

Social Science Data Files and Bibliographic Control: Contributions

Sue A. Dodd

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Abstract

Sue A. Dodd was active professionally in efforts to define and describe social science data files for library catalogs. Her two books on guidelines for cataloging data files and software were important contributions to our understanding of the core elements used for this purpose. Numerous reports and documents were produced through her work with IASSIST as part of the Classification Action Group. This overview discusses a selection of Sue Dodd's published works and the following list of references are discussed individually. Also included are references for works of significance which relied heavily on Sue Dodd's research.

Keywords: Cataloging, Bibliographic control, Metadata, Library catalogs

It is important to remember that until the work carried out by Dodd and others there were no widely known and systematically organized catalogs, inventories, or bibliographies of data files extant in the U.S. Some work had been discussed through the International Social Science Council (ISSC), largely due to the efforts of Stein Rokkan, and in the U.S. through the Council of Social Science Data Archives (Adams 2006). A publication calling for bibliographic conventions and standards was written by David Nasatir under contract to UNESCO to study "overcoming the barriers to realizing the fullest utilization of machine-readable social science data." Nasatir called for not only the preparation of bibliographic details, but also for archives to enable variable-level searching across studies and across archives (Nasatir, D., 1973, p. 3 and p. 46).

The following items make interesting reading; many of the topics discussed are issues the data archive community is still concerned with today. A few details about these early days are illustrative. For example, there is mention of the "data explosion" to describe a situation not unlike the way today's authors refer to the "data deluge." And it should be noted that at that time, social science data primarily consisted of surveys, enumerations, public opinion polls, and some administrative records. Mainframe computers were the only electronic tools available to the researcher for carrying out statistical analysis. Today's variety and size of file formats, including videos, images, simulations, games, etc., were not yet in the mainstream of what we now think of as research data. Still the volume of material even then was notable.

In addition to concerns about the amount of data available during the period when Sue Dodd was active, there was much discussion about the potential role for libraries in data management and calls for action. Even so this concept was not new and had been expressed since at least the late 1950s when, as Nasatir mentions, "York Lucci and Stein Rokkan proposed a library centre of survey research data in a project sponsored by the School of Library Service at Columbia University in 1957." (Nasatir D., p 10). And library leaders such as Clifton Brock, whose 1967 work is quoted by Nasatir, state "[s]ocial Science Data Archives have developed entirely outside the scope of library systems," and that "scholars, organizations, and publications" ... [in the "data sector"] ... "are wholly outside the world of conventional librarianship" (Brock, 1967, p. 305). Brock's

lament is echoed in a speech also described in Nasatir's 1973 work in which Ralph Bisco in 1967 spoke about "Why should university libraries undertake data services when social science data archives are already providing them?" (Bisco, 1967). Further, the National Academy of Sciences, wrote Nasatir, conducted a study headed by Phillip E. Converse which concluded that "few research libraries are adequately staffed" ... [and] "libraries appear overwhelmed by information revolutions on other fronts" (National Research Council, 1967, Chapter 3).

So it was within this environment that Sue Dodd began her work. The shift in thinking about roles and responsibilities for management of social science data files can be found in Sue's writing in *Drexel Library Quarterly*, *Journal of the American Society for Information Science*, *Journal of Library Automation*, *Library Trends*, and *Library Resources and Technical Services*. These pieces are illustrative of increasing receptiveness of libraries to focus on the bibliographic aspects of describing and classifying social science data files. There were significant activities within the American Library Association to develop rules and guidelines for cataloging data files, and the Machine readable Catalog (MARC) format. But it would seem that the *Report on the Conference on Cataloging and Information Services for Machine-Readable Data Files: March 28-31, 1978* had an impact that ensured the catalog rules would be implemented more widely in libraries. And Sue's books, *Cataloging machine-readable data files: A interpretive manual* in 1982 and *Cataloging microcomputer files: A manual of interpretation for AACR2* in 1985, aided even lone catalogers in small libraries and archives to create accurate records for their catalogs of holdings.

