty-six 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 $27,000. 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. In addition fifteen scholars were supported by the Pacific Asian American Mental Health Research Center. This stipend support amounted to $12,000. Finally, The University of Michigan's generous policy of granting Visiting Scholar status to postdoctoral scholars enabled almost one-fourth 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).

The Summer Program instructional staff numbered thirty-one individuals, of these twenty-two held faculty appointments at Consortium member universities. The 1980 staff was drawn from nine different disciplines at twenty-one separate universities in the United States, Canada, and Europe.

Finally, the 1980 Program consolidated a set of curricular revisions which were initiated in the 1979 Program. 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 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 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 participant's university bases.

1980 ICPSR TRAINING PROGRAM IN THE THEORY AND TECHNOLOGY OF SOCIAL RESEARCH

FIRST TERM (June 30-July 25)

Time	Lectures
9 am - 10 am	Elementary Mathematics for Social Scientists (50)* R.W. Hoyer (U. of Michigan)
	Mathematics for Social Scientists (100) James Dowdy (West Virginia U.)
10 am - 11 am	Dynamic Analysis (60) Philip Converse (U. of Michigan)
	Formal Theories of Social Research (50) Nicholas Miller (U. of Maryland, Baltimore)
11 am - 12 pm	Evaluation Research Methodology (25) Richard Shingles (Virginia Polytechnic Inst.)
1 pm - 2:15 pm	Introduction to Computing (June 30-July 2) (170) Susan Albert (U. of Michigan)
	Introduction to MIDAS (July 3,7,8) (170) Michael Hawthorne (U. of Michigan)
	Workshops
10 am - 12 pm	Quantitative Historical Analysis II (4) J. Morgan Kousser (California Inst. of Technology)
	Empirical Research Issue in Aging (39) John Nesselroade (Pennsylvania State U.)
2:30 pm - 4:30 pm	Introduction to Statistics and Data Analysis I (60) Shirley Dowdy (West Virginia U.) Martha Abele (U. of Michigan)
	Introduction to Linear Models (29) Karen Rasler (Florida State U.)
	Intermediate Linear Models (25) Steven Jackson (Cornell U.)
	Intermediate Linear Models (29) Duncan Snidal (U. of Chicago)

Advanced Linear Models (19)
Douglas Rivers (Harvard U.)

Applied Multivariate Analysis (32)
Jae-On Kim (U. of Iowa)

* Number of participants.

SECOND TERM (July 28-August 22)

Time	Lectures
9 am - 10 am	Data Analysis and Public Policy (40)* L.S. Mayer (Wharton School, U. of Pennsylvania)
1 pm - 2:15 pm	Critiques of Social Research (August 4-August 15) (20) Stanislav Andreski (U. of Reading)
	Dynamic Models of Political Economy (25) William Keech (U. of North Carolina, Chapel Hill)
	Introduction to Computing (July 28-July 29) (50) Susan Albert (U. of Michigan)
	Introduction to MIDAS (July 30,31, August 1) (50) Michael Hawthorne (U. of Michigan)
	Introduction to APL (July 28-August 6) (40) John Fox (York U.)
	Introduction to ECTA (August 4-August 6) (40) Vasantha Kandiah (U. of Michigan)
	Introduction to SPSS (August 18-August 20) (50) Jon Sell (U. of Michigan)
	Workshops
9 am - 5 pm	Quantitative Analysis of Asian American Populations (July 28-August 8) (15) Angelina Li (Illinois Bureau of Employment Security)
	Quantitative Analysis of Crime and Criminal Justice (17) Alan J. Lizotte (Indiana U.)

10 am - 12 pm	Advanced Linear Models (7) Robert Stine (Princeton U.)
	Causal Models (37) John Fox (York U.)
	Experimental Studies of Social Phenomena (18) Marilyn Dantico (Florida Atlantic U.)
	Exploratory Data Analysis (15) L.S. Mayer, Peter Tittmann (Wharton School, U. of Pennsylvania)
2:30 pm - 4:30 pm	Models with Unmeasured Variables (6) Kenneth Bolen (General Motors Research Laboratories)
	Applied Nonparametric Statistics (July 28-August 8) (17) R.W. Hoyer (U. of Michigan)
	Discrete Multivariate Analysis (29) Graham J.G. Upton (U. of Essex)
	Intermediate Linear Models (10) John Pothier (Yale U.)
	Intermediate Linear Models (8) Geoffrey Fong (U. of Michigan)
	Introduction to Statistics and Data Analysis II (40) Shirley Dowdy (West Virginia U.) Martha Abele (U. of Michigan)
	Multi-level Analysis (August 11-August 22) (8) Leigh Burstein (UCLA)
	Time Series Analysis (25) Greg Markus (U. of Michigan)

*Number of participants

ICPSR TRAINING PROGRAM
RECORD OF ATTENDANCE

Year	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
1980	94	102	61	257

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, and contribute 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

Over the last several years 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. A formal bid document was prepared; a copy was included in the last Annual Report. 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 acquistion. 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. More detail on the outcome of the bidding process and the basis for selecting a Prime system may be found later in this section in the document entitled "Justification to the University of Michigan for Minicomputer Selection".

