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Article Author: McCrank, Lawrence J.

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SHARING CODICOLOGICAL RESOURCES
THROUGH BIBLIOGRAPHIC NETWORKS AND UTILITIES

LAWRENCE J. McCRANK

Dean, AUM Library & Resource Center
MONTGOMERY, AL 36196-0401
USA

Codicology: An Evolving Hybrid

Codicology as a holistic discipline is a relatively recent phenomenon.¹ Granted that elements of codicological description and attention to the physical context of a text (i.e., the codex as an artifact) were by the end of the last century recorded in several surveys and catalogs and such data were used to trace the transmission of texts, formalization of such documentation has taken decades and descriptive standards are still evolving.² The German equivalent, the turn-of-the century Handschriftenkunde of Ludwig Traube (d. 1907), Paul Lehmann, and others, was confined largely to paleography.³ Whereas much of the effort in paleography before the turn of the century addressed classification and identification by letter-form

¹ For a short introduction, see Richard H. and Mary A. Rouse, "Codicology, Western European," Dictionary of the Middle Ages, ed. Joseph Strayer (New York, NY: Charles Scribner's Sons, 1983), III, 475-78; cf. R. Marichal, "Paleography, Latin," New Catholic Encyclopedia (New York: McGraw-Hill, 1967), X, 879-85.

² Cf., for example, Albert Curtis Clark, The Descent of Manuscripts (Oxford: Clarendon Pr., 1918); and in contrast by degree of sophistication by 1968 (first ed.): L. D. Reynolds and N. G. Wilson, Scribes and Scholars. A Guide to the Transmission of Greek and Latin Literature, 2nd rev. ed. (Oxford: Clarendon Pr., 1974).

³ See T. J. Brown, "Latin Paleography since Traube," Transactions of the Cambridge Bibliographical Society, 3 (1959-63), 361-81; cf. Traube's Vorlesungen und Abhandlungen (Munich: Beck, 1909-20), vol. I.

analysis, blending revisions by W. Wattenbach, Leopold Delisle and others with older work stemming from the Maurist contributions, early nineteenth-century efforts were largely monopolized by inventory projects (intra and inter-institutional) exemplified on the grand scale by E. A. Lowe's monumental Codices latini antiquiores.⁴ These survey-oriented projects contributed to the evolution of manuscript identification standards and forms for main entries in bibliographic citations which are still used within the field, but they were more concerned with the technology of facsimile reprographics than descriptive standards.

Others preferred less emphasis on description, identification and cataloging, and more of an all-embrasive study of manuscript culture anticipating modern treatments of orality and textuality, as in the histoire du livre genre of historical and text studies.⁵ The term codicologie had been introduced in the period between World Wars I and II, especially as used by the French school surrounding Charles Samaran.⁶ It was resurrected in the 1950s by the Belgian

⁴ E. A. Lowe, Codices latini antiquiores (Oxford: University Pr., 1935-63), 10 vols., preceding the more ambitious, and hence ongoing Chartae Latinae antiquiores project begun by A. Bruckner and A. Marichal, and the French CNRS-based work begun in 1953 by C. Samaran.

⁵ For example, R. Marichal, "L'Écriture latine et la civilisation occidentale du I^{er} au XVII^e siècle," L'Écriture et la psychologie des peuples (Paris, 1963), 183-198. The histoire du livre movement is too often misconstrued as only pertaining to printed books, in response to Lucien P. V. Lèbvre and Henri-Jean Martin's L'Apparition du Livre (Paris: Ed. A. Michel, 1958), trans. as The Coming of the Book: The Impact of Printing (London: Verso, 1984), when indeed the precursor to such developments lie in paleography's transition to codicology a decade before the appearance of this important work, as reflected in M. Masai's Belgian school which led to the foundation of the review Scriptorium in 1946 and the Centre Belge d'Archéologie et d'Histoire du Livre in 1957.

⁶ See Samaran's preface to Codicologica 1 (Leiden, 1976), esp. 9-10.

manuscript scholar, François Masai,⁷ who coined the paraphrase of "codicology" as "the archeology of the book" that so inspired Gilbert Ouy, Albert Gruijs, Léon Gilissen, and others to embrace by the late 1960s the notion of a comprehensive discipline or unifying science for medieval manuscript studies.⁸ Such an interdisciplinary approach found its champion in no less a scholar than L. M. J. Delaissé, so that by the 1970s the idea gained widespread, although not universal acceptance, in the field of medieval manuscript studies.⁹ This holistic approach was adopted for earlier periods to trace the origins of the codex, but not so much for early modern or more recent manuscript studies;¹⁰ and unfortunately such intellectual ferment seems to have had little influence outside relatively small academic circles.

Although Codicology may be seen as a hybrid between paleography and textual criticism, influenced by form

⁷ François Masai, "Paleographie et codicologie," Scriptorium, 4 (1950), 177-9, and his methodological essay, "La paléographie gréco-latine. ses tâches, ses méthodes," Scriptorium, 10 (1956), 280-2.

⁸ Gilbert Ouy, "Les bibliothèques," L'histoire et ses méthodes, ed. Charles Samaran (Paris: Gallimard, 1961) and his "Comment rendre les manuscrits médiévaux accessibles aux chercheurs," Codicologica 4: Essais méthodiques, ed. A. Gruijs and J. P. Gumbert (Leiden, 1978); Albert Gruijs, "Codicology or the Archeology of the Book? A False Dilemma," Quaerendo, 2 (1972), 87-108; Albert Derolez, "Codicologie ou Archeologie du Livre," Scriptorium, 28 (1973), 47-9; and Léon Gilissen, Prolégomènes à la codicologie: recherches sur la construction des cahiers et la mise en page des manuscrits médiévaux in Scriptorium, vol. 7 and separately (Gand: Story-Scientia, 1977).

⁹ L. M. J. Delaissé, "Towards a History of the Medieval Book," Miscellanea André's Combs, II (1967), repr. in Divinitas, 11 (1967), 423-35.

¹⁰ See Michael McCormick's reaction, "Typology, Codicology and Papyrology: A New Book by Eric G. Turner," Scriptorium, 35 (1981), 331-3, referring to Turner's The Typology of the Early Codex (Philadelphia, PA: Univ. of Pennsylvania Pr., 1977), also reviewed by G. Prato, Scriptorium, 34 (1980), 135.

criticism represented by diplomatics and art (qua artifact) history, it has been slow to recognize its parallels with descriptive, analytical, and critical bibliography for the study of printed books.¹¹ Moreover, the movement has been relatively isolated from the larger world of scholarly bibliography and librarianship because its practitioners tend to come from classical textual studies¹² (but more recently from History and Art History as well), and to concentrate, albeit in an interdisciplinary fashion, mainly on things medieval.¹³ Despite the slight opening of the field and even the embrace of computer applications,