The following listing contains entries for publications, reports and other documents produced by Sue Dodd and her colleagues and cover the period between 1977 and 1990. Also included are pieces containing substantial reference to Sue Dodd's work and her role within IASSIST. These works include Sue Dodd's books on cataloging data files and cataloging software for what were then called micro-computers. There are reports she prepared for the *IASSIST Newsletter* (now known as the *IASSIST Quarterly*) in her role as a member of the IASSIST US Classification Action Group. Sue was active in professional organizations within the American Library Association and presented her work at meetings which were critical for their impact on and advancement of bibliographic identification of data files.

There have been a number of developments in both libraries and archives since Sue Dodd's works were published. In the library cataloging realm Barbara Tillett's Functional Requirement for Bibliographic Records (FRBR) entity-relationship model provided a new way to think about the links between bibliographic records for all types of materials and is concerned with entities, relationships and attributes (metadata) (Tillett, 2004). A new set of guidelines for cataloging will replace the Anglo-American Cataloging Rules; Resource Description and Access (RDA) will provide rules and instructions on recording data to reflect attributes and relationships associated with the entities defined in the FRBR². Further developments have led to the Resource Description Framework (RDF) model which extends the utility of entity-relationship models such as FRBR. And RDF links to metadata schema have been demonstrated. For example, Stefan Kramer et al. within the DDI Alliance, have produced a document on connecting "RDF-described datasets to other related resources ... in the Semantic Web ... more specifically, ... to leverage the Data Documentation Initiative (DDI) to enable semantic linking of

social science data to other data and related resources on the web" (Kramer, et al., 2012).

Work to ensure that datasets used in research are properly cited, to develop item-level, actionable metadata schema, and to link data to published content as well as to other resources has been driven by some of the same practitioners who were guided by Sue Dodd's earlier efforts and by many newcomers to the field. One likes to think that efforts to consider the possibilities, build the theory and applications, and develop the tools available today have at least a kernel of kinship with the ideas and directions defined in Sue Dodd's work. Perhaps it may be said without too much hyperbole that this was her expectation given that she wrote in the *IASSIST Newsletter* in 1978, "[s]uccess is invariably measured not by what you hope to achieve, but by what you are able to produce. At the same time, the sum total of the lessons learned and the refinements made in the initial stages of any new endeavor becomes the foundation for future successes. The work described here is still developmental but it is designed to be expanded and implemented by other parties." (Dodd, 1978, p. 37).

Selected bibliography of books, articles and citations

(Text extracted directly from works *is in quotes*)

Dodd, S. A. (1977, January). Cataloging machine-readable data files: a first step? *Drexel Library Quarterly*, 13, 48-69. Philadelphia: Drexel University. 1977

Commentary: "Libraries are traditionally well equipped to handle ... informational needs, in that they have standardized procedures for maintaining bibliographic control on a multimedia collection of materials. Coupled with a recent commitment to automated systems, library procedures offer an important way of dealing with the existing problems of organizing, classifying, and cataloging information on social science data files. This paper will focus on the feasibility and future implications of applying library procedures and standards to MRDF, starting with the most important step--cataloging." Dodd describes the process by which rules and guidelines for cataloging data files were developed through American Library Association Committees and Library of Congress. The IASSIST Classification Group work and projects are outlined. This article includes one of the first calls for national level efforts to "establish a national program of information services ... through a shared and cooperative network." One could easily repeat Dodd's insistence in 1977 that "the time has come to focus our attention on our national and commonly held responsibilities."

Dodd, S. A. (1977, February). Report of the Joint Canadian-United States Action Groups on Classification (CAG). *IASSIST Newsletter*, 1(2), pp. 9-11.

Commentary: "Agenda topics: discussion of useful areas of concern and future coordination of tasks; 2) Review of cataloging efforts to date ... including discussion of the Working Manual for Cataloging Machine-readable Data files [MRDF] compiled by Sue Dodd; 3) Discussion of the ramifications of MRDF catalog records, such as the national union list of social science data; shared cataloging; cataloging-in-production; the MARC II record as a standard format for storing automated bibliographic records ...; 4) Practical exercise in applying subject headings and descriptors for several large and uniquely held datasets, with a view towards compiling the beginning of the thesaurus or authority list of social science

terms for data files; 6) Discussion of the lack of adequate subject headings and sub-headings currently provided by the Library of Congress for social science data files, with a view toward providing constructive recommendations."