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.

The Prime 750 and the Zenith Z-89's were installed and put to use by the ICPSR staff starting in September, 1980. The Prime 750 was also linked to the earlier Prime 350 using the Primenet network. This provides very effective communication between the two systems, allowing them to be treated almost as one larger system. The overall performance and reliability of this array of equipment during the year was outstanding. Almost every office has a Zenith Z-89, providing ready access for every staff member from the Executive Director on down. With this level of hardware it was possible to fully utilize the available base of software for archival processing, servicing, word processing, and administrative support, to dramatically improve staff productivity.

Low-cost Microcomputers

ICPSR staff have been monitoring the potential applications of microcomputers since they first emerged as hobbyist machines over five years ago. Careful evaluation of the best of the available systems has been an on-going activity, including work with the Apple II with funding assistance from the Law Enforcement Assistance Administration and the Bureau of Justice Statistics, and work with a Terak 8510/a and the Zenith Z-89's with funding form the National Science Foundation.

The most recent work has been based on a system from a new company, Convergent Technologies. This system was acquired late in the year with NSF funding, to begin development of support for the ICPSR staff on systems of lower cost than the Prime minicomputers. This would allow use of the same software currently running on the Prime's, so that expansion of computing capacity for the ICPSR could be done at minimal increments in cost. More of the rationale is presented in the document which follows, entitled "Justification to the University of Michigan for Selection of a Convergent Technologies System".

The Convergent Technologies system was installed just before the end of the fiscal year. Experience with it during this brief period was excellent, although there were some shortcomings suspected in the performance of the FORTRAN. Cumulative experience with the Zenith Z-89's also proved they were very solid and capable systems. A report on the many different factors to be considered in selecting a microcomputer will be provided to ICPSR members early in the coming year.

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 $6.75 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.

As a major step toward making remote network access much easier, a proposal was developed requesting support from the National Science Foundation for software which would create a "network interface computer". More specific information is given in the External Funding section of this Report, in the portion entitled "Development of Facilities for Remote On-Line Access..."

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 the following section. As a convenience for ICPSR members, special pricing for copies of OSIRIS IV has been arranged with the Survey Researh Center.

Hierarchical Data Handling

The Computer Support Group of the Center for Political Studies has been developing new tools for analyzing logically complex data collections. Such data often have a large number of variables and cases, and may 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. The OSIRIS Hierarchical Data Structures (OHDS) has been developed to allow the user to define the logical relationship existing between the various data elements and build 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.

JUSTIFICATION TO THE UNIVERSITY OF MICHIGAN FOR MINICOMPUTER SELECTION

We have chosen the Prime 750 after evaluating the alternative proposals from Digital Equipment Corporation (DEC) for a VAX 11/780 and from Systems Industries for specific peripherals for a VAX.

The exact dollar amounts of the two bids may be compared by looking at the configurations proposed by the two main bidders, ignoring the networking capabilities - which I will review later.

The Prime bid was as follows:

-Prime 750 CPU, 2 million bytes memory, 16 line terminal controller	$171,000
-300 million byte disk and controller	42,000
-2nd and 3rd 300 million disk and controller	66,000
-1600/6250 bpi 75ips tape	45,000
-32 line terminal controller	8,000
-FORTRAN 77	4,500
-Source Level Debugger	1,500
	338,000
less discount	56,216
	281,784

One qualifying note about the Prime bid is that they will initially deliver only a 1600 bpi tape, and will exchange it for a 6250 around the first of the new year.

DEC's bid:

	list	after discount
-VAX 11/780 1 million bytes memory 176 million byte disk 1600 bpi 125 ips tape 8 line terminal controller	217,000	199,976.
-1 million bytes add-on memory	18,500	17,020.
-2nd and 3rd 176 million byte disks	68,000	62,560
-32 line terminal controller	7,700	7,084
-FORTRAN IV PLUS	5,000	4,600
-FORTRAN 77 (est.)	5,000	4,600
-DEC's Computer Special Systems interface for 6250 bpi tape drive	34,250	34,250
-6250 bpi tape drive, formatter diagnostic box from STC (est.)	40,000	40,000
	397,250	371,746

DEC would deliver the above configuration by October (PRIME will deliver by the end of June, 4 months earlier), but only if we stick to 176 million byte disks. The RFP specifies a total of at least 750 million bytes of disk, which to be cost-effective means 300 million byte disks. To obtain such disks from DEC would mean a still later (unspecified how much later) delivery. Furthermore the 176 million byte would still be required as the system and paging disk. Since that is the critical disk in terms of system availability, a practical configuration would have to include two 176 million byte and two 300 million byte disks; the extra disk would cost another $31,280, making the total for such a VAX system $403,026.