¹¹ The "science" of paleography, of course, is dated to the foundation treatise of Dom Jean Mabillon, De re diplomatica (1681), and its evolution largely in eighteenth-century debates about the classification and genealogy of scripts and writing schools. The painstaking detailed reconstruction of writing methods and penmanship associated with the late nineteenth-century works of W. Wattenbach (significantly, Anleitung zur lateinischen Paläographie [1866]) and Leopold Delisle (1875-), the discipline began to identify "principles" in methodology, common nomenclatures, and certain qualifications in letter formations for classification of scripts. The trend toward classification has been frustrated by particularism both in the scripts themselves and the nationalism of modern scholarship in approaching scripts identified with a given cultural heritage, as evident in the general, but not precise schema arrived at in the mid-twentieth century: cf. E. M. Thompson's determination to simplify classification and to standardize nomenclature in his An Introduction to Greek and Latin Paleography (Oxford: University Press, 1912) and the less exact groupings in G. Liefelinck, Galileo Battell, Bernhard Bischoff, et al. eds., Nomenclature des écritures livresques du IXe au XVIIe siècle (Paris, 1954); Gerhard Powitz, "Zur Textaufnahme in Handschriftenkatalogen", Codicologica, 4 (1984), 59-66. The problem of script classification is exacerbated by typography's romantic throwbacks to archaic usage. Cf. citations for relevant works in Bibliography throughout the following notes.

¹² This includes Greek (Byzantine) and Hebrew work, as exemplified by Malachi Beit-Ari e, Hebrew Codicology: Tentative Typology of Technical Practices employed in Hebrew dated medieval manuscripts (Jerusalem: Israel Academy of Sciences and Humanities, 1981).

¹³ Consider my previous observations in McCrank, "Analytical and Historical Bibliography: A State-of-the-Art Review,"

codicologists still define Codicology's scope by classical languages and inappropriately assume that its methodology, purview, and interests pertain only to medieval and Renaissance manuscripts before the spread of printing by moveable type. The application of codicological approaches to modern codices is everywhere neglected; and in the United States such disciplined studies of manuscript codices (i.e., journals, diaries, instructional materials, etc.) are sadly lacking, with the exception of literary manuscripts for critical editing.

Codicology's auxiliary sciences include papyrology, epigraphy, and sigliography, diplomatics and paleography, and manuscript-art history; but counterparts such as xylography, typography, and descriptive bibliography, as well as conservation and forensic sciences, tend to be excluded as though the technologies of manuscript and machine-assisted book production were more divisive than they were and as if the history of the medieval and early modern worlds can be segregated definitively into neat periodizations even though manuscripts were printed, printed books were hand copied, and both forms of text production and dissemination continued into the twentieth century.¹⁴

Annual Report of the American Rare, Antiquarian and Out-of-Print Book Trade, ed. Dennis Carbonneau (New York, NY: BCAR, 1979), 178-85, and in the same volume: James D. Farquhar, "Codicology and Art History: Manuscript Studies," and E. J. Devereux, "Analytical Bibliography and Literature: Printing and Textual Studies," pp. 185-94. These observations are mentioned in Robert Harmon's survey of trends in bibliographical scholarship, Elements of Bibliography: A Simplified Approach (Metuchen, NJ: Scarecrow Pr., 1981), 100-105; but generally the methodological literature about scholarly bibliography likewise ignores Codicology. The two fields, largely duplicative in method and purpose, co-exist with little rapport between them.

¹⁴ For examples of the continuation of medieval manuscript production well into the twentieth century, see McCrank, The Rare Book and Manuscript Collections of the Mt. Angel Abbey Library: A Catalog and Index (Wilmington, DE: Scholarly Resources, Inc., 1983) and my forthcoming Ladders between Cultures: Instructional Media in the Catholic Mission to Oregon, 1835-85 (1987).

Contextual concerns, such as the history of libraries, archives, and other knowledge-based institutions and related communications, have been elucidated by codicological scholarship.¹⁵ However, a working relationship of Codicology with professional applications in the information fields, except through a few curators, is almost nonexistent, so that concerns within the field over the past decade have had little impact on or input from archival and library science or the related technical and scientific expertise to be found in conservation and preservation.¹⁶ This professional and intellectual insularity bred from the textual introspection and necessary specialization required in Codicology has been both its strength and yet a flaw in its scholarship and a major hindrance to its more widespread influence. Consequently, the field's interests in manuscript cataloging have never been adequately represented in the larger world of cataloging and bibliographic description.

¹⁵ There are, of course, notable exceptions such as the awareness of library history exhibited in the reconstructive work of Gilbert Ouy ("Les bibliothèques," supra) and Neil Ker, exemplified for library historiography best by André Vernet, La bibliothèque de l'abbaye de Clairvaux du XIIe au XVIIIe siècle, (Paris: CNRS, 1979), 2 vols.; and by Ker's Medieval Libraries of Great Britain, 2nd ed. (London: Royal Historical Society, 1964). Cf. the interpretive essays in Francis Wormald, ed., The English Library before 1700 (London: Athlone Pr. for Univ. of London, 1958); and Lawrence J. McCrank, "Medieval Libraries," Dictionary of the Middle Ages, ed. J. Strayer (New York, NY: Charles Scribners Sons, 1986), VII, 557-70.

¹⁶ See my earlier comments in McCrank, "Strategic Planning for Networking of Rare Book and Historical Manuscript Data Resources," The International Conference on Data Bases in the Humanities and Social Sciences, 1983 (Osprey, FL: Paradigm Press, Inc., 1985), 193-208. Consider, for example, the divergence in the U.S.A. between the annual manuscripts conference at St. Louis University and sessions in the medieval studies conference at Western Michigan University, and of the Manuscripts Society, the Bibliographic Society, and the Society for Textual Scholarship, etc., and the relatively rare intercourse of medievalists with the historical, literary, and manuscripts-oriented components of the American Library and Association

Networking and the Formation of Standards

The integration of scholarship from traditional subject and methodological specializations into cataloging and description is too often limited by language and national boundaries. The Woffenbuttel conference of 1984 highlighted other problems, including standardization of descriptors, script identifiers, and collation methods and formulae, which come clearly into focus only when large undertakings force comparisons between types of manuscripts, varieties of scripts, and production techniques.¹⁷

Conferees sought to clarify problems which arose from using the 1983 third revised edition of a catalog manual for the description of manuscript codices, and in the computerization of such catalogs.¹⁸ Indeed, it is computerization which is exposing the inconsistencies of earlier catalogs, is forcing wholesale reconsideration of older traditions in manuscript description, and is spawning

(i.e., Library History roundtable), Association of College and Research Libraries (i.e., Rare Books and Manuscripts Section), and the Society of American Archivists (i.e., History of Archives roundtable). Perhaps a liaison needs to be established between the Medieval Academy of America or whichever organization takes responsibility for fostering codicological standards in the United States, and these archival and library organizations so that the field is better served by evolving bibliographic systems.

¹⁷ Joachim-Felix Leonhard, Methoden und Probleme der Katalogisierung adbenlaendischer Handschriften. Die Tagung der Handschriftenbearbeiter in Woffenbuttel vom 24. bis 26.8.1984. in Zeitschrift fuer Bibliothekswesen und Bibliographie, 32 no. 5 (Sept./Oct., 1985), esp. 440-550. This conference shared experiences at Freiburg University in building a union catalog of manuscripts; at the Bavarian State Library in Munich where a union list was being indexed; and at the Baden State Library in Karlsruhe which was exploring centralized cataloging of codices for defined regions or networks.