Dodd, S. A. (1977, May). Cataloging and classification of machine-readable data files: A preliminary repo[rt] on the US IASSIST classification cataloging project. *IASSIST Newsletter*, 1(3), pp. 23-24. Retrieved January 2014 from <http://archive.org/stream/newsletterserial13inte/newsletterserial13inte_djvu.txt>

Commentary: "The primary emphasis of the US Classification Action Group of IASSIST has been on establishing standards and on the study of library information systems as they may apply to social science data files. Some of the recent developments within the library system which the Classification Group is examining include: 1) the development of rules and guidelines for cataloguing machine-readable data files (MRDF); 2) the development toward the acceptance of the MARC (Machine-Readable Catalog) record format as a universal standard for the automated bibliographic record; 3) the development of networks and on-line information systems which allow for multiple input and immediate retrieval of information; 4) the development of thesauri and controlled vocabularies for social science terms; and, 5) the development towards future considerations of a national union list of available MRDF and their location."

Dodd, S. A. (1977, May). Report of the Joint Canadian-United States Action Groups on Classification (C AG). *IASSIST Newsletter*, 1(3), pp. 8-10. Retrieved January 2014 from <http://archive.org/stream/newsletterserial13inte/newsletterserial13inte_djvu.txt>

Commentary: "The primary focus of the CAG at the Canadian Working Conference centered on the first problem of how to cite properly a social science numerical data file in the published literature... Agenda topics : Current problems and associated tasks within the mandate of the Classification Action Group include developing (1) examples and guidelines for bibliographic references for social science numerical data files, (2) a "cataloging-in-production" scheme for major producers of social science data files, (3) a more "universally based" classification scheme for social science data files; and, reviewing (4) the cataloging efforts to date and discussing any or all related problems and (5) existing printed thesauri in the social sciences in terms of their future applications to data files."

Dodd, S. (1977, Fall). The emerging priority in bringing bibliographic control to social science machine-readable data files. *IASSIST Newsletter*, 1(4), pp. 11-18. Retrieved January 2014 from <http://archive.org/stream/newsletterserial14inte/newsletterserial14inte_djvu.txt>

Commentary: "Two recent attempts to compile "catalogs" of social science data have encountered the lack of consistency among titles for the same data set. One attempt has been the recent cataloging efforts at the Universities of North Carolina, Wisconsin, Princeton, and Yale, whereby traditional library cataloging records are created for social science data generated by academic research. The other has been the efforts of the Association of Public Data Users (APDU) to compile a directory of publicly available data files which represent primarily government produced data. Both groups have experienced the same problem: variance of titles for the same data file. Yet, without some control over titles and some mutually agreed upon primary source of title information, there can be no

bibliographic control of social science data and none of the related products such as a union list of machine-readable data files. This paper will attempt to offer some suggestions for remedying the situation, including guidelines for transcribing titles; for creating a "title page"; for compiling a bibliographic reference; and for establishing an "authority list" for titles."

Dodd, S. (1978, Spring). Building a bibliographic/MARC data base for social science data files in a network environment. *IASSIST Newsletter*, 2(2), pp. 34-37. Retrieved January 2014 from <http://archive.org/stream/newsletterserial22inte/newsletterseria22inte_djvu.txt>

Commentary: "Social Science numerical and textual data files represent a vast amount of valuable and publicly available information. For example, they are widely used by students, faculty and policy makers engaged in research. Not only have such data files had an unprecedented growth in the last decade, but with the advance of small and relatively inexpensive computer terminals, data analysis and computer simulation models have moved into the classroom as legitimate instructional tools. Specialized files, often referred to as "educational data packages" have been developed to teach students analytical skills, so as to better understand social and economic phenomena. According to Nesvold (1976): "Experience with machine-readable 'laboratory' materials should be as appropriate to the beginning social science student as is the laboratory for the beginning chemistry student."

Unfortunately, many such data resources are not fully utilized because potential users are unaware of the existence and accessibility of social science data files. At the present time, information on usable MDRF is fragmented among varying government agencies, research institutions, and university computing and data centers. Among these various agencies, there is no common format for information on the existence of data files, nor is there any standardized structure that would facilitate retrieval of information from many different sources. Existing information on computerized files is available to some but not to all. What is needed is a central source of information within the public domain that would provide equal access to all interested users. What is needed is some sort of bibliographic control and national standards for social science files-- not unlike that which is available for printed materials."