This is not the end of the problems though. One quick thought was to sell the 1600 bpi tape drive on the used maket, possibly getting $20,000 for it. Unfortunately DEC will not quarantee that the 6250 bpi drive is supported by the VMS operating system, and in any case will be distributing its own software updates for the 1600 bpi drive. Thus we must retain both tape drives.

The VAX system's space, electric, and air conditioning requirements are such that it would cost at least $25,000 more than the Prime to install. The extra units on the VAX also add about $500 a month in maintenance charges, or $6000 each year. Finally, there is the specification in the RFP that source code for the system be provided. DEC is asking $30,000 for VMS source code, plus $12,000 for the BLISS compiler to manipulate that code; in any case DEC will not guarantee that we can regenerate VMS based on the source code provided. Since we got very poor system's analyst support from DEC during the evaluation process, I feel it would be a serous risk for us to forego having source code. In total, if one incorporates all costs for a VAX to compare with the Prime 750, the VAX (including a 5 year maintenance difference) would cost us $500,026.

This also does not take into account that Prime has Primenet capabilities available for doing an excellent job of networking the 750 and our current 350 into a highly unified system. Primenet also supports HDLC and X.25 interfaces which may be of major help in our interfacing to a campus network. In order to provide this networking support, our current 350 must be upgraded, and Prime includes this in their bid, adding $42,100 for hardware and software. The overall effect is to significantly expand the useful power and lifetime of our Prime 350, for beyond what an equivalent investment in developing networking capabilities far the VAX would yield.

In comparing software available on the two systems, the major difference we found was that Prime's symbolic debugger is vastly superior to that on VAX/VMS. The command language capabilities of VMS are superior to those of Prime's PRIMOS at this point, but changes in PRIMOS will narrow the gap next year.

As a side comment, both operating systems are really very good and many users would find them similar in quality to the Michigan Terminal System.

We benchmarked both the Prime 750 and the VAX 11/780, using facilities both vendor's provide in which a separate computer drives the machine under test, emulating the desired number of terminal users. Thus we were able to check the performance of both machines with 20, 30, and 40 user terminal loads. One of the main benchmarks was based on an existing, heavily used program which we converted to run on the VAX. This program does a lot of disk and terminal input-output, and is big enough to cause appreciable paging. This program used twice as much CPU time on the VAX as on the Prime. On the other hand, programs which made little use of VMS resources tended to be 1.5 to 2 times faster on the VAX than on the Prime. One benchmark routine was found to be 10 times slower on the VAX: it involved disk output and was written in what seemed like the manner a normal, careful person would follow. We now know that an assembler routine would have been better here: one shortcoming of VMS is that assembler must be used to get to low-level system functions whereas under PRIMOS they can be reached directly from FORTRAN. The overall effect of this one failure with VMS was that a much higher CPU load was imposed on the VAX by our benchmark than on the Prime. Thus we are not in a position to compare overall response times for interactive users. Our experience on both systems leads us to believe overall performance of VAX/VMS is no better than on the Prime 750 with PRIMOS, but we have no hard data.

What I can say is that the Prime 750 performance exceeded our expectations and fully meets requirements. Given the Prime is much less expensive and can be delivered much sooner, it is the obvious choice. To further solidify the choice we have negotiated a maintenance contract amendment with Prime which provides faster response time on service and incorporates a significant penalty if equipment is not repaired within a day and a half.

A brief comment about the System Industries bid is in order. The use of System Industries 300 million byte disks, 6250 bpi tape, and another vendor's 1 million byte memory add-on could save us about $50,000 in purchase costs, but would add some maintenance and operating system uncertainties. This is not enough of a difference to change the final decision.

JUSTIFICATION TO THE UNIVERSITY OF MICHIGAN FOR SELECTION OF A CONVERGENT TECHNOLOGIES SYSTEM

This is a relatively lengthy memo on this proposed equipment acquisition for the Inter-university Consortium for Political and Social Research (ICPSR), so that the full rationale may be put forth for your consideration. We have put substantial effort into this selection, but there may be considerations or matters of emphasis that we have missed. We would appreciate the reactions of others.

We are requesting approval for the acquisition of a Convergent Technologies microcomputer system costing $23,244, plus an optional acquisition of up to $10,000 in additional items from the same vendor.