¹⁸ Consider also Ursula Winter, Renate Schipke, and Hans-Erich Teitge, Regelm für die Katalogisierung von Handschriften [im Auftrage der Deutschen Staatsbibliothek...] (Berlin: Deutsche Staatsbibliothek, Zentrale Leiteinrichtung für Handschriften und Inkunabeln, Kommission für Handschriften und Inkunabeln, 1983).

interest in supra-national standards. Scholars have decried the lamentable lack of bibliographic control over the rich codicological resources in some countries, i.e., Spain and Italy (where there are numerous projects underway),¹⁹ which hinders use as well as preservation efforts.²⁰ Since most description has been general, for inventories rather than full detailed cataloging, many complaints arise from specialist perspectives.²¹ The view from the arts is a case in point. Indeed, some of the most interesting progress in methods (including computer applications) and standards has evolved in cataloging music manuscripts.²²

¹⁹ Marina Panetta, "Il bibliotecario conservatore e la catalogazione dei codici in Italia; qualche riflessione," Accademie e Biblioteche d'Italia, 52 no. 1 (Jan-Feb. 1984), 63-9.

²⁰ On the other hand, note projects in Italy as reported by M. Ferrari, B. Alessio, G. Nicolai, C. Villa, E. Menesto, and A. Vitale-Brovarone. Note that one project is to collate all secondary studies completed that pertain to the manuscripts of the National Central Library in Florence: Piero Innocenti, "Materiali per un catalogo dei manoscritti alla Biblioteca Nazionale Centrale di Firenze," AIB Bollettino, 17 no. 2 (Apr-June, 1977), 128-33.

²¹ For a statement about the description of medieval manuscript art, see Karl Dachs, "Die Beschreibung des Buchschmucks in Handschriftenkatalogen," Zeitschrift fuer Bibliothekswesen und Bibliographie, 29 no. 1 (Jan-Feb. 1982), 25-34. He contrasts three types of catalogs: those only paying attention to text in the traditional German Handschriften mode; those specializing in manuscript illumination, especially miniatures, which now constitute a "trend"; and the newer codicological hybrids which are starting to pay attention to both in a holistic fashion.

²² Note especially the Catalogue of Bavarian Music Collections project described by Robert Muenster, "Die Erfassung von Musikhandschriften in Altbayern und Schwaben," Bibliotheksforum Bayern, 9 nos. 1-2 (1981), 183-91, and in the same issue, Martin Seelkopf's "Die Erfassung von Musikhandschriften in Franken," pp. 192-203. Cf., "Die Cataloge Bayerischer Musiksammlungen," Bibliotheksforum Bayern, 11 no. 2 (1983), 91-95. See also Nanna Schiodt, "MUSICAT: A Method of Cataloging Music Manuscripts by Computer, as applied in the Danish RISM Manuscript Project," Fontes Artis Musicae, 23 no. 4 (Oct.-Dec. 1976), 158-66, for early trend-setting applications.

Because of the Herzog August Library's pioneer projects in the scientific examination and standardized description of manuscript codices at Woffenbittel, Gandsheim, Hildesheim, Lüneburg, and Hanover, there is increased interest in regional catalog centers, paralleling the interest in the U.S.A. in regional conservation centers, where talent could be pooled to provide the expertise required in such specialized cataloging.²³ Work in France by the Centre de Recherche du Text at Paris and at the Bavarian State Library in Munich is progressing along similar, multi-institutional, multi-disciplinary lines.²⁴ Other countries such as Norway and Switzerland have also attempted national approaches to the problem,²⁵ and there are other enumerative projects, such as the survey of English literary manuscripts, which are noteworthy.²⁶ Out of these efforts is coming a greater consensus about descriptive methodology and presentation of manuscript information in inventories, catalogs, and electronic media. The international working conference attempted at the Catholic University of Nijmegen in 1987 may be seen not only

²³ Helmar Hartel, "Mittelalterliche Handschriften und ihre Erschliessung in Niedersachsen," ABI-Technik, 3 no. 2 (1983), 136-37.

²⁴ Karl Dachs, "Handschriftenkatalogisierung in Bayern," Bibliotheksforum Bayern, 9 nos. 1-2 (1981), 15-29.

²⁵ See, for example, "The Norsk Privatarkivinstittutt's Computerized Manuscript Catalogue; Progress Report and Evaluation," (Oslo, 1986); Max Burckhardt, Pascal Lander and Martin Steinmann, Katalog der datierten Handschriften in der Schweiz in lateinischer Schrift des Mittelalters bis 1550... (Zurich: Urs Graf Verlag, 1977-).

²⁶ See David C. Sutton, "A Computerized Union Catalogue of Literary Manuscripts," Program, 18 no. 2 (April 1984), 170-73, for twentieth-century English literary manuscripts in the United Kingdom (mainly loose mss., not codices) accessible through an off-line system. Note that this project uses UKMARC formatting, and LOCAS, so it has the potential for transportation across bibliographic systems and networks.

as timely, but indeed, as overdue.²⁷ Its cancellation was lamentable, because it postpones the building of consensus so desperately needed in the development of standards; on the other hand, it too was conceived as a conclave of manuscript experts without regard for already existing standards, national and international, and ongoing developments in descriptive cataloging.

Just as American studies might benefit from the transfer of codicological and diplomatic methodology from medieval and early modern to modern manuscripts, American medievalists might benefit most from the sharing of codicological resources through bibliographic networks and utilities simply because of their distance from European repositories. Thus far they have had to rely on traditional reference works, often outdated, for very indirect access to information about their primary resources. Recent technical advances in computer-assisted searching, reprographics, optical scanning and laser printing, and digitalization, promise solutions to this access problem.²⁸ At the same time these technical advances prompt codicologists to standardize descriptive practices, evolve classification schemes and taxonomies, and to strive toward comprehensive cataloging of extant manuscripts. Critical decisions must now be taken, whether to continue a habitually over-

²⁷ As noted by Ludmilla Kisseleva, "Une conférence sur l'écriture et la description des manuscrits," Scriptorium, 34 (1980), 288. The aims of the planned conference in 1987 were admirable, namely to define codicological and textological data elements and necessary art historical data for descriptive cataloging, the registration and structuring of data, information storage and retrieval problems associated with such databased work, and to organize collaborative projects. The conference organizers, however, preconceived a "common data base" rather than interchangeable data bases shared through existing systems.

²⁸ Consider, for example, the implications of OCR advances in manuscript transliteration, as reported by Marie Allen, "Optical Character Recognition: Technology with New Relevance for Archival Automation Projects," American Archivist, 50 (1987), 88-99.

specialized introspective focus in Codicology and continue to share codicological resources primarily among a small group of specialists through manual, traditional means; or to work through bibliographic networks and utilities to share descriptive information (cataloging), surrogation (abstracts, extracts, quotations as in recording incipits, etc.), and reproduction (facsimiles from the expensive exemplars of meticulously reproduced copies of whole codices, to less expensive micrographic alternatives, or electronic analog and digitized formats,) with the larger world of textual studies and bibliographic scholarship.