Dodd, S. A. (1978). Characteristics of machine-readable data files. *Report on the Conference on Cataloging and Information Services for Machine-Readable Data Files: March 28-31, 1978* (pp. 5-8). Airlie House, Warrenton, VA: Data Use and Access Laboratories. Retrieved January 2014 from <http://books.google.com/books/about/Report_on_the_Conference_on_Cataloging_a.html?id=bf7gAAAAMAAJ>

Commentary: "To coordinate the development and implementation of standards for controlling MRDF, a Conference on Cataloging and Information Services was organized by DUALabs ... and supported by a grant from the National Science Foundation... The conference brought together at least 55 key persons having an active interest in establishing a framework within which a national program of cataloging and information services could be developed. The specific objectives of the conference were to identify key technical issues requiring resolution prior to implementing a coordinated cataloging effort, define the operational components of a centralized clearinghouse for MRDF cataloging... and ... initiate a national program to catalog machine-readable data. Sue Dodd's

presentation was focused on "the act of cataloging MRDF and the related information products."

Dodd, S.A. (1978, Spring). MRDF Cataloging Conference. *IASSIST Newsletter*, 2(2), pp. 49-52.

Commentary: Reports on the National Conference on Cataloging and Information Services for Machine-Readable Data Files, held on March 29-31, 1978. The conference was an attempt at "establishing a framework within which a national program of cataloging and information services could be developed." The organizers might be forgiven for feeling these initial steps have yet to bear fruit as far as a national infrastructure. Even so, the conference resulted in a call to action for work to be carried out with major data producers in academic institutions and government agencies to use rules and guidelines for building a bibliographic record of data files created. Dodd's preliminary report was followed by a final *Report on the Conference on Cataloging and Information Services for Machine-Readable Data Files, March 28-31, 1978 at Airlie House, Warrenton, Virginia*. Produced by the MRDF Conference Secretariat, DUALabs. Arlington, VA. 1978.

Dodd, S.A. (1979, March). Bibliographic references for numeric social science data files: Suggested guidelines. *Journal of the American Society for Information Science*, 30(2), 77-82. doi:10.1002/asi.4630300203

Commentary: "In the last two decades, private research organizations, government agencies, and foundations have invested heavily in the collection of social science numeric data, contributing to the proliferation of machine-readable data. However, the development of information technology and the ability to produce data have progressed much more rapidly than our capacity to organize, classify, and reference its availability. There is an immediate need for some type of bibliographic control over MRDF, including guidelines on how to create a proper bibliographic reference. The purpose of this article is twofold: (1) to outline some of the information components associated with social science numeric data files, and (2) to provide guidelines, examples, and a uniform vocabulary for the creation of a bibliographic reference." Includes numerous illustrations and examples. Dodd hoped that these guidelines "will soon appear in the 'authors' guide' section of social science journals and will eventually be included in such works as the Chicago *A Manual of Style* and Kate L. Turabian's *A Manual for Writers*. The ultimate goal would be to pave the way for social science data files to be included in printed bibliographies, end-of-work references, and indexing and abstracting works such as the *Social Science Citation Index*."

Dodd, S. A. (1979, March). Building an on-line bibliographic/MARC resource data base for machine readable data files. *Journal of Library Automation*, 12(1), 6-21. Retrieved January 2014, from <<http://eric.ed.gov/?id=EJ203534>>

Commentary: "Explains how a multipurpose bibliographic/MARC data base of machine-readable data files (MRDF), created according to the MARC II record format, was conceived, and how much an information resource would benefit the general user and professional librarian." Dodd describes the experiences of the Social Science Data Library at the Institute for Research in Social Science at the University of North Carolina, Chapel Hill to build an online catalog of data files. The article provides an example of early efforts to use the facilities and expertise of academic main frame

computing centers, MARC format for data files, and simple database design.

Dodd, S. A. & Rowe, J. S. (1980) A model bibliographic information system for machine-readable data files in the humanities and social sciences. In *Data Bases in the Humanities and Social Sciences* ed. by J. Raben and G. Marks. Amsterdam/New York: North-Holland, 1980, pp. 275-279

Commentary: "Models for the design of a database containing references to MRDF can be found in existing bibliographic information systems currently used for other types of research material - books, journal articles, technical reports, government documents, maps and audio-visual materials. The paper summarizes some recent developments in the area of bibliographic control of MRDF, outlines a model integrated system of data elements and indicates some products and services that could be derived from such a system."