The motivation and financial support for this acquisition come from an NSF equipment grant awarded to the ICPSR one year ago. The stated purposes for such an acquisition under the NSF grant involve provision of state-of-the-art microcomputer capabilities that will support the software ICPSR currently has running on the Prime systems (also acquired in part by this same grant), thereby forming a basis for meeting future growth of computational needs by ICPSR through incremental addition of microcomputers. It was also hoped that the microcomputer system would form the basis for establishing exportable data management and analysis capabilities that could provide more usable and economical computing power for ICPSR members and others.

To meet these stated objectives the following are some of the key factors in our considerations.

1. The address space available must be 500,000 bytes or better, with some form of paging or segment swapping provided in the operating system. This is to allow easy conversion of existing Prime software, and to simplify future software development.

2. FORTRAN must be well supported, since that is our primary programming language. A symbolic debugger for FORTRAN is also desirable.

3. The operating system should support a multi-user environment for shared access to disk space, printers, and networking to foreign machines.

4. The operating system should be structured for both programmers and users in a manner that eases use in our multi-user environment and aids in the export/import of software. This implies that the operating system either look very much like PRIMOS/MTS, or that it allow the construction of tailored user environments that achieve that same end, or that it be a very popular system such as UNIX.

5. The above imply a need for computational power that can only be met by one of the new 16-bit micros, the Intel 8086, the Zilog Z8000, or the Motorola 68000.

6. It is also obvious that such a microcomputer system must include a fast hard disk such as one of new, low-cost Winchester technology devices. This is important for speed and storage capacity as well as reliability under the prospective work load.

7. Given the pace of hardware development it is desirable that the system have a modular construction that simplifies upgrading at low cost, and that encourages use of devices from alternative vendors. Such a design also has advantages when servicing is needed.

8. To provide the highest quality interaction for the user a memory-mapped video, with all-points-addressable graphics of at least 500 by 500 points, is desirable. This is a lower-priority consideration than the others.

9. The initial cost and the incremental expansion cost of such a system should both be as low as possible. For a minicomputer system of the class of our Primes the minimum start-up cost is about $100,000 for everything including disk space, tape for backup, 8 user terminals, and system software. This is about $12,500 per terminal. By tripling the start-up cost with a larger Prime the cost per terminal comes to about $10,000. If such a big installation is below saturation, it might be argued that the incremental cost of adding another terminal is only about $2,000, but that is effective only for a few increments between a well-utilized system and a saturated one. The goal with the microcomputer system is to be well below the $100,000 for start-up, below $10,000 as the per-terminal cost, and preferably with the per-terminal and incremental cost and power in a linear correlation with each other.

Our examination of the marketplace has identified only three companies which can provide a reasonable match to the above considerations. These are Apollo, Onyx, and Convergent Technologies. These are all companies in existence for less than two years, with staff coming from other leading vendors. Each will be discussed in turn.

Apollo is a company started by many of the technical people who were originally responsible for the Prime minicomputer series. Apollo systems are designed to provide very high quality terminals/workstations, with a Motorola 68000 in each, and a network to share access to disk, printer, etc. It appears to be a very well thought-out design, virtually a Mercedes in kind, but with prices to match. Each user's workstation costs $24,000 plus $23,000 for a central disk and tape support system. At these prices the system is far out of bounds on price. However, the basic hardware could be offered at a price meeting our guidelines, so an important question has been whether these systems will come down in price very quickly, which is determined by Apollo's marketing strategy. Our contacts with them do not offer much expectation of this, and they are not willing to offer any special prices to us now to get us into these systems. Thus the Apollo system is indicative of what is possible with the technology, but fails to meet our cost requirements.

Onyx was started by people from Zilog and hence uses the Z8000 microprocessor. It is designed as a classic small time-sharing system, utilizing the UNIX operating system. It offers a 10 Megabyte disk and cartridge tape backup device in a small desktop cabinet about the size of two file drawers set side-by-side. It is almost a desktop PDP 11/45. Hardware reliability is generally reported as excellent, with production starting about 9 months ago. Because it offers UNIX in a low-cost, compact, reliable box it appears likely to be very popular.

Are there any problems? Unfortunately, yes. Several individuals contacted as references have provided essentially the same feedback: the Onyx is slower than expected. Part of the problem is the disk support which can read only every sixth sector during rotation, reducing the transfer rate. This hurts both data transfers and program swapping. Another problem is terminal character interrupt handling, where transmission to one 9600 baud terminal can completely tie up the machine. Furthermore, the machine is evidently ill-behaved and actually loses characters as its capacity is exceeded. Since we transmit entire screens of text from our terminals at these speeds, this would require some radical change in how we support our users.