Converging Descriptive Methodologies

American codicological scholarship is a blend of continental influences, rather than strictly a borrowing from the British school; French and Italian influences are evident in approaches to art, German influences are discernible in paleography and penchant for classification, and descriptive practices display commonalities with Vatican Library procedures established by Cardinal Ehrle and others. Ironically Vatican general cataloging practice was also influenced by American consultants hired to update its bibliographic control and classification system, so there are points of convergence between developments in Europe and America that bear on this discussion.²⁹

²⁹ In addition to the 1948 Vatican Cataloging Rules, thereafter work in the U.S.A. led by Fr. Oliver Kapsner produced the following works of importance for handling medieval codices: A Manual of Cataloging Practice for Catholic Author and Title Entries (Washington, D.C.: Catholic University of America, 1953) and Catholic Subject Headings (Collegeville MN: St. John's Abbey for the Catholic Library Assn., 1963), which had some impact on the formation of international standards such as the International Federation of library Association's Committee on Cataloging, List of Uniform Titles for Liturgical Works of the Latin Rites of the Catholic Church (London: IFLA, 1975), which should have had more impact than they have on the cataloging of medieval manuscripts. See also Ruth Eisenhart, "Cataloging of liturgies and other religious texts in the alphabetic catalogue," ICCP Report (London,

The prototype inventory work of Seymour de Ricci is still influential in the United States, since the experience of early surveyors of manuscripts was condensed into handbook form by his co-worker, W. J. Wilson, for future generations to follow.³⁰ E. A. Lowe's Codices latini antiquiores anticipated descriptive methods later espoused by codicologists and his approach was still evolving at the time of his death in 1969.³¹ Unfortunately because of Lowe's concentrated interests in pre- and Carolingian materials and specialization, his influence seems not to have penetrated developments in descriptive cataloging outside the practice of paleography per se. No American medievalist can escape the influence of inventory compilers such as Lynn Thorndyke for scientific works or Paul Kristeller's exemplary Iter Italicum and his Latin Manuscript Books before 1600.³² The last word on such practices in the English-speaking world, however, was by Neil Ker whose inventory work surpassed the influence of T. C. Skeat, and was masterfully expanded by several indepth studies of text dissemination in manuscript.³³ Delaisés aforementioned preference for a matrix treatment instead of

1963), 199-206.

³⁰ William J. Wilson, "Manuscript Cataloging," Traditio, 12 (1956), 456-555; cf. Seymour de Ricci, Census of Medieval and Renaissance Manuscripts in the United States and Canada... (New York, NYL Wilson, 1935-40; repr., NY: Kraus, 1961), with supplement by C.U. Faye and W. H. Bond (New York, NY: Bibliographical Society of America, 1962).

³¹ E. A. Lowe, ed., Codices Latini Antiquiores; a paleographical guide to Latin manuscripts prior to the ninth century (Oxford: Clarendon Pr., 1934-71), with supplement.

³² Paul O. Kristeller, Iter Italicum and his equally important, Latin Manuscript Books before 1600: ... 3rd ed. (New York, NY: Fordham Univ. Pr., [1965]).

³³ Cf. Neil R. Ker, Medieval Manuscripts in British Libraries (Oxford: Clarendon Press, 1969-76); T. C. Skeat, ed. for the British Museum Dept. of Manuscripts, The Catalogues of the Manuscript Collections, rev. ed. (London: Trustees of the British Museum, 1962).

annotation only, has appealed to catalogers more visually oriented than Ker's predilection to textuality. Compromises between these descriptive traditions, one focusing on art more than text and vice versa, can be seen in the United States in the descriptions by James D. Farquhar, Jean Caswell, and others; and in Great Britain by the work of Malcolm Parks and colleagues.³⁴ A further attempt at syncretization was made in the experimental computer-produced catalog of the Mt. Angel Abbey (Oregon) Library's manuscripts, incunabula and early printed books, by merging special subject thesauri (Catholic descriptors) with the Library of Congress subject-headings, using rotational indexing to create access, and integrating tabular description with annotation in formats compatible with national standards for machine-readable cataloging.³⁵

While American scholars are anxious for improved access to European collections, a reciprocal effort should be made to catalog manuscript codices in the U.S.A. and Canada. The major projects in the U.S.A. are to create access to repositories abroad and to serve as a guarantee for the preservation in America of microfilmed manuscripts from Europe. Among these projects should be noted the Vatican Library collections being assembled at St. Louis University,

³⁴ James Douglas Douglas Farquhar, Creation and Imitation: the Work of a Fifteenth-century Manuscript Illuminator (Ft. Lauderdale, FL: NOVA, 1976), and reflected also in his and Sandra Hindman's Pen to Press: Manuscript and Printed Books in the First Century fo Printing (College Park, MD: Univ. of Maryland, 1977); cf. Malcolm Parks, The Medieval Manuscripts of Keble College (Oxford: Oxford Univ. Press, 1979), which relies on the cross-fertilization that occurred in the collaborative work of Delaissé, Parks, and James Marrow, Illuminated Manuscripts: The James A. de Rothschild Collection at Waddeston Manor (Fribourg, Switzerland: National Trust, 1977).

³⁵ Lawrence J. McCrank, The Rare Book and Manuscript Collections of the Mt. Angel Abbey Library: A Catalog and Index (Wilmington, DE: Scholarly Resources, Inc., 1983), 5 program fiche to accompany Mt. Angel Abbey: A Centennial History of the Benedictine Community and its Library, 1882-1982 (Wilmington, DE: Scholarly Resources, Inc., 1983).

the Ambrosiana collections at the University of Notre Dame, and the Hill Manuscript Library at St. John's University and Abbey in Minnesota.³⁶

There have been many noteworthy works of scholarship based on certain manuscripts, but not as much institutional survey work, inventory compilation, or cataloging in the U.S.. Notable collections of codices such at the Beinecke library at Yale University, Notre Dame University, the Hispanic Society of America, have only recently getting the attention they deserve.³⁷ Other catalogs underway are for the Newberry and Huntington Libraries and the Library of Congress.³⁸ A. Sanjian's survey of Armenian manuscripts in the U.S.A. is a noteworthy example or recent enumerative work.³⁹ These efforts, however, have not led to a national effort to locate and identify all of the codicological resources in the U.S. (of which there are more than might be expected in private collections as well as public institutions), similar to the North American Imprints

³⁶ The Hill Monastic Library is collaborating with American monasteries in microfilming and cataloging their holdings, but note that most cataloging undertaken for this massive project must necessary be of the short-title, inventory variety. See Julian Plante, William F. Lanahan, et al., Hill Monastic Library Progress Reports (Collegeville, MN: St. John's University, 1971-), 1-10, cont'd..