Dodd, S. A. (1982). *Cataloging machine-readable data files: An interpretive manual*. Chicago: American Library Association.

Commentary (from the ALA press release for this book): "One of the effects of the information explosion is the proliferation of machine-readable data files (MRDF). In order to assure better bibliographic control over this medium, the Council on Library Resources awarded a grant to Sue A. Dodd to support her groundbreaking work on a manual for cataloging MRDF. The result of her efforts, CATALOGING MACHINE-READABLE DATA FILES will be published. . . by the American Library Association.

The first section of Dodd's manual is designed to demystify data files and computer programs and to make MRDF more comprehensible to those who must catalog and store them. Section two explicates rules for cataloging MRDF from the ninth chapter of AACR2, offering interpretations and examples and revealing the "how and why" of cataloging. Included is an extremely valuable outline of the steps for cataloging the microcomputer programs that are now found in many public and school libraries. The third section offers guidance on bringing bibliographic control to computerized files, including a bibliographic citation and a data abstract.

The only available work of its kind, CATALOGING MACHINE-READABLE DATA FILES provides the guidance which data producers, data archivists, and data librarians need to supply consistent bibliographic information for the MRDF they service. Newcomers to this rapidly developing field will appreciate the accessible presentation and the glossary of terms included in the manual."

Dodd, S. A. (1982, Winter). Toward integration of catalog records on social science machine-readable data files into existing bibliographic utilities: A commentary. *Library Trends*, 30(3), pp. 335-361. Retrieved January 2014 from <<http://eric.ed.gov/?id=EJ286983>>

Commentary: Comments on "significant steps that have contributed to current level of bibliographic control of social science machine-readable data files (MRDF). . . and . . . outlines some of the remaining problems to be considered before MRDF can be integrated into existing bibliographic utilities." Twenty references and MARC format, catalog entry, and data abstract for an MRDF are appended. The article summarizes and describes the process, groups and people who promoted the management and bibliographic control of data files, beginning in the late 1950's. Dodd includes details on the

role IASSIST played; including testing of a cataloging manual by several archives and reporting on the experience. There is a section describing how Dodd funded and wrote her first book *Cataloging Machine-Readable Data Files*. Development of a "multi-purpose automated cataloging system" at ICPSR is outlined as is work carried out to further test cataloging rules for data files. Writing in 1982, Dodd states "There is no doubt that machine-readable data will play an even greater role in research. . . [m]ore and more data [will be] needed for government and private research." "[A] new dimension to the information explosion is now apparent; and with it an increasing demand for access to more and better documented data files." "Communicating the availability of usable data is an inseparable part of research and an integral part of librarianship. In the near future, libraries will have no choice but to become more involved."

Dodd, S.A. (1984). Characteristics and Sources of Public Opinion Polls in the United States. In *Numeric Databases*, ed. by Ching-Chih Chen and Peter Hernon. Norwood, NJ: Ablex Publishing Co. pp. 153-170.

Commentary: Dodd provides a detailed history and overview on public opinion polling, polling agencies, methods of data collection and problems in analyzing and interpreting poll data.

Dodd, S. A. (1985). Changing AACR2 to accommodate the cataloging of microcomputer software. *Library Resources and Technical Services*, 29(1), 52-65. Retrieved January 2014, from <<http://eric.ed.gov/?id=EJ312387>>

Commentary: Examines rules affected by revisions approved by American Library Association's Joint Steering Committee for Revision of Anglo-American Cataloging Rules (AACR2) and those covered in the new "Guidelines for Using AACR2 Chapter 9 for Cataloging Microcomputer Software." Changes still needed to provide adequate bibliographic control are suggested. Thirteen references are included.

Dodd, S. A., & Sandberg-Fox, A. M. (1985). *Cataloging microcomputer files: A manual of interpretation for AACR2*. Chicago: American Library Association.