The above hardware problem is made more serious because the hardware is not modular. It is essentially a big, single-board design. Thus when hardware corrections of the magnitude needed take place, the cost of upgrade will be perhaps half of the overall acquisition cost. This lack of modularity is a more general concern in terms of keeping the system state-of-the-art for an extended period.

Two software problems exist with the Onyx. The UNIX provided by Onyx is not an adequate match in features or reliability for the UNIX commonly found in a DEC environment. A much improved version of the Onyx UNIX is to be marketed by Interactive Systems. However this is projected to add about $11,000 to the cost, and compounds a second software problem. Neither version of UNIX has a FORTRAN at present. We have located one independent supplier who will offer one for the Onyx system, perhaps in the next month. The FORTRAN from Interactive Systems will not be available for 6 to 12 months. Neither is projected as having a symbolic debugger. Thus availability, performance, and price of key software components must be a major concern.

A further concern arises from our contact with Onyx. They have not been very good at responding to our questions, and their current documentation for their hardware and software is not very extensive.

The pricing from Onyx is as follows. A local Onyx dealer will provide the system at a 10 per cent discount, or about $22,500 for a system with 512K bytes of memory, 10 Megabytes of disk, cartridge tape, and UNIX. Interactive Systems will provide the same system except for an 18 Megabyte disk for $33,000. If one assumes either system supports a maximum of 4 terminals (costing another $2,000 each), then the per-terminal cost of the maximum system is either $7,625 or $10,250, respectively.

Thus the Onyx has a great deal of promise, but many specific details are a serious problem at present.

Convergent Technologies is a company started by senior people from Intel, along with a software group largely from Xerox PARC and manufacturing people from Hewlett-Packard. They have done an amazing amount in a short time. The systems' overall architecture is very much like the Apollo with one (Intel 8086) microprocessor per user workstation. a network tie to a central disk, and so forth. The have excellent documentation on all parts of the system. Contact with their people has been uniformly impressive.

We have seen one of the systems in operation in Detroit. It is of highly modular construction. It also includes interface slots to the Intel Multibus, offering an important path for alternative hardware. We were not able to see FORTRAN in use because this has just been delivered (by Microsoft). It does have a symbolic debugger.

One of the people contacted as a reference for the Onyx is going to use Convergent Technologies systems for future work, and as part of this intends to get UNIX running on this hardware. Whether this will happen is of course not certain, but he has been using UNIX commercially for 6 years and appears capable of doing it. Another reference we have is to a company in Arizona that currently offers commercial packages on Prime systems and plans to convert all of them to run on the Convergent Technologies machines.

Another small feature of these machines is that an IBM 3270 emulator is available for $1,500. A quick check indicates that it should be possible to use this system to access Data Systems Center.

Convergent Technologies is very interested in selling us a system. The specific configuration proposed would start with one central Master Workstation with a 34 by 132 character screen, 256k bytes of memory, a 10 Megabyte disk, and a floppy disk for backup. To this would be added three Application Workstations, each with a 27 by 80 screen, one with 256k memory, two with 128k memory. Each workstation has its own 8086 microprocessor. The cost of this would be $23,244 which is about 35 per cent off a list price of about $35,000. The cost per terminal is thus about $5,800 with the discount, or $8,750 without it. I believe we would stand a good chance of maintaining that discount, especially if we provide some interesting software and visibility for the system.

I do not have a price sheet which allows me to be specific, but the start-up and incremental costs of growth with the Convergent Technologies system appears to be lower than for the Onyx.

Problems? One is that they do not yet offer as good a disk backup device as could be desired. A second is that while they do have a character graphics facility, the full bit-map capability is only a promise for a year hence. A third is that they are a new, small company. However, they are doing a lot of things right, and they look to me as though they will succeed.

Summary

The Convergent Technologies system seems a very good match to our needs. The two most serious problems are ones of uncertainty. Will they prosper? They seem to me as good a propect as either of the others we've considered. Is the current lack of UNIX a problem? Given the quality of their operating system and the prospect of UNIX becoming available, it does not seem too serious a problem. Thus I see it as a sound decision to proceed with the acquisition of a Convergent Technologies system as a state-of-the-art basis for our work. I hope you concur.