³⁷ Cf. James A. Corbett, Catalogue of the Medieval and Renaissance Manuscripts of the University of Notre Dame (South Bend, IN: Assn. of the Univ. of Notre Dame Library, 1978); Charles Faulhaber, Medieval Manuscripts in the Library of the Hispanic Society of America:... (New York: Hispanic Society of America, 1983), 2 vols.; and Barbara A. Shailor, et al., Catalogue of Medieval and Renaissance Manuscripts in the Beinecke Rare Book and Manuscript Library, Yale University (Binghamton, NY: SUNY, 1984), Vol. I = Vol. 34, Medieval and Renaissance Texts series.

³⁸ Svato Schutzner, Medieval and Renaissance Manuscript Book in the Library of Congress: A Descriptive Catalog (Washington, D.C.: Library of Congress, [1988?]).

³⁹ Avedis K. Sanjian, A Catalog of medieval Armenian Manuscripts in the United States (Berkeley, CA: Univ. of California, 1976).

Project or the internationally known Eighteenth-century English Short Title Catalog.⁴⁰

Not have these projects served to evolve a set of codicological standards that fit into the Anglo-American Cataloging tradition. Manuscript textual scholars, for example, do not yet have the authoritative handbooks afforded to bibliographers by Esdaille, Bowers, and Gaskell.⁴¹ Nor do medievalist art historians seem to tie their interests in illumination and craft production to standards evolving in the arts.⁴² Instead, it is commonplace to compile catalogs in an apprenticeship fashion, by inheriting preferred approaches to either art or text from one's mentor or imitating earlier efforts which appear to represent the "state of the art" with modifications to fit the immediate needs of the project. Advances in method, technique, and standards are slow under these circumstances.

The goal of improved international access to and preservation of manuscript sources requires the rapid evolution of standards for codicological description: improved taxonomies for script and iconographic

⁴⁰ See Henry Synder, "ESTC: A Progress Report," ed. Dennis Carboneau, Annual Report of the American Rare, Antiquarian, and Out-of-Print Book Trade (New York: BCAR Publications, 1979), 162-5, with updates in the projects newsletter, Factorum (especially by the late Judith Singleton, i.e., vol. 12 [July 1981], 6). For the NAIP program, contact Alan Degutis, American Antiquarian Society, 185 Salisbury St., Worcester, MA 01609 USA.

⁴¹ Fredson Bowers, The Principles of Bibliographic Description (Princeton, NJ: Princeton University Press, 1949); and Philip Gaskell, A New Introduction to Bibliography (New York, NY: Oxford University Press, 1972), corrected ed. (Oxford: Clarendon Press, 1974), esp. "Bibliographic Description," pp. 331-35.

⁴² Consider trends noted in Mary Van Someren Cok, All in Order: Information Systems for the Arts, Including the National Standard for Arts Information Exchange (Washington, D.C.: National Assembly of State Arts Agencies, 1981); and projects like Helen Zinkham and Elizabeth Betz Parker, "Genre/Form and Physical Characteristics Terms: A Thesaurus for Prints, Photographs, Ephemera and Other Graphic Materials" draft prepared for the Standards Committee of the ALA/ACRL Rare Books and Manuscripts, Section, Mar. 1985.

identification; evolution of typologies and controlled vocabularies or thesauri for generalized description by scripts, production techniques, forms (structures) and formats (layouts), and origins; authority control over descriptive vocabularies for access by subject, locale, chronology, physical form, and related syntactical mechanisms; and decisions about tentative and short-form cataloging, phased cataloging techniques for varied degrees of precision and volume of data in description, record formats, and protocols for transmitting such information electronically across cultural and political boundaries.

Machine-Readable Cataloging

American practice in bibliographic description has been controlled by professional library associations and national libraries cooperating together (U.S.A., Canada, and Great Britain), in a tradition of bibliographic practice which has been codified into the Anglo-American Cataloging Rules (AACR), now in their second revision (AACR2).⁴³ AACR2 is often supplemented by more detailed cataloging, at various levels, according to in-house conventions or adaptations of the Library of Congress manual The Bibliographic Description of Rare Books (1981).⁴⁴ These were accommodations for machine-readable cataloging (MARC) of rare books, mainly

⁴³ Cf. American Library Association, Anglo-American Cataloging Rules, ed. C. Summer Spalding (Chicago, IL: ALA, 1976), especially for "Incunabula" (ch. 8, pp. 247-51) and "Manuscripts" (ch. 10, pp. 259-71); and ALA, Anglo-American Cataloging Rules, second ed., Michael Gorman and Paul Winkler (Chicago, IL: ALA, 1978), which merges these separate sections into the general rules.

⁴⁴ Library of Congress, Office of Descriptive Cataloging, The Bibliographic Description of Rare Books (Washington, D.C.: LC, 1981), originally circulated in draft as L.C. Manual for the Cataloging of Older Imprints: A Preliminary Edition (Washington, D.C.: LC, 1979) partially in response to the Independent Research Libraries Association, Proposals for Establishing Standards for the Cataloguing of Rare Books and Specialized Research Materials in Machine-readable Form (Worcester, MA: IRLA, 1979).

printed materials, and an effort to make a generalized format suitable for carrying greater detail and cataloging at a greater level of specificity than required for modern imprints. The USMARC format of tagging bibliographic elements in specified data fields, some of fixed length and others more flexible, evolved after 1966 at the Library of Congress and spread rapidly in the 1970s with the growth of fourteen shared cataloging cooperatives, most importantly OCLC (now the Online Computer Library Catalog) and somewhat later, RLG (Research Libraries Group).⁴⁵ LCMARC with modifications for each network evolved into USMARC. International cooperation in the exchange of records guaranteed the spread of UNiversal MARC or UNIMARC as an international standard, subject to modifications to suit a country's individual needs, i.e., UKMARC for Great Britain, CANMARK for Canada, IBEROMARC for Spain, etc.⁴⁶ It is now used by eighteen countries and there are at least four UnionMARC projects.⁴⁷

⁴⁵ Note the special files being hosted by RLIN's Program for Research Information Management, including one for medieval and early modern manuscripts, as reported by Leslie P. Hume, "RLG's Program for Research Information Management: New Information Resources for Scholars," in the forthcoming Proceedings: International Conference on Data Bases in the Humanities and Social Sciences, 1987 hosted by Auburn University at Montgomery, AL, July 10-13, 1987. See also Nan L. Han, Wesley M Stevens and B. Lael Sorenson, The Benjamin Data Bank and BAG/2: A case Study and User Manual for encoding, storing and retrieving information on medieval manuscripts (Dunellen, NJ: Benjamin Data Bank, 1983).

⁴⁶ Cf. American National Standards Institute, American National Standard for Bibliographic Information Interchange on Magnetic Tape (New York: ANSI, 1979); Library of Congress, Books: A MARC Format (Washington, D.C.: LC Information Systems Office, 1969) and L.C.'s MARC Format for Bibliographic Data (Washington, D.C.: LC Automated Systems Office, 1980); and the introduction to MARC by Walt Crawford, MARC for Library Use (White Plains, NY: Knowledge Industry Publications, Inc., 1984).