Commentary: See discussion by Paden, 1986 (below)

Dodd, S. A. (1990). *Bibliographic references for computer files in the social sciences: A discussion paper*. University of North Carolina - Chapel Hill. Chapel Hill: Institute for Research in Social Sciences. Retrieved January 6, 2014, from (<<http://people.virginia.edu/~pm9k/info/compRef.html>>)

Commentary: "A recent discussion among the participants of the E-Mail "Informal List for Official Representatives of ICPSR" centered around citing computer files in references, footnotes, and bibliographies; whether to cite a codebook or file (providing you have both); and a discussion on citing primary or secondary sources. With respect to the last two concerns, there appeared to be adequate response indicating that it is better to cite the file as opposed to the codebook, and that one generally cites primary data sources. However, the first concern required more information and the ICPSR OR meeting was targeted as the next opportunity for such a discussion. Note: this paper was first presented at the ICPSR OR Annual Meeting in November 1989, but has been revised for the May-June 1990 IASSIST meeting in Poughkeepsie, N.Y. . . . The March 1981 issue of *Social Forces* was the first time that a major social science journal had provided instructions (in the "authors'

guide" section) on how to cite a machine-readable data file (MRDF) -- currently referred to as a "computer file." . . . It is not possible in this discussion paper to provide anything but brief examples, but more detailed instructions on the components of a bibliographic citation are provided in the *JASIS* article (Dodd, 1979) and in part three, chapter 9 of *Cataloging Machine-Readable Data Files* (Dodd, 1982)."

Gray, A. S. & Dodd, S.A. (1984). The Roles of Libraries and Information Centers in Providing Access to Numeric Databases. In *Numeric Databases*, ed. by Ching-Chih Chen and Peter Hernon. Norwood, NJ: Ablex Publishing Co. pp. 247-262.

Commentary: Although this chapter was published in 1984, much of what Gray and Dodd say is still appropriate to ongoing debate about how libraries can take on the work of maintaining and providing access to data. The authors recognized that this would involve additional financial investment by libraries and they promote "cooperative arrangements which reduce the cost." "Keeping in mind the goal of providing access to the data itself, the library should also solicit information from those facilities which might also provide services for accessing the data." The authors suggest one option might be to share computing facilities and to provide statistical consulting. Discussion on acquisitions and collections, cataloging, and public service are well defined and could inform libraries still. The authors advise that libraries "should be prepared to evaluate new roles in providing access."

Roistacher, R. C., Dodd, S. A., Robbin, A., & Noble, B. (1980). *A style manual for machine-readable data files and their documentation*. Washington, D.C.: U.S. Dept. of Justice, Bureau of Justice Statistics. Retrieved January 2014 <<https://www.ncjrs.gov/pdffiles1/Digitization/62766NCJRS.pdf>>

Commentary: For many years, this manual was the de facto bible in the U.S. one could use to properly and fully document data files. Each of the guidelines is illustrated with a rationale and examples. The authors state that "bibliographic identity is provided by six kinds of information; . . . [that] which identifies . . . describes the content . . . classifies . . . in a set of descriptors or keywords . . . [and provides] information required to access, analyze, . . . [and] archive the MRDF." There is a comprehensive section on the kind of information required to describe each variable in a dataset: wording of questions, variable names, variable labels, explanatory text, code values, category labels, frequency count, and universe definition. These elements were to form the basis of a data dictionary and/or users' guide we think of as today's codebook. A chapter includes a detailed checklist. This document played a significant role in standardizing the kind of information required to ensure usability of datasets and impacted data management practices of researchers and archivists alike.

Works citing or making use of Sue Dodd's research.

Fox, M. J. (1990). Descriptive cataloging for archival materials. *Cataloging and Classification Quarterly*, 11(3-4), pp. 17-34. doi:DOI: 10.1300/J104v11n03_02

Commentary: This paper describes the significant characteristics of archival materials and of archival methods of description and arrangement. Key sections of Archives, Personal Papers, and Manuscripts are explicated with particular reference to the ways in which the archival approach to descriptive cataloging reflects the nature of contemporary archival records and practice

while remaining compatible with the style and structure of bibliographically oriented cataloging. The relationship of catalog records to other forms of archival finding aids is explained.