ORGANIZATION AND ADMINISTRATION

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1965-1966
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1962-1963
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State University of New York-Geneseo	Ann Young
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University of Wisconsin-Milwaukee	James Gibson
University of Wyoming	Oliver Walter
Yale University	JoAnn Dionne

ICPSR MEMBERSHIP REPORT

SUMMARY OF INSTITUTIONAL AND GROUP AFFILIATIONS 1980-1981

Category A Affiliates	85	
Category B Affiliates	43	
Category C Affiliates	3	
Category S Affiliates	9	
Total Institutional Affiliates		140

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	
Southwestern Regional Federation	9	
Virginia Federation	2	
Total Federated Institutions		60

National Memberships:

Australian Consortium for Social and Political Research	19	
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		47

TOTAL INSTITUTIONAL AND NATIONAL AFFILIATES..... 247

1980-1981 ICPSR COUNCIL AND STAFF

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Aage R. Clausen, Ohio State University, Chair
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Ruth S. Jones, University of Missouri, St. Louis
Lawrence LeDuc, University of Windsor
Murray G. Murphey, University of Pennsylvania
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Robert R. Beattie, Archival Assistant Director
Christopher A. Innes, Archival Assistant Director
Santa A. Traugott, Archival Assistant Director

Deborah Alper-Research Assistant
April Bates-Research Assistant
Hugh Battley-Procedures Analyst
Maia Bergman-Research Assistant
Anne Burns-Data Archive Specialist
Jo Ella Coles-Research Assistant
Ray Farha-Research Assistant
Joan Fisher-Secretary
Joel Gordon-Coding Analyst
Patricia Green-Data Archive Specialist
Lynne Gressett-Research Assistant
Christine Guzorek-Coding Analyst

Joyce Hamrick-Coding Analyst
Vicki Hartman-Research Assistant
Laurie Howland-Secretary
R. E. Iwirtzt-Research Assistant
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Martha Love-Research Associate
Eric Mackey-Coding Analyst
Maria McFarlin-Reserch Assistant
Patricia Maurer-Secretary
Debbie Moore-Coding Analyst
Susan Nichols-Coding Analyst
Jane Rafferty-Coding Analyst
Veronica Roamanow-Coding Analyst
David Schreiber-Research Assistant
Trish Schwagmeyer-Secretary
Dan Sharphorn-Graduate Student Research Assistant
Ruth Wasem-Graduate Student Research Assistant
Verna Washington-Data Archive Specialist
Wendell Willacy-Research Assistant
Susan Wyman-Research Assistant

Summer Program

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Laura Johnstone, Senior Secretary
Lynda Pinto-Torres, Secretary
Christine Hart, Secretary
Beatrice Ellis, Secretary

Instructors:

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Kenneth Bollen, General Motors Research Institute
Leigh Burstein, University of Califoria, Los Angeles
Philip E. Converse
Marilyn Dantico, Florida Atlantic University
James Dowdy, West Virginia University
Shirley Dowdy, West Virginia University
Geoffrey Fong
John Fox, York University
Robert Hoyer
Steve Jackson, Cornell University
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Jae-On Kim, University of Iowa
J. Morgan Kousser, California Institute of Technology
Angelina Li, University of Illinois, Chicago Circle
Alan Lizotte, Indiana University
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Lawrence Mayer, University of Pennsylvania
Nicholas Miller, University of Maryland, Baltimore
John Nesselroade, Pennsylvania State University

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Karen Rasler, Florida State University
Douglas Rivers, Harvard University
Richard Shingles, Virginia Polytechnic Institute
Duncan Snidal, University of Chicago
Robert Stine, University of Pennsylvania
Peter Tittman, University of Pennsylvania
Graham Upton, University of Essex

Computer Counselors:

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Vasantha Kandiah
Jon Sell
Robert Dedrick
Cathy Johnson
Bradley Martin

Library

Walton Brown
Timothy Berka
Phyllis Brooks
David Dotson
Mark Mihanovic
Melinda Stewart

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Sylvia Barge, Senior Programmer Analyst
Tina Bixby, Senior Systems Analyst
Susan Horvath, Programmer Analyst
Peter Joftis, Systems Analyst
Ida Sanburn, Administrative Assistant
Richard Jungclas, Systems Research Programmer
Douglas Orr, Programmer Anaylst
Christopher Bickley, Graduate Student Research Assistant
Thomas Libert, Research Associate II
Renaldo Sepulveda-Garese, Programmer II
George Schimmel, Programmer Analyst

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

FINANCIAL SUMMARY

Actual and Projected Expenditures and Income 1980-1981 and 1981-1982

The following summaries present income and expenditure projections for July 1, 1981 through June 30, 1982 and actual expenditures for July 1, 1980 through June 30, 1981. 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 meetings of the Council, communications and meetings with Official Representatives, Consortium administration and management, and publication of the Guide to Resources, the Annual Report and other informational materials. A final display summarizes actual expenditures and income sources for 1980-1981 and projections for 1981-1982.