⁴⁷ See John Attig, "The Concept of a MARC Format," Information Technology and Libraires, 2 (1983), 7-17.

The MARC format, as a bibliographic protocol and data packaging device, however, has needed less accommodation than did the codes which governed the form of data in the various elements and subject descriptors certainly needed alteration from the Library of Congress Subject Headings (LCSH).⁴⁸ Nevertheless, USMARC formats have proliferated to accommodate the special requirements of various media. The book format with supplementary, intensified cataloging accommodates most rare book needs for short-title cataloging and inventory control or census taking, as determined by scholarly bibliographers working largely from within the Anglo-American tradition.⁴⁹ This has led to the ISBD(A) standard for antiquarian materials.⁵⁰ More recent work by the American College and Research Library Association (ACRL) Rare Book and Manuscripts Division (RBMS) has been to refine the data in the elements themselves, such as uniform short-citation referencing to standard bibliographic tools,⁵¹

⁴⁸ Library of Congress, Subject Headings... (Washington, D.C.; LC Descriptive Cataloging, 1986), 2 vols..

⁴⁹ These trends are reviewed by Melissa C. Flannery, "A Review of Recent Developments in Rare Books Cataloging," Cataloging and Classification Quarterly, 7 no. 1 (1986), 55-62; Lawrence J. McCrank, "Bibliographic Control of Rare Books: Phased Cataloging, Descriptive Standards, and Costs," Cataloging and Classification Quarterly, 5 (fall 1984), 27-51; Terry Belanger and Stephen Paul Davis, "Rare Book Cataloging and Computers," pt. 1, AB Bookman's Weekly, 63 (Feb. 5, 1979), 955-66; pt. 2, vol. 65 (Jan. 14, 1980), 187-204; and Stephen Paul Douglas, "Computer Technology as Applied to Rare Book Cataloging," IFLA Journal, 10 (1984), 158-169.

⁵⁰ Bibliographic Description of Rare Books: Rules Formulated under AACR2 and ISBD(A) for the Descriptive Cataloging of Rare Books and Other Special Printed Materials (Washington, D.C.: Library of Congress, 1981).

⁵¹ Peter Van Wingen and Stephen Paul Douglas, Standard Citation Forms for Published Bibliographies and Catalogs Used in Rare Book Cataloging (Washington, D.C.: Library of Congress, 1982).

relator terms,⁵² genre terms,⁵³ and standard collation practices.⁵⁴ Drafts exist for similar tools, such as the "Thesaurus of Terms for Retrieval of Physical Evidence" and standardizing binding terms (rev. 1984), i.e., "Binding Hierarchy Based on the Thomas List." Unfortunately, these efforts have been reported through the International Federation of Library Associations meeting which seem unnoticed in manuscript circles, so that cross-influences is not what it should be.⁵⁵

Thus the customizing of each institution's catalog project to its own idiosyncrasies continues. Barbara Shailor reflects the vantage point from within Codicology, that is a frame of reference excluding the aforementioned work in rare book librarianship, when she commented: "The matter of suitable format for cataloguing medieval and Renaissance manuscripts is a difficult one since there are few firmly established guidelines."⁵⁶ Even when computers have been used as in this case, it is mainly to produce a book catalog along traditional lines, instead of designing an integrated, interactive database capable of transportation across systems and international boundaries,

⁵² "Relator Terms for Rare Books, Manuscript and Special Collections Cataloging, 2nd edition," College and Research Library News, 9 (Oct. 1981), 322-5.

⁵³ ACRL Rare Book and Manuscript Section, Genre Terms: A Thesaurus for Use in Rare Book and Special Collections Cataloging (Chicago, IL: ACRL, 1983).

⁵⁴ ACRL RBMS Committee headed by Terry Belanger, focused largely on collation standards to be observed by conservators.

⁵⁵ Consider Ian R. Wilson, "Some Major Developments in International Rare Book Librarianship: Reflections on the Medium-Term Programme, 1981-85," IFLA Journal, 8 (Oct. 1982), 265-272' and his "Current Developments in International Rare Book Librarianship and Their Relevance for the United Kingdom," Journal of Librarianship, 15 (July 1983), 70-82.

⁵⁶ Shailor, Catalog, xviii.

where a book catalog is merely a by-product for temporary convenience. Discussions in medieval circles about computerized formats and forms of presentation are often confused, with emphasis on the latter and aesthetics rather than the technical requirements of information or a sense of systems design in the structure of the catalog. Systematic data entry, congruence in descriptions for parallel structure, consistency in presentation, and the development of a syndectic reference system, which are cardinal virtues of good information systems design, are too often lacking in manuscript cataloging projects.

Shailor's form of presentation in the Beinecke catalog, which represented the thinking in 1981 of Richard H. Rouse and other notables on her advisory board, reflects the problematic reconciliation of thinking within Codicology with developments outside the field. She attempted to define the criteria for a good catalog description: "first, to note accurately the textual contents and physical makeup of the fragment or codex; second, to relate briefly the material... to manuscripts preserved elsewhere; third, to serve as a point of departure for further inquiry by scholars and collectors."⁵⁷ In proceeding to methodological considerations she outlined her conventions for headings, contents description, physical specifications, provenance tracings, bibliographical citations, indexing, and the inclusion of plates. The resulting work is an example of careful scholarship and well-meant consideration of the problem of standards for manuscript cataloging, but it cannot be recommended as a model because it ignores well established conventions and international standards that could have been adopted for such cataloging. While attempting to relate the manuscripts themselves to a wider context by citations of secondary works and referrals to other manuscripts, the Catalog itself is out of context in the realm of librarianship and international standards for

⁵⁷ Shailor, Beineke Catalog, xviii-xix.

bibliographic description and control. As such, it unfortunately reflects the aforementioned insularity of medieval studies from the whole of bibliographic scholarship and the progress of recent years in international librarianship, especially in the Anglo-American tradition, for rare book and manuscript description. It is also a case of computerization for an electronic form of mechanization to produce manual copy, not genuine automation, so that this project's records cannot be merged into MARC-based bibliographic information systems for easy sharing unless they were to be revised and reformatted. Such criticism should not be misconstrued as unfair or unduly harsh because this is a solid, commendable effort; the point here is to call attention to the traditional mentality of medieval manuscript scholarship inhibiting such a praiseworthy cataloging project's unrealized potential.