Kinney, T., & Jones, R. (1988). *Microcomputers, government information, and libraries*. *Government Publications Review*, 15, pp. 147-154. Retrieved January 2014, from <[http://dx.doi.org/10.1016/0277-9390\(88\)90040-4](http://dx.doi.org/10.1016/0277-9390(88)90040-4)> or <<http://www.sciencedirect.com/science/article/pii/0277939088900404>>

Commentary: An increasing proportion of government information is being disseminated in machine-readable and electronic form. An important subset of this information—information distributed on diskette or optical disk or available online—is accessible using microcomputer technology. This article examines the role that libraries can play in helping their users to locate and use this microcomputer-accessible government information, and the potential of such a role in helping libraries to fulfill their responsibility to provide broad access to government information.

Kranz, J. (1988). Microcomputer software cataloging: the need for consistency. *Cataloging and Classification Quarterly*, 9(1), pp. 83-96. doi:DOI: 10.1300/J104v09n01_09

Commentary: "Bibliographic records for microcomputer software in the OCLC Online Union Catalog are evaluated primarily for the purpose of focusing catalogers' attention on selected areas in need of more consistent treatment. The degree of cataloging inconsistency evident in these records is examined with respect to the application of rules and prescriptions embodied in AACR2 Chapter 9, [and] the ALA Guidelines for cataloging microcomputer software... A secondary purpose of this quantitative/qualitative study is to provide a general assessment of the overall composition of microcomputer software cataloging ..."

Nasatir, M. (1981). The cataloging and classification of machine-readable data files, Part 1: A case for incorporating records of machine-readable data files into the public catalog. *Cataloging and classification quarterly*, 1(1), pp. 23-41. doi:DOI: 10.1300/J104v01n01_03

Commentary: "Standard catalog entries ... constitute primary records by which computer-readable data files should be controlled and accessed. It is appropriate that academic and research institutions would want to record and provide access to files of data in machine-readable form in the public catalog of their libraries where entries already appear for other media ... It is high time that the feasibility and desirability of incorporating records of machine-readable data files... in the public catalog ... should be explored."

Nasatir, M. (1982). The cataloging and classification of machine-readable data files, Part II: A practical application of the developing principles. *Cataloging and Classification Quarterly*, 1(4), pp. 41-62. doi:DOI: 10.1300/J104v01n04_04

Commentary: "Fortified with AACR1, AACR2, the Final Report of the Catalog Code Revision Committee, the Working Manual for Cataloging Machine-Readable Data Files and documentation from the Data Library at UCLA's Institute for Social Science Research (ISSR), a test run of cataloging MRDF was undertaken. This article chronicles the difficulties encountered during that practical application of the developing cataloging principles."

Nasatir, M. (1982). The cataloging and classification of machine-readable data files, Part III: Subject description of machine-readable data files. *Cataloging and Classification Quarterly*, 2(3-4), pp. 45-58 doi:DOI: 10.1300/J104v02n03_03

Commentary: "In 1976, the International Association for Social Science Information Service and Technology (IASSIST) Classification Action group participated in a project to test the feasibility of cataloging and classifying MRDF. After applying the rules for descriptive cataloging presented in Sue Dodd's *Working Manual*, based on the recommendations drawn up by the ALA Catalog Code Revision Committee's Sub-Committee on Rules for Cataloging MRDF... The project resulted in three recommendations. "The first is that [Library of Congress Subject Headings] LCSH be used for catalog ... subject description of MRDF. ... The second recommendation ... is for people ... to follow Dodd's guidelines and to provide as many descriptive terms as are applicable to the study... The third ... is for a group representing substantive academic disciplines, government agencies, and catalogers to draw up useful terms at all levels of the hierarchy ... to evaluate terms ... to submit suggested changes to LCSH ... to combine ... terms into interdisciplinary thesauri ... [and] to coordinate the consistent use of standard terms ..."

Nasatir, M. (1983). Machine-readable data files: The future is here. *Journal of Library Administration*, 4(1), pp. 1-5. doi:DOI: 10.1300/J111V04N01_01

Commentary: This article "argues for the inclusion of a format for machine-readable data files in the existing bibliographic networks" given that a **MA**chine-**R**eada**BL**e **C**ataloging (MARC) format has been developed. The author notes that "Large academic, research, and special libraries are requesting the capability of ... [using] the US/MARC formats in combination with AACR2 [to] define the content of the data elements in a MARC record. Some of the elements ... are a data file description which shows existence and source of data; a detailed abstract which includes the genesis and history of the file so as to link modified files; a keyword structure; physical characteristics of tape, file and software needed; applicability of the data to solving specific problems or analytic needs; and the link between data files and the software created to manage or operate them. These links reveal the presence of accompanying documentation, the bibliographic citation of accompanying documentation, software compatibility, and linkage with other files or programs." Further, Nasatir stresses "[T]he more that users from all kinds of institutions contribute to and access a MRDF database, the more its economic viability will be assured ... [and that] "communicating the accessibility of usable data [is] an integral part of librarianship."