As the following summaries indicate, income and expenditures are projected to be lower in 1981-1982 than in 1980-1981 ($1,676,911 as compared to $2,143,286). In certain respects, however, this difference is deceptive. 1980-1981 income and expenditures include a "one time" equipment award from the National Science Foundation in the amount of $473,945. Leaving this equipment award to the side, income and expenditures in 1980-1981 amounted to $1,669,341, slightly less than projected income and expenditures for 1981-1982, $1,676,911. A modest increase in income from member fees is projected for 1981-1982, $923,907 as compared to $860,334 in 1980-1981. Income from other sources for 1981-1982 are projected at somewhat lower levels than in 1980-1981. In the latter year contributions from The University of Michigan and income from grants and contracts--again, less the NSF equipment award--amounted in total $770,045 as compared with $713,004 projected for 1981-1982. On the other hand, two proposals to funding agencies are currently pending which, if awarded, will bring income and expenditures for 1981-1982 to a level above that of 1980-1981 (less the equipment award in that year). Taken in total and given inflationary factors it is likely that the level of Consortium activties will remain essentially constant in 1981-1982 as compared with 1980-1981 or increase modestly.

As will be noted, an unexpended carry-forward in the amount of $121,331 appears for 1980-1981 and is projected to remain unexpended through 1981-1982. A major portion of this carry-forward derives from the unexpended allocation for the Biennial Meeting of Official Representatives which was included in the 1980-1981 budget. The remainder of this carry-forward derives from collection of outstanding debts to ICPSR, increase in membership during the course of 1980-1981, and a somewhat lower rate of expenditures during that year than was originally projected. Given the uncertainties of the national research funding climate, it has seemed wise to attempt to maintain this carry-forward at least through 1981-1982 as a modest reserve against adverse circumstances.

FINANCIAL SUMMARY: PROJECTIONS AND EXPENDITURES

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
I. RESOURCE DEVELOPMENT AND SERVICES		
Expenditures		
A. Archival Development		
Professional and technical staff salaries and fringe benefits	$ 371367	$ 398999
Supplies, postage and communications	24669	18844
Printing and duplicating	2916	3413
Computer time and machine rental	129543	77745
Travel	18598	22852
Total Direct Costs	$ 547093	$ 521853
Indirect Costs	195532	195566
Subtotal	$ 742625	$ 717419
B. Data Acquisition		
Professional and technical staff salaries and fringe benefits	$ 5357	$ 6886
Supplies, postage, communications, and data	5347	8100
Travel and per diem	469	480
Total Direct Costs	$ 11173	$ 15466
Indirect costs	1676	2319
Subtotal	$ 12849	$ 17785

Expenditures	Actual Expenditures 1980-81	Projected Expenditures 1981-82
C. Documentation		
Professional and technical staff salaries and fringe benefits	$ 17557	$ 5963
Supplies, postage and communications	1332	1000
Printing and duplicating	45611	65100
Computer time and machine rental	3410	200
Travel	1426	0
Total Direct Costs	$ 69336	$ 72263
Indirect Costs	16950	18172
Subtotal	$ 86286	$ 90435
D. Data Maintenance		
Professional and technical staff salaries and fringe benefits	$ 15258	$ 17527
Supplies, postage and communications	1912	1950
Computer time and machine rental	8759	9460
Total Direct Costs	$ 25929	$ 28987
Indirect Costs	3889	4348
Subtotal	$ 29818	$ 33335

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
Expenditures		
E. Computer Support		
Professional and technical staff salaries and fringe benefits	$ 66578	$ 67440
Supplies, postage and communications	988	1000
Total Direct Costs	$ 67566	$ 68440
Indirect Costs	10135	10265
Subtotal	$ 77701	$ 78705
F. Data Services		
Professional and technical staff salaries and fringe benefits	$ 91412	$ 111141
Supplies, postage and communications	47542	35900
Printing and duplicating	2128	2000
Computer time and machine rental	19500	20480
Total Direct Costs	$ 160582	$ 169521
Indirect Costs	25248	26567
Subtotal	$ 185830	$ 196088

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
SUMMARY OF TOTAL EXPENDITURES FOR RESOURCE DEVELOPMENT AND SERVICES:		
TOTAL DIRECT COSTS	$ 881679	$ 876530
INDIRECT COSTS	253430	257237
TOTAL COSTS	$ 1135109	$ 1133767

Funding:		
ICPSR Operating Budget	$ 537787	$ 598477
Administration on Aging/National Institute on Aging	180556	110189
Bureau of Justice Statistics	302985	339471
Department of Agriculture	4030	970
Department of Energy	26804	76801
National Election Studies Project	8695	0
National Endowment for the Humanities	24367	0
Robert Wood Johnson Foundation	23733	0
Russell Sage Foundation	26152	7859
TOTAL	$ 1135109	$ 1133767

Financial Summary

II. EQUIPMENT ACQUISITION

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
PRIME 750, terminals, and microcomputers	$ 473945	$ 0
Subtotal	$ 473945	$ 0