All of the data elements and the varieties of information recorded in the Beinecke catalog, as in the cases of other exemplary works cited, could have been shared more dynamically via MARC formats through national and international bibliographic systems, in addition to the intellectual access created by the book catalog, without necessarily dictating the latter's presentation and the scholar's preference for narrative description. When treating the attributes of a "good catalogue description" one can imagine a range from short-title entries recording the "bare essentials" or "the registration of immutable facts" in the words of Albert Gruijs; or one can advance beyond textual description to visual presentations as in Malcolm Park's work all the way to facsimile reproduction, and beyond mere description and reprographic surrogation to the point of criticism advocated by Gilbert Ouy. N. Ker's compromise between short-title cataloging or inventory surveys and critical, full description for every item, provides a vademecum which appealed to Great Britain's Standing Conference of National and University Libraries (SCONUL) Manuscript Advisory Committee. But the selection

of a single prototype or exemplar, style or standard of completeness, is unnecessarily limiting, when one can adopt standards and an expandable format permitting a range of description, parallel to the concepts of "phased cataloging" and "phased conservation" some advocate for rare book and manuscripts.⁵⁸

MARC Archives and Manuscript Control Format

Of the various MARC formats created since 1968 for each major form of media, some are more flexible and are thereby more relevant to codicological needs than others. Some, such as music, have data elements in them which may be useful for medieval music codices. The book format, while describing a modern codex adequately for item retrieval, is so tailored to printed materials and bibliographic conventions that it would not be as appropriate as a manuscript format. There are two MARC formats for manuscripts, both influenced by the serials format for describing continuing series as in the case of periodicals, but which is therefore adoptable for series of correspondence, legal, and governmental records, and anthologized compilations as well. These are: (1) the older Manuscripts format (1973); and (2) the newer Archives and Manuscripts Control (AMC) format (1983-4). The latter needs to be investigated thoroughly as a vehicle for codicological description.

The AMC-MARC format resulted after 1977 from the work of the National Information Systems Task Force (NSTIF) of the Society of American Archivists (SAA) in response to the archival profession's dissatisfaction with the bibliographic

⁵⁸"Phased Cataloging" as recommended by McCrank, Classification Quarterly, 5 (1984), 36-7, was called "one of the most innovative and potentially useful proposals for increases in computer capabilities..." by Flannery, Classification Quarterly, 7 (1986), 59. It is not dissimilar from Stephen Paul Davis' recommendation of "extended MARC research records," IFLA Journal, 10 (1984), 167.

print-orientation of the treatment of manuscripts (primarily loose manuscripts or papers as collections, or official records as archives) in such projects as the National Union Catalog of Manuscript Collections.⁵⁹ Medieval manuscript codices were hardly the concern of the NUCMC any more than NSTIF; nor were they specifically a concern in the formulation of the ISBD(A) standard for using the MARC book format. Consequently, manuscript codices have no specific format in the MARC family, but might be entered either as though it were a rare book (if the codex were a complete literary or legal work) or a bound manuscript collection (if it were a compilation as many medieval codices are). The oversight is again symptomatic of the lack of interplay between manuscript and bibliographic scholarship and the late emergence of codicology, unnoticed in the library world.

The SAA NSTIF tried to design a common format capable of almost infinite varieties of data about manuscripts and to facilitate such information to be exchanged between institutions in machine-readable form in accord with technical standards promulgated by the American National Standards Institute (ANSI). NSTIF revised the existing USMARC Manuscript Format, and then cooperated with the RLG to have it implemented on this network's national online system (RLIN).⁶⁰ Subsequently OCLC also implemented it. By 1983 the new format was approved by the SAA council, the Library of Congress, and the ALA (American Library Assn.) RTSD/LITA/RASD Committee on the Representation of Machine-

⁵⁹ Library of Congress Manuscript Division, National Union Catalog of Manuscript Collections (Hamden, CT: Shoestring Pr., 1959/61-). This tool was primarily for modern American personal papers, not codices, although bound diaries, letter books, etc., are included.

⁶⁰ For the work of SAA's NSTIF see David Bearman, "Toward National Information Systems for Archives and Manuscript Repositories," American Archivist, 45 (1982), 53-56; Richard Lytle, "An Analysis of the Work of the National Information Systems Task Force," American Archivist, 47 (1984), 357-65.

Readable Form of Bibliographic Information (MARBI). Manuals of the final revision were distributed throughout the U.S.A. in 1984.

The AMC-USMARC format accommodates existing institutional practices in manual or automated environments, and enables the data when in machine-readable form to be shared through either RLIN or OCLC and other networks, and hence internationally as well; and because most commercial vendors of bibliographic control systems now support USMARC as a national standard (and UNIMARC can be specified as well), AMC-formatted records are highly transportable without requiring total reformulation of in-house systems. Indeed, use of the AMC format even in manual systems tends to foster consistency and congruence in manuscript description. Finally, used in automated systems with other MARC formats with proper authority controls and subject headings, the AMC formatted record is linked automatically to all publications of the same work, to secondary works by the same authors and about the same subjects, and to all varieties of media. These attributes make the AMC format very advantageous for the transfer of codicological information.

As Albert Gruijs and others have recognized, data format, form of presentation, and content, are related but yet distinct matters in information transfer. His proposal to use thirty-two descriptors to describe a textblock parallels moves within analytical bibliography toward uniform description, i.e., Thomas Tanselle's advocacy of set terms to describe binding surfaces, writing materials, type faces, etc..⁶¹ Past efforts by codicologists at Paris and

⁶¹ Cf. G. Thomas Tanselle, "The bibliographic description of patterns," Studies in Bibliography, 23 (1970), 71-102; his "A System for color identification for bibliographical description," Studies in Bibliography, 15 (1967), 203-34; his "The bibliographic description of paper," Studies in Bibliography, 24 (1974), 27-67; and his "The identification of type faces in bibliographic description," Papers of the Bibliographical Society of America, 60 (1966), 185-202. These are symptomatic of the standardization process in analytical bibliography which seems to had little impact on

Perugia to reach a consensus for descriptors are similar to those by paleographers to describe scripts; such movements are counterparts to, but not part of the formation of small sets of prescriptive terms or thesauri to accomplish the very same purposes. Such efforts in Codicology, apart from their problematic isolation from similar developments, have been misguided in their attempt to derive a definitive dictionary of all appropriate terms, preferred usage, and subordination of variants, without any body's authority to authorize one or the other usage even if agreement were reached.⁶² This problem is not unlike that faced by the SAA task force in 1981-82 in meeting the demands of its constituency. SAA, like ALA, had to set up a standing committee rather than a task force, in recognition that such consensus building and maintenance is a process rather than a product. Like all language and communication issues, the problem is not to stop change by pickling a descriptive vocabulary, but to control its change. SAA's work resulted by 1982 in a Data Elements Used in Archives, Manuscripts, and Records Repository Information Systems: A Dictionary of Standard Terminology, which was revised in 1984.⁶³ This

Codicology.

⁶² These debates exhibit inadequate concern for subject access beyond data supplied in main entries. For current thinking about terminology in description and access see Dagobert Soergel, Organizing Information. Principles of Data Base and Retrieval Systems in Library and Information Science Series ed. H. Borko and C. Edward Evans (Orlando, FL: Academic Press, 1985). For the integration of archival and bibliographic approaches to intellectual access, cf. Lawrence J. McCrank, "The Impact of Automation: Integrating Archival and Bibliographic Systems," Archives and Library Administration: Divergent Traditions and Common Concerns, ed. by McCrank (New York: Hayworth Press, 1987), 61-98, also in Journal of Library Administration, 7 nos. 2/3 (1987), 61-98; Richard Lytle, "Intellectual Access to Archives" pts 1-2, American Archivist, 43 (1980), 64-75, and 43 (1980), 191-207.

⁶³ Appended to Nancy Sahli, MARC for Archives and Manuscripts: The AMC Format (Chicago, IL: SAA, 1985).

Dictionary refers to the AMC-MARC tags for proper use of terms in designated fields of information in the MARC format, and it also relates to the 1983 revision of AACR-2 by S. Henson for manuscript description, as recommended by the Library of Congress Manuscript Division.⁶⁴

This Data Element Dictionary approaches the problem of controlled description slightly different than the genre term compilations prepared for the ALA/ACRL Rare Books and Manuscripts Division. Instead of trying to identify every possible variant in manuscript description, the archival approach focuses on the functionality of each data set to form elements in a comprehensive description. Its rationale began not with a particular item in mind, but instead a theoretical construct, namely the "life cycle" of records in archival control systems. The main functions include: (1) identification, including source (provenance); (2) determination of holdings; (3) appraisal; (4) accessions information; (5) processing data; (6) preservation diagnostics and treatment records; (7) management of inquiries about the manuscript(s); (8) retrieval of the records and the document; (9) administration matters; and (10) communication of relevant data. Each function has functional subsystems consisting of a breakdown of the process and a sample of the data elements classified by the appropriate activity. Codes or designations identify action as related to place and time, and to locate appropriate tags to place such data into the AMC format. The one-hundred and thirteen data elements used with the MARC format are applicable with only slight revision to codicological description. The application of such a functional control scheme with set vocabularies of genre terms and descriptors, with use of the MARC tags 1-886, provide almost infinite variation of the same theme to describe medieval codices.

⁶⁴ Stephen Henson, Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories, Historical Societies, and Manuscript Libraries (Washington, D.C.: LC, 1983).

Conclusion

The foregoing discussion of recent developments in terminological control and standards, bibliographic description, and machine-readable cataloging, indicates that there are tools and methods readily available for Codicologists to adopt for their purposes. It also places the meager efforts within Codicology in stark contrast to the larger world of bibliographic scholarship and of library and archival science. The AMC-USMARC format offers a usable template for recording most codicological data according to international standards, and to foster thereby the easy electronic transfer of such cataloging between institutions and nations. These are intellectual tools that are inherently flexible enough to accommodate the special interests of codicologists and the peculiarities of their materials, loose or bound manuscripts, ranging from formal texts to works of art, and to compilations and records such as cartularies and registers.

Rather than indulge in a typical delight in the uniqueness of medieval manuscripts-- a trait shared by them all, one must first emphasize their commonalities with other forms of communication and place more emphasis on their functionality and shared attributes with a range of oral, textual, and visual artifices constructed by mankind for similar purposes. The very rarity of codices makes sharing information about them even more imperative, presumably in a more dynamic process than through book catalogs. Just as description is itself an act of preservation, so too is the dissemination of information about the codices being described. Finally, note that description is a continuing process, not a definitive act, for which better means of information collection and collation are needed. One way to accomplish such ends is to pay better attention to standards, national and international; to information transfer through our growing networks of bibliographic utilities; and the possible linkage of information generated in our archives, libraries, and museums. Machine-readable

cataloging of medieval manuscripts according to international standards rather than the tastes of individual catalogers or dictates of preeminent medievalists who carry the day, should be a paramount consideration in any cataloging project.

APPENDIX: AMC-MARC Tag structure (outline only)

<u>TAG</u>	<u>FIELD</u>
010	Library of Congress control number
035	Local system control number
039	Level of bibliographic control and coding detail
040	Cataloging source
041	Language code
043	Geographic area code
045	Chronological code or date/time
052	Geographic classification code
066	Character sets present
072	Subject category code
09X	Local call numbers
100	Main entry - personal name
110	Main entry - corporate name
111	Main entry - conference or meeting
130	Main entry - uniform title heading
240	Uniform title
242	Translation of title by cataloging agency
243	Uniform title, collective
245	Title statement
260	Publication, distribution, etc. (imprint)
300	Physical description
340	Medium
351	Organization and arrangement
500	General note
502	Dissertation note
505	Contents note (formatted)
506	Restrictions on access
510	Citation note (brief form)/references
520	Summary, abstract, annotation, scope, etc., note
521	Users/intended audience note
524	Preferred citation of described materials
530	Additional physical form available note
533	Reproduction note
535	Location of originals/duplicates
540	Terms governing use and reproduction
541	Immediate source of acquisition
544	Location of associated materials
545	Biographical or historical note
546	Language note
555	Cumulative index/finding aids note
561	Provenance

562 Copy and version identification
565 Case file characteristics note
580 Linking entry complexity note
581 Publications note
583 Actions
584 Accumulation and frequency of use
59X Local notes
600 Subject added entry - personal name
610 Subject added entry - corporate name
611 Subject added entry - conference or meeting
630 Subject added entry uniform title heading
650 Subject added entry topical heading
651 Subject added entry - geographic name
655 Genre/form heading
656 Index term - occupation
657 Index term - function
69X Local subject added entries
700 Added entry - personal name
710 Added entry - corporate name
711 Added entry - conference or meeting
730 Added entry uniform title heading
740 Added entry - title traced differently
752 Added entry place of publication or production
773 Host item entry
851 Location
870 Variant personal name
871 Variant corporate name
872 Variant conference or meeting name
873 Variant uniform title heading
880 Alternate graphic representation
886 Foreign MARC information field

Abstract

Sharing Codicological Resources through Networks

Lawrence J. McCrank

The long established procedures for preparing a manuscript census and distributing information on holdings has been costly, labor intensive, and inefficient. Medievalist are now using computers increasingly to prepare inventories and even more complex descriptions, but they are mechanizing previous manual processes rather than taking full advantage of automation, the recent development of information systems, and of bibliographic utilities and networks. There have been some interesting applications in computer-generated conventional reference tools for access to manuscript resources, which point to the development of interactive data bases capable of access in machine-readable form through established library and archival information systems.

The greatest barrier to humanistic research across cultural and international boundaries has been the lack of authority control, standard protocols, format guidelines, and facilities financing online searching outside of one's own institution. Mechanisms are now available for sharing such information via bibliographic networks using the international MARC standard (Machine-Readable Cataloging). Other technical developments allow for the transfer of visual images that are retrievable with textual data. If codicological data are captured on the MARC format on CD-ROM and WORM discs which follow standards for transportability across systems, then resource can be shared off-line between institutions and mounted on locally searchable data bases.

The relatively new MARC AMC (Archives and Manuscripts Cataloging) may provide adequate means for codicological description, because its linking capabilities allow for the subordination of descriptive fields including full-text and tabular descriptions such as manuscript collations in matrix form (the so-called Delaisse method). Experiments with such machine-readable codicological description in the U.S. date to 1980. These efforts are discussed along with the evolving standards within the Anglo-American descriptive tradition, to suggest ways in which descriptive practices by codicologists and related manuscript scholars might have reciprocal influence on the standards used in bibliographic networking for sharing manuscript information. The emergence of transportable standardized databases providing intellectual access to manuscript resources will certainly enhance medieval scholarship.