Paden, J. C. (1986). Cataloging computer software: A guide for the inexperienced microcomputer user. *Cataloging and Classification Quarterly*, 7(1), pp. 19-33. doi:DOI: 10.1300/J104v07n01_03

Commentary: "An examination of AACR2 Chapter 9 and the CC:DA Guidelines for using AACR2 for Cataloging Microcomputer Software (Chicago: ALA, 1984) for catalogers not familiar with microcomputers. Includes seven full descriptive cataloging examples of microcomputer software using these recently developed guidelines." Sue Dodd and Ann M. Sandberg-Fox's *Cataloging Microcomputer Files: A Manual of Interpretation for AACR2* is widely quoted. Paden states the guidelines for using AACR2's Chapter 9 for MRDF's were "written in the mid '70's before microprocessors and microcomputers

were fully developed and available on the scale they are today."The article is a snapshot of the time and how changes in technology impacted libraries. These machines were so new, and they required a variety of software to be installed by the user in order to operate, unlike the early 21st C. when most machines come pre-equipped. Libraries maintained copies of each version of programs that would then be installed as needed. There was confusion on exactly what to catalog, since one program usually contained several files to install and operate. "Only a cataloger with considerable experience in computer software could be expected to determine the nature of each file in a program."The section on how to describe physical characteristics is quite charming, with its directions on how to measure various storage media as well as their containers.

Wenzel, P. (1988). Microcomputer-based access to machine-readable numeric databases. *Reference Services Review*, 16(1-2), pp. 51-55. doi:(DOI: 10.1108/eb049009

Commentary: In a volume containing articles on the National Archives in the U.S., National Technical Information Service (NTIS), National Archives of Canada, Roper Center, and an article by Margaret Hedstrom on state archives, Wenzel describes a project, carried out at the Data and Program Library Service at the University of Wisconsin - Madison to enhance access to their collection of machine-readable data files. Project goals were based on the problems in access described by Dodd and others. Three levels of access are discussed. The *archive* level, *study* level and *variable* level each serve to identify the organization in which data are housed, provide broad descriptions of individual studies, and to document each variable within an individual dataset. This article documents early attempts by domain-specific data archives to develop and make visible online catalogs of their holdings.

Wittenborg, K. (1985). Machine-readable data files. In Patricia A. McClung (Ed.), *Selection of Library Materials in the Humanities, Social Sciences and Sciences* (Vol. 1, pp. 375-387). Chicago: American Library Association.

Commentary: "In the past many libraries have been reluctant to acquire MRDF, as they presented a number of obstacles. To some they seemed prohibitively expensive; to others, they fell outside the library's purview since they did not appear in bibliographies, abstracting and indexing services, or even databases. In addition, they require a computer and a degree of technical expertise to use. ... Machine-readable data files present a myriad of collection development challenges."The author suggests readings by Sue Dodd and Judith Rowe, and participation in IASSIST as key to understanding the research and kind of data used by quantitative social scientists. In describing how libraries would manage data acquisitions, Wittenborg addresses the use of bibliographic links between data and documentation with attention toward version control, and level of processing (curation). The article concludes with an admonition: "New information and new tools appear with astonishing frequency and the knowledge and tactics one has taken pains to acquire become outdated with alarming speed. ... The selector must simply make a great effort to keep in touch..."

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Dodd S.A. (1978). "Building a Bibliographic/MARC Data Base for Social Science Data Files in a Network Environment." IASSIST Newsletter 2:2, pp. 34-37.

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NOTES

1. Libbie Stephenson is Director of Social Sciences Data Archives at University of California, Los Angeles. libbie@ucla.edu Please contact Ms. Stephenson with any additions or corrections to this list of works
2. Joint Steering Committee for development of RDA. Retrieved March 2014 <<http://www.rda-jsc.org/rdapropectus.html>>