Funding:

National Science Foundation	$ 473945	$ 0
TOTAL	$ 473945	$ 0

III. EDUCATIONAL ACTIVITIES

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
Expenditures		
A. ICPSR Summer Program		
Professional and technical staff salaries and fringe benefits	$ 115588	$ 119402
Supplies, postage, communications and rent	18739	18850
Printing and duplicating	4896	5100
Stipend support	65453	69000
Computing and equipment rental	36335	38660
Travel and per diem	5295	3700
Total Direct Costs	$ 246306	$ 254712
Indirect Costs	21863	22243
Subtotal	$ 268169	$ 276955
B. Educational Development Activities		
Professional and technical staff salaries and fringe benefits	$ 3785	$ 5746
Total Direct Costs	$ 3785	$ 5746
Indirect Costs	568	861
Subtotal	$ 4353	$ 6607

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
SUMMARY OF TOTAL EXPENDITURES FOR EDUCATIONAL ACTIVITIES:		
TOTAL DIRECT COSTS	$ 250091	$ 260458
INDIRECT COSTS	22431	23104
TOTAL COSTS	$ 272522	$ 283562

FUNDING		
ICPSR Operating Budget	$ 99799	$ 105848
Administration on Aging/National Institute on Aging	43007	43389
Asian-American Research Center University of Illinois, Chicago Circle	2000	0
Bureau of Justice Statistics	26875	31025
The University of Michigan	100841	103300
TOTAL	$ 272522	$ 283562

IV. GOVERNANCE AND ADMINISTRATION

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
Expenditures		
A. Governance and Member Relations		
Professional and Administrative staff salaries and fringe benefits	$ 28899	$ 35422
Supplies, postage and communications	8770	8900
Printing and duplicating	1738	1800
Travel and meetings:		
Council Meetings, Advisory Committee, and Professional Conferences	31772	31900
Total Direct Costs	$ 71179	$ 78022
Indirect Costs	10705	11700
Subtotal	$ 81884	$ 89722
B. Communications and Meetings with Official Representatives		
Travel and per diem	41739	21250
Total Direct Costs	$ 41740	$ 21250
Indirect Costs	6260	3750
Subtotal	$ 48000	$ 25000

		Actual Expenditures 1980-81	Projected Expenditures 1981-82
	Expenditures		
C.	Central Administration		
	Professional and administrative staff salaries and fringe benefits	$ 71205	$ 76719
	Supplies, postage and communications	8178	8400
	Printing and duplicating	2542	2600
	Computing and equipment rental	2923	2920
	Travel and per diem	1425	700
	Total Direct Costs	$ 86273	$ 91339
	Indirect Costs	12912	13700
	Subtotal	$ 99185	$ 105039
D.	Publication of Guide, Annual Report, Informational and Summer Training Program materials		
	Professional and administrative staff salaries and fringe benefits	$ 10772	$ 16727
	Supplies, postage and communications	2786	2900
	Printing and duplicating	13780	14000
	Computing and equipment rental	1045	1000
	Total Direct Costs	$ 28383	$ 34627
	Indirect Costs	4258	5194
	Subtotal	$ 32641	$ 39821

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
SUMMARY OF TOTAL EXPENDITURES FOR GOVERNANCE AND ADMINISTRATION:		
TOTAL DIRECT COSTS	$ 227575	$ 225238
INDIRECT COSTS	34135	34344
TOTAL	$ 261710	$ 259582

FUNDING:		
ICPSR Operating Budget	$ 261710	$ 259582

	Actual Expenditures 1980-81	Projected Expenditures 1981-82
GRAND TOTAL		
Total Direct Costs	$ 1833290	$ 1362226
Total Indirect Costs	309996	314685
Grand Total	$ 2143286	$ 1676911
(Unexpended Carry-Forward	$ 121331	$ 121331)

BUDGET SUMMARY

		Final Expenditures 1980-81	Projected Expenditures 1981-82
INCOME SOURCES			
A.	ICPSR Operating Budget (Member Fees)	$ 860334	$ 923907
B.	Miscellaneous Income	38962	40000
C.	Administration on Aging/National Institute on Aging	223563	153578
D.	Asian-American Research Center Univ. of Illinois, Chicago Circle	2000	0
E.	Bureau of Justice Statistics	329860	370496
F.	Department of Agriculture	4030	970
G.	Department of Energy	26804	76801
H.	The University of Michigan	100841	103300
I.	National Election Studies Project	8695	0
J.	National Endowment for the Humanities	24367	0
K.	National Science Foundation	473945	0
L.	Robert Wood Johnson Foundation	23733	0
M.	Russell Sage Foundation	26152	7859
	TOTAL	$ 2143286	$ 1